



**JUN 05 2017**

Mr. Gregory Pritchett  
Chevron USA, Inc.  
PO Box 1392  
Bakersfield, CA 93302

**Re: Notice of Preliminary Decision – Title V Permit Renewal  
District Facility # S-1129  
Project # 1171631**

Dear Mr. Pritchett:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Chevron USA, Inc. in western Kern County, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the renewed Federally Mandated Operating Permit. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

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

Sincerely,



Arnaud Marjolle  
Director of Permit Services

Enclosures

cc: Tung Le, CARB (w/enclosure) via email  
cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin  
Executive Director/Air Pollution Control Officer

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**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



**SAN JOAQUIN VALLEY  
AIR POLLUTION CONTROL DISTRICT**

Proposed Title V Permit Renewal Evaluation  
1171631  
S-1129

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**TITLE V PERMIT RENEWAL EVALUATION**  
**Oil and Gas Production**

**Engineer:** David Torii

**Date:** 4/24/17

**Facility Number:** S-1129  
**Facility Name:** Chevron USA, Inc.  
**Mailing Address:** PO Box 1392  
Bakersfield, CA 93302  
**Contact Name:** Gregory Pritchett  
**Phone:** 661-654-7796  
**Responsible Official:** Arthur Lewis  
**Title:** Area Manager  
**Project # :** 1171631  
**Deemed Complete:** 4/24/17

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**I. PROPOSAL**

Chevron USA, Inc. was issued a Title V permit on 6/30/02. As required by District Rule 2520, the applicant is requesting a permit renewal. The existing Title V permit shall be reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the previous Title V permit renewal on 1/17/12.

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

**II. FACILITY LOCATION**

Facility S-1129 is part of Chevron USA, Inc.'s Heavy Oil Western stationary source.

**III. EQUIPMENT LISTING**

A detailed facility printout listing all permitted equipment at the facility is included as Attachment C.

**IV. GENERAL PERMIT TEMPLATE USAGE**

The applicant is requesting to use the following model general permit Templates:

**A. Template SJV-UM-0-3 Facility Wide Umbrella**

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

## V. SCOPE OF EPA AND PUBLIC REVIEW

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

## VI. FEDERALLY ENFORCEABLE REQUIREMENTS

### A. Rules Updated or Evaluated

- District Rule 2020, Exemptions (amended December 20, 2007 ⇒ amended December 18, 2014)
- District Rule 2201, New and Modified Stationary Source Review Rule (amended December 18, 2008 ⇒ amended February 18, 2016)
- 40 CFR Part 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (1/20/11 and 2/16/2012)
- 40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (2/27/14)
- 40 CFR Part 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (8/12/15)
- 40 CFR Part 64, Compliance Assurance Monitoring (10/22/97)
- 40 CFR Part 82, Subpart B Stratospheric Ozone (June 25, 2013)
- 40 CFR Part 82, Subpart F Stratospheric Ozone (June 25, 2013)

### B. Rules Removed

There are no applicable rules that were removed since the last Title V renewal.

### C. Rules Added

- District Rule 2410, Prevention of Significant Deterioration (adopted June 16, 2011, effective November 26, 2012)

### D. Rules Not Updated

The following rules have been not been amended since the renewed Title V permit was issued. The most recent date reflects the version which has been approved by the EPA into the SIP.

- District Rule 1070 Inspections (Amended December 17, 1992)
- District Rule 1080, Stack Monitoring (Amended December 17, 1992)
- District Rule 1081, Source Sampling (Amended December 16, 1993)
- District Rule 1100, Equipment Breakdown (amended December 17, 1992)
- District Rule 1160, Emission Statements (adopted November 18, 1992)
- District Rule 2010, Permits Required (amended December 17, 1992)
- District Rule 2031, Transfer of Permits (amended December 17, 1992)
- District Rule 2040, Applications (amended December 17, 1992)
- District Rule 2070, Standards for Granting Applications (amended December 17, 1992)

- District Rule 2080, Conditional Approval (amended December 17, 1992)
- District Rule 2520, Federally Mandated Operating Permits (amended June 21, 2001)
- District Rule 4001 New Source Performance Standards (Amended January 19, 1995; Amended September 17, 1997; Amended April 14, 1999)
- District Rule 4101, Visible Emissions (amended February 17, 2005)
- District Rule 4102, Nuisance (amended December 17, 1992)
- District Rule 4201, Particulate Matter Concentration (amended December 17, 1992)
- District Rule 4202, Particulate Matter - Emission Rate (amended December 17, 1992)
- District Rule 4601 Architectural Coatings (Amended December 17, 2009)
- District Rule 4703 Stationary Gas Turbines (amended September 20, 2007)
- District Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities (amended August 19, 2004)
- District Rule 8021 Construction, Demolition, Excavation, Extraction, And Other Earthmoving Activities (November 15, 2001; Amended August 19, 2004)
- District Rule 8011 General Requirements ( Amended August 19, 2004)
- District Rule 8031, Bulk Materials (amended August 19, 2004)
- District Rule 8041, Carryout and Trackout (amended August 19, 2004)
- District Rule 8051, Open Areas (amended August 19, 2004)
- District Rule 8061, Paved and Unpaved Roads (amended August 19, 2004)
- District Rule 8071, Unpaved Vehicle/Equipment Traffic Areas (amended September 16, 2004)
- 40 CFR Part 60 Appendix F (7/1/91)
- 40 CFR Part 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines (3/20/09)
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos (7/20/04)
- 40 CFR Part 63 Subpart YYYY—National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (4/20/06)
- 40 CFR Part 64, Compliance Assurance Monitoring (CAM)

## **VII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE**

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

For this facility, the following are not federally enforceable and will not be discussed in further detail:

### **A. Rules Added/Updated**

None.

## **B. Rules Not Updated**

District Rule 4102, Nuisance (as amended December 17, 1992)

Condition 41 of permit unit '0-4 is based on District Rule 4102 and will therefore not be discussed any further.

## **VIII. PERMIT REQUIREMENTS**

The purpose of this evaluation is to review changes to federally enforceable requirements; therefore, this compliance section will only address rules that have been amended or added since the issuance of the initial Title V permit or most recent renewal of the Title V permit.

### **A. District Rule 2020 - Exemptions**

District Rule 2020 lists equipment which is specifically exempt from obtaining permits and specifies recordkeeping requirements to verify such exemptions. The amendments to this rule do not have any effect on current permit requirements and will therefore not be addressed in this evaluation.

### **B. District Rule 2201 - New and Modified Stationary Source Review Rule (NSR)**

District Rule 2201 has been amended since this facility's initial Title V permit was issued. This Title V permit renewal does not constitute a modification per section 3.26, defined as an action including at least one of the following items:

- 1) Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.
- 2) Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
- 3) An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
- 4) Addition of any new emissions unit which is subject to District permitting requirements.
- 5) A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

Therefore, the updated requirements of this rule are not applicable at this time.

### **C. District Rule 2410 - Prevention of Significant Deterioration (PSD)**

District Rule 2410 has been newly adopted since this Title V permit was last renewed. However the requirements of this rule are only triggered at

the time the source undergoes a modification. This source has never been subject to this rule, therefore there are no PSD permit applicable requirements to include in the Title V permit.

District Rule 2410 has been newly adopted since this Title V permit was last renewed. However the requirements of this rule are only triggered at the time the source undergoes a modification. All applicable requirements from any PSD permit actions have already been incorporated into the current Title V permit.

**D. District Rule 2520 - Federally Mandated Operating Permits**

No changes to this Rule have occurred since issuance of the previous TV permit; however, greenhouse gas emissions will be addressed under Rule 2520 during this renewal.

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

**E. 40 CFR Part 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. 40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Institutional Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction). Subpart Dc has standards for SO<sub>x</sub> and PM<sub>10</sub>. The facility's steam generator (S-1129-24) is subject to Subpart Dc requirements.

This subpart was amended 2/16/12.

The 2/16/12 amendment revised PM emission monitoring requirements. Steam generator S-1129-24 is gas-fired and therefore, not subject to the PM testing and monitoring requirements. No change to their permits is required as a result of the amendments; therefore, continued compliance with this regulation is expected

**F. 40 CFR Part 60, Subpart GG, Standard of Performance for Stationary Gas Turbines**

40 CFR Part 60 Subpart GG applies to stationary gas turbines with a heat input greater than 10.7 gigajoules per hour (10.2 MMBtu/hr) that commence construction, modification, or reconstruction after 10/03/77.



40 CFR Part 60 Subpart KKKK, Section 60.4305(b), states that stationary combustion turbines regulated under this subpart are exempt from the requirements of 40 CFR 60 Subpart GG.

The facility's gas turbines (S-1129-868 and '869) are regulated under 40 CFR Part 60 Subpart KKKK. Therefore the units are exempt from the requirements of 40 CFR Part 60 Subpart GG and no further discussion is required.

**G. 40 CFR Part 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution**

Subpart OOOO could potentially apply to tanks S-1129-865, '866 and '867. However, pursuant to section §60.5365(e), this subpart does not apply since the emissions from each of the tanks are estimated to be less than 6 tons per year. Therefore, the requirements of this subpart are not applicable to tanks S-1129-865, '866 and '867.

Tank S-1129-225 has VOC emissions estimated to be greater than 6 tons per year. However, pursuant §60.5365, the applicable provisions of this subpart only apply to tanks that commence construction, modification or reconstruction after August 23, 2011, and on or before September 18, 2015. Tank S-1129-225 commenced construction prior to 8/23/11 and has not undergone modification or reconstruction.

**H. 40 CFR Part 64 – Compliance Assurance Monitoring**

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

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

This regulation was last amended on 10/22/97; however, the Rule 2201 Major Source thresholds for NO<sub>x</sub> and VOC were lowered from 50,000 to 20,000 lb/year via the 12/18/08 amendment to Rule 2201 (the amended rule was not effective till 6/10/10). The previous Title V renewal (finalized on 1/17/12) evaluated all but permits S-1129-868 and '869 which were implemented on 6/6/12, at the 20,000 lb/year NO<sub>x</sub> and VOC thresholds; consequently, a CAM discussion is required for S-1129-868 and '869.

**Cogeneration Units: S-1129-868 and '869**

- 1) These units have emission limits for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, and VOC.
- 2) These units are served by a selective catalytic reduction (SCR) system to control NO<sub>x</sub> emissions. However, each of the units is equipped with a

Continuous Emissions Monitoring (CEM) system and they are therefore exempt from CAM requirements.

**I. 40 CFR Part 82, Subparts B and F, Stratospheric Ozone**

These regulations apply to servicing motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC). Sections of this regulation were amended in 2013, and conditions 27 and 28 of S-1129-0-4 assure compliance with the requirements.

**IX. PERMIT SHIELD**

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

**A. Requirements Addressed by Model General Permit Templates**

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

**X. CALIFORNIA ENVIRONMENTAL QUALITY ACT**

The purpose of the Title V permit renewal is to update the permit to ensure that any changes to regulations since the issuance of the initial Title V permit or most recent renewal of the Title V permit are incorporated as permit requirements.

Per the California Environmental Quality Act (CEQA) Statute §21080.24, and CEQA Guidelines §15281, the issuance, modification, amendment, or renewal of any permit by an air pollution control district or air quality management district pursuant to Title V is exempt from CEQA, unless the issuance, modification, amendment, or renewal authorizes a physical or operational change to a source or facility. There will be no physical or operational change to the source or facility nor will the Title V permit renewal authorize a physical or operational change to the source or facility. Therefore, this project, a Title V permit renewal, is subject to a ministerial action that is exempt from CEQA.

**XI. PERMIT CONDITIONS**

See Attachment A - Draft Renewed Title V Operating Permit.

**ATTACHMENTS**

- A. Draft Renewed Title V Operating Permit
- B. Previous Title V Operating Permit
- C. Detailed Summary List of Facility Permits

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# ATTACHMENT A

Draft Renewed Title V Operating Permit

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# San Joaquin Valley Air Pollution Control District

FACILITY: S-1129-0-4

EXPIRATION DATE: 02/29/2016

## FACILITY-WIDE REQUIREMENTS

1. {4362} The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. {4363} The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. {4364} The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. {4365} Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. {4366} The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. {4367} A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. {4368} Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. {4369} The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. {4370} The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: CHEVRON U S A INC  
Location: HEAVY OIL WESTERN, CA  
S-1129-0-4: Apr 24 2017 10:41AM - TORID

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

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FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
23. {4384} No person shall manufacture, blend, repack, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. In use includes, but is not limited to: being accessed, filled, emptied, maintained or repaired. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
25. {4386} The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. {4387} With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. {4388} If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. {4389} If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. {4390} Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
30. {4391} Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit
31. {4392} An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit
32. {4393} Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
33. {4394} Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

34. {4395} Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit
35. {4396} Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
36. {4397} The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. {4398} The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. {4399} When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. {4400} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. {4401} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {118} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
42. All permits for facilities S-1128, S-1129, S-1141, S-1549, and S-2592 are included in the Chevron USA, Inc. Heavy Oil Western stationary source. [District Rule 2201] Federally Enforceable Through Title V Permit
43. When applicable to 40 CFR Part 68, a subject facility shall submit to the proper authority a Risk Management Plan when mandated by the regulation. [40 CFR Part 68] Federally Enforceable Through Title V Permit
44. For vapor recovery systems connected to tanks with pressure relief valves, operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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45. For tanks equipped with pressure relief valves, operator shall inspect pressure relief valves for fugitive leaks annually in accordance with EPA Method 21, with the instrument calibrated with methane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. On June 30, 2002, the initial Title V permit was issued, the reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin July 1 of every year, unless alternative dates are approved by the District Compliance Division. These reports are due within 45 days of the end of reporting period. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-24-24

EXPIRATION DATE: 02/29/2016

SECTION: NE34 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

NON-COMPLIANT DORMANT 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE

## PERMIT UNIT REQUIREMENTS

1. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary permit changes and/or modifications required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320] Federally Enforceable Through Title V Permit
3. When designated as a dormant emissions unit, the permittee shall not be required to perform fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. Steam generator shall be equipped with a non-resettable, operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit unit: PTO S-1129-386. [District Rules 2201, 4406, and 4320; and CH&SC 41700] Federally Enforceable Through Title V Permit
7. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
8. Upon recommencing operation, permittee shall not exceed the following: PM10: 0.010 lb/MMBtu, SOx: 1.768 lb/MMBtu, VOC: 0.003 lb/MMBtu, [District Rule 2201] Federally Enforceable Through Title V Permit
9. Upon recommencing operation, permittee shall not exceed the following: NOx (as NO2): 0.0365 lb/MMBtu or 30 ppmv @ 3% O2 or CO: 0.0355 lb/MMBtu or 48 ppmv @ 3% O2, except during start-up or shutdown. [District Rules 2201] Federally Enforceable Through Title V Permit
10. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 22.1 lb-NOx/day, 1,095 lb-NOx/year, 0.084 lb-CO/MMBtu, 21.5 lb-CO/day, and 1,065 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 4306] Federally Enforceable Through Title V Permit
13. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 1070]
15. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Upon recommencing operation, permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content and higher heating value within 60 days of startup and at least once every 12 months. The sulfur content and higher heating value of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Upon recommencing operation, a source test to demonstrate compliance with NO<sub>x</sub> and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
19. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

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

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing to measure NO<sub>x</sub> and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, and 4306] Federally Enforceable Through Title V Permit
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4306] Federally Enforceable Through Title V Permit
24. The following test methods shall be used: NO<sub>x</sub> (ppmv) - EPA Method 7E or ARB Method 100, NO<sub>x</sub> (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM<sub>10</sub> - EPA Method 5, SO<sub>x</sub> (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H<sub>2</sub>S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H<sub>2</sub>S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, and 4306] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, and 4306] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent and the measured NO<sub>x</sub> and CO concentrations corrected to 3% O<sub>2</sub>, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2520, 9.3.2 and 4306] Federally Enforceable Through Title V Permit
28. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
29. An operating log shall be maintained for each unit of the group. The log shall include, on a monthly basis, the total hours of operation, type and quantity of fuel used, and preventative and corrective maintenance and modifications performed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4306] Federally Enforceable Through Title V Permit
32. {584} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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33. {468} The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-225-9

EXPIRATION DATE: 02/29/2016

SECTION: SW18 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

420,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK #10GM5 STA. L

## PERMIT UNIT REQUIREMENTS

1. Host vapor pressure (ROC - C2) of any organic liquid introduced to the tank shall not exceed 0.23 psia. [District Rule 4623, and District NSR Rule] Federally Enforceable Through Title V Permit
2. Daily volume of liquids introduced into tank shall not exceed 16,000 barrels on any given day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Annual volume of liquids introduced into tank shall not exceed 960,000 barrels per year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2 of District Rule 4623, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2] Federally Enforceable Through Title V Permit
5. The API gravity of crude oil or petroleum distillate shall be determined at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.2] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph" (Host Method), as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623, 6.2] Federally Enforceable Through Title V Permit
8. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
9. Permittee shall submit records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, API gravity, and throughput. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-385-16

EXPIRATION DATE: 02/29/2016

SECTION: SW17 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION PIPING NETWORK AND FLARE SERVING 40 OIL PRODUCTION WELLS (MCKITTRICK OILFIELD)

## PERMIT UNIT REQUIREMENTS

1. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit
2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
3. Well casing vents or downstream valves may be closed if wells are producing to tanks equipped with 99% vapor control or if the wells are idle. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
4. Fugitive VOC emissions from TEOR system including condensate collection and handling shall not exceed 29.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC limit listed above does not include components at the well-head up to the point of initial gas/liquid separation, or existing production handling or flow measurement facilities, or shown to be handling produced fluids with an API gravity less than 30 degrees or fluid streams containing more than 50% water (by weight) or with a VOC content of 10% (by weight) or less. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Components to be screened and counted for determining compliance with fugitive VOC limit listed above shall be identified and categorized according to the appropriate fluid types (gas or water/oil) in Table 2-4 of the EPA's "1995 Protocol for Equipment Leak Emission Estimates" (EPA-453/R-95-017) and the following component types: valves, fittings, threaded connections, open-ended lines, pumps, compressors, pressure relief devices, pipes, flanges, process drains, sealing mechanisms, hatches, sight-glasses, meters, or seal fluid systems. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The VOC content of the casing gas shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Maximum amount of gas combusted in flare shall not exceed 21.6 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NO<sub>x</sub> (as NO<sub>2</sub>): 0.068 lb/MMBtu; PM<sub>10</sub>: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur emissions from flare shall not exceed 49.4 lb SO<sub>2</sub>/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Operator shall conduct quarterly sampling of the well casing gas. If the gas sampled is 25% or less VOC by weight for eight consecutive quarterly samplings, the sampling frequency shall only be required annually. If a test shows noncompliance with the percent VOC requirement, the source must return to quarterly testing until eight consecutive quarters show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limit. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520] Federally Enforceable Through Title V Permit
15. Operation shall include condenser vessel, air-cooled heat exchanger, 500 barrel condensate vessel and 0.9 MMBtu/hr Sur-Lite Model 20 SLF enclosed flare. [District Rule 2201] Federally Enforceable Through Title V Permit
16. A flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
17. All vapors from condenser shall be incinerated in flare. [District Rule 2201] Federally Enforceable Through Title V Permit
18. A flame or heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be operational. [District Rule 4311] Federally Enforceable Through Title V Permit
19. Flame temperature of the flare shall be greater than 1200 degrees F or another temperature established during source testing which documents compliance with all emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Flare shall be equipped with operational fuel meters to measure quantity of PUC quality makeup gas and TEOR gas incinerated. [District Rule 2520] Federally Enforceable Through Title V Permit
21. If the flare is fired on noncertified gaseous fuel (including TEOR gas) and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using EPA Method 11 or 15, ASTM D 1072, D 3031, D 4084, D 3246, D6288, Double GC, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520] Federally Enforceable Through Title V Permit
22. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source (including TEOR gas) shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520] Federally Enforceable Through Title V Permit
23. Sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source test results shall be submitted to the District within 60 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
26. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

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



27. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4401] Federally Enforceable Through Title V Permit
29. Steam-enhanced crude oil production well vents shall be closed, except when temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, and the front line production equipment downstream of the wells that carry produced fluids be connected to a VOC collection and control system. Alternatively, steam-enhanced crude oil production well vents shall be open and the well vents connected to a VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
30. The operator shall be in violation of Rule 4401 if any District inspection, or operator inspection conducted as a requirement of this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401] Federally Enforceable Through Title V Permit
31. There shall not be an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
32. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
33. There shall be no components with major liquid leaks or with gas leaks greater than 50,000 ppmv. [District Rule 4401] Federally Enforceable Through Title V Permit
34. There shall not be more minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv than the following: 3 leaks for 1 - 25 wells, 6 leaks for 26 - 50 wells, 8 leaks for 51 - 100 wells, 10 leaks for 101 - 250 wells, 15 leaks for 251 - 500 wells, and 1 leak for each 20 wells (with a minimum of 50 wells test) for more than 500 wells connected to a VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

35. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
37. Except for pipes and unsafe-to-monitor components, all other components shall be inspected pursuant to the requirements of section 6.3.3 at least once every year. [District Rule 4401] Federally Enforceable Through Title V Permit
38. All pipes shall be visually inspected at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
39. The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401] Federally Enforceable Through Title V Permit
40. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
41. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. The operator shall inspect a component, other than PRDs, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
43. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The operator, upon detection of a leaking component, shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected and the date and time of the leak measurement. For gaseous leaks, the tag shall indicate the leak concentration in ppmv. For liquid leaks, the tag shall indicate whether it is a major liquid leak or a minor liquid leak. The tag shall indicate, when applicable, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. The tag shall remain in place until the leaking component is repaired or replaced and reinspected and found to be in compliance with the requirements of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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45. The operator shall minimize all component leaks immediately, to the extent possible, but not later than one hour after detection of the leak in order to stop or reduce leakage to the atmosphere. Except for leaking critical components or leaking essential components, if the leak has been minimized but the leak still exceeds the applicable leak standards specified in this permit, the operator shall do one of the following within the timeframes specified within this permit: 1) repair or replace the leaking component; 2) vent the leaking component to a closed vent system; 3) or remove the leaking component from operation. A closed vent system is a District approved system that is not open to the atmosphere. It is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a District approved control device that has a overall VOC collection and destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rule 4401] Federally Enforceable Through Title V Permit
46. The operator shall repair minor gas leaks within 14 days, major gas leaks which less than or equal to 50,000 ppmv within 5 days., major gas leaks which are greater than 50,000 ppmv within two days, minor liquid leaks within 3 days, and major liquid leaks within 2 days. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4401] Federally Enforceable Through Title V Permit
47. If a leaking component is an essential component or a critical component which cannot be shut down immediately for repairs, and after being minimized still exceeds the applicable leak standard, the operator shall repair or replace the component to eliminate the leak during the next process unit turnaround or no later than one year from the date of original leak detection, which ever is earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
49. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
50. The operator shall maintain copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
51. The results of periodic gauge tank TVP testing conducted shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
52. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
53. Except as elsewhere in this permit, the operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 44016] Federally Enforceable Through Title V Permit
54. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual control efficiency testing requirement if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare, or if the vapor collection and control does not have a VOC destruction device. [District Rule 4401] Federally Enforceable Through Title V Permit
55. An operator seeking approval a waiver of the annual control efficiency testing requirement shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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56. The operator shall conduct TVP testing of each gauge tank, as defined by Section 3.17 of Rule 4401, at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4401] Federally Enforceable Through Title V Permit
57. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
58. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
59. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
60. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
61. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
62. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description (the results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the OMP); a detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
63. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rules 4201 and 4801; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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64. Compliance with permit conditions in the Title V permit shall be deemed compliance with subsumed Kern County Rule 404. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit
65. Permittee shall maintain records of number and type of fugitive emissions components and calculated fugitive emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
66. Permittee shall keep accurate records of daily heat input to the flare in MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
67. Permittee shall maintain with this permit a current listing of all steam enhanced wells connected to the casing collection system and shall make such listing readily available for District inspection upon request. [District Rule 2520] Federally Enforceable Through Title V Permit
68. Daily records of TEOR gas and makeup gas consumed by flare shall be retained on site and shall be made readily available for District inspection upon request. [District Rule 2520] Federally Enforceable Through Title V Permit
69. Records of leaks detected during annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
70. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401] Federally Enforceable Through Title V Permit
71. All records required by this permit shall be maintained and retained for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

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DRAFT

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-386-21

EXPIRATION DATE: 02/29/2016

SECTION: 34 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION PIPING NETWORK SERVING 119 STEAM DRIVE WELLS, 1 CYCLIC WELL AND WET LACT SEPARATOR VESSEL/PERMIT S-1129-867 (NORTH MIDWAY)

## PERMIT UNIT REQUIREMENTS

1. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(as amended December 16, 1993). [District Rule 1081 and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
3. Well casing vents or downstream valves may be closed if wells are producing to tanks equipped with 99% vapor control or if the wells are idle. [District Rules 2201 and 4401, 5.5] Federally Enforceable Through Title V Permit
4. Fugitive emissions from TEOR system including condensate collection and handling shall not exceed 118.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC limit listed above does not include components at the well-head up to the point of initial gas/liquid separation, or existing production handling or flow measurement facilities, or shown to be handling produced fluids with an API gravity less than 30 degrees or fluid streams containing more than 50% water (by weight) or with a VOC content of 10% (by weight) or less. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Components to be screened and counted for determining compliance with fugitive VOC limit listed above shall be identified and categorized according to the appropriate fluid types (gas or water/oil) in Table 2-4 of the EPA's "1995 Protocol for Equipment Leak Emission Estimates" (EPA-453/R-95-017) and the following component types: valves, fittings, threaded connections, open-ended lines, pumps, compressors, pressure relief devices, pipes, flanges, process drains, sealing mechanisms, hatches, sight-glasses, meters, or seal fluid systems. [District Rule 2201] Federally Enforceable Through Title V Permit
7. TEOR operation with well vent vapor control system including: gas/liquid separators, water-cooled heat exchangers, fin-fan cooling towers, vacuum pumps with separators, liquid transfer pumps, casing gathering line, liquid traps and pumps, compressors, fin fan heat exchangers, 2-phase separators, and non-condensable gas line with liquid traps to existing incineration steam generator S-1129-24 or DOGGR approved vapor disposal wells. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Operation shall include condensate piping to existing crude oil wash tank. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Gas/liquid separators and condensate drums/tanks and all other equipment used to handle or store condensate shall be enclosed and shall vent only to vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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10. Water/VOC condensate from gas/liquid separators and condensate drums shall be pumped only to production manifold or to production facilities equipped with an operating vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Condensate storage/production wash tank shall be operated at a constant fluid level. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Collected vapors shall be disposed of in District approved incineration devices as listed on this permit or in Department of Oil, Gas and Geothermal Resources (DOGGR) approved vapor disposal wells. Permittee shall make copies of DOGGR approval for injection wells and make such documentation readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Permittee shall document Department of Oil & Gas Geothermal Resources approval for vapor disposal wells prior to injection of vapors. [District Rules 4401 and NSR] Federally Enforceable Through Title V Permit
14. Permittee shall cease injection vapors & notify the District immediately if DOGGR injection approval is revoked, denied, terminated, surrendered or altered to disallow injection. [District NSR Rule] Federally Enforceable Through Title V Permit
15. The VOC content of the casing gas shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Operator shall conduct quarterly sampling of the well casing gas. If the gas sampled is 25% or less VOC by weight for eight consecutive quarterly samplings, the sampling frequency shall only be required annually. If a test shows noncompliance with the percent VOC requirement, the source must return to quarterly testing until eight consecutive quarters show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
18. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
19. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Steam-enhanced crude oil production well vents shall be closed, except when temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, and the front line production equipment downstream of the wells that carry produced fluids be connected to a VOC collection and control system. Alternatively, steam-enhanced crude oil production well vents shall be open and the well vents connected to a VOC collection and control system. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
22. The operator shall be in violation of Rule 4401 if any District inspection, or operator inspection conducted as a requirement of this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401, 5.6.1] Federally Enforceable Through Title V Permit
23. There shall not be an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.6.2.1] Federally Enforceable Through Title V Permit
24. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
25. There shall be no components with major liquid leaks or with gas leaks greater than 50,000 ppmv. [District Rule 4401, 5.6.2.2 and 5.6.2.3] Federally Enforceable Through Title V Permit
26. There shall not be more minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv than the following: 3 leaks for 1 - 25 wells, 6 leaks for 26 - 50 wells, 8 leaks for 51 - 100 wells, 10 leaks for 101 - 250 wells, 15 leaks for 251 - 500 wells, and 1 leak for each 20 wells (with a minimum of 50 wells test) for more than 500 wells connected to a VOC collection and control system. [District Rule 4401, 5.6.2.4] Federally Enforceable Through Title V Permit
27. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.7.1] Federally Enforceable Through Title V Permit
28. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.7.2] Federally Enforceable Through Title V Permit
29. Except for pipes and unsafe-to-monitor components, all other components shall be inspected pursuant to the requirements of section 6.3.3 at least once every year. [District Rule 4401, 5.8.1] Federally Enforceable Through Title V Permit
30. All pipes shall be visually inspected at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.2] Federally Enforceable Through Title V Permit
31. The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401, 5.8.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.3.2] Federally Enforceable Through Title V Permit
33. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401, 5.8.4.1] Federally Enforceable Through Title V Permit
34. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. The operator shall inspect a component, other than PRDs, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.8.4.2, 5.8.4.3, 5.8.5] Federally Enforceable Through Title V Permit
35. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.8.6] Federally Enforceable Through Title V Permit
36. The operator, upon detection of a leaking component, shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected and the date and time of the leak measurement. For gaseous leaks, the tag shall indicate the leak concentration in ppmv. For liquid leaks, the tag shall indicate whether it is a major liquid leak or a minor liquid leak. The tag shall indicate, when applicable, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. The tag shall remain in place until the leaking component is repaired or replaced and reinspected and found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.1, 5.9.2] Federally Enforceable Through Title V Permit
37. The operator shall minimize all component leaks immediately, to the extent possible, but not later than one hour after detection of the leak in order to stop or reduce leakage to the atmosphere. Except for leaking critical components or leaking essential components, if the leak has been minimized but the leak still exceeds the applicable leak standards specified in this permit, the operator shall do one of the following within the timeframes specified within this permit: 1) repair or replace the leaking component; 2) vent the leaking component to a closed vent system; 3) or remove the leaking component from operation. A closed vent system is a District approved system that is not open to the atmosphere. It is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a District approved control device that has a overall VOC collection and destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rule 4401, 5.9.3, 5.9.4] Federally Enforceable Through Title V Permit
38. The operator shall repair minor gas leaks within 14 days, major gas leaks which less than or equal to 50,000 ppmv within 5 days., major gas leaks which are greater than 50,000 ppmv within two days, minor liquid leaks within 3 days, and major liquid leaks within 2 days. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4401, 5.9.4, 5.9.5, and 5.9.6] Federally Enforceable Through Title V Permit
39. If a leaking component is an essential component or a critical component which cannot be shut down immediately for repairs, and after being minimized still exceeds the applicable leak standard, the operator shall repair or replace the component to eliminate the leak during the next process unit turnaround or no later than one year from the date of original leak detection, which ever is earlier. [District Rule 4401, 5.9.7] Federally Enforceable Through Title V Permit
40. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
41. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

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42. The operator shall maintain copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.7, 6.1.8] Federally Enforceable Through Title V Permit
43. The results of periodic gauge tank TVP testing conducted shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
44. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit
45. Except as elsewhere in this permit, the operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
46. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual control efficiency testing requirement if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare, or if the vapor collection and control does not have a VOC destruction device. [District Rule 4401, 6.2.2, 6.2.3] Federally Enforceable Through Title V Permit
47. An operator seeking approval a waiver of the annual control efficiency testing requirement shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401, 6.2.4] Federally Enforceable Through Title V Permit
48. The operator shall conduct TVP testing of each gauge tank, as defined by Section 3.17 of Rule 4401, at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4401, 6.2.5] Federally Enforceable Through Title V Permit
49. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
50. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
51. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit

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52. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.5] Federally Enforceable Through Title V Permit
53. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
54. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description (the results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the OMP); a detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
55. Permittee shall maintain records of number and type of fugitive emissions components and calculated fugitive emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
56. Records of leaks detected during annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
57. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
58. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-864-13

EXPIRATION DATE: 02/29/2016

## EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH A MAXIMUM OF 200 CLOSED CASING VENT STEAM-ENHANCED WELLS AND PRODUCTION FACILITIES INCLUDING AUTOMATIC WELL TEST VESSEL(S), MASTER TRAP VESSEL, COMPRESSOR(S), COOLERS AND CHILLER(S) WITH VAPOR PIPING FROM '1-865 AND '1-866; AND TO TEOR PERMIT S-1128-116

## PERMIT UNIT REQUIREMENTS

1. Except for pressure relief streams, area drains, and pressure drains, produced fluids shall be routed to gas/liquid separation equipment prior to transfer to storage tank(s). Except for releases from pressure relief valves, vapors separated from fluids produced from any well associated with this operation shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above the ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
3. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
4. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All components not excluded from counting shall be identified and categorized according to the following component types: connectors, flanges, open-ended lines (sample connections, drains, bleed valves, etc.) pump seals, valves with visible actuators, polish rod stuffing boxes and other (pressure relief devices, compressor seals, meters, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit

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8. Fugitive components in crude oil service shall handle oil with API gravities less than 30 degrees as determined by ASTM Methods D-1298, or D-287 with D-4057. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall conduct gas sampling at McKittrick MCK-DIA-VOC sample point located between the Master Trap Vessel and the first liquid knockout vessel to qualify for exemption from fugitive component counts for components handling fluids with 10% or less VOC by weight. The testing required by permit S-1129-864 shall be used to demonstrate compliance, which is representative of all components downstream of the first liquid knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall demonstrate that any components in condensate service handle fluid streams that contain at least 50% water (by weight). If the components are shown to contain greater than 80% water (by weight), then no further demonstration will be required, otherwise annual analysis will be required. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content shall be tested using methods and procedures approved by the District and conducted under circumstances representative of normal operation. VOC content shall be analyzed using the latest version of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be done using CARB Method 422. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fugitive VOC emissions from TEOR operation shall not exceed 36.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC limit listed above does not include piping and components exempt from counting including: piping and components handling produced fluids with an API gravity less than 30 degrees, piping and components in water/oil service (water content greater than or equal to 50%), piping and components handling fluids having less than 10% VOC by weight, or existing production handling or flow measurement facilities. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Except for components specified above, permittee shall maintain with the permit accurate counts of fugitive components subject to counting by type and service and resulting emissions calculated using the average emissions factors in the USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, Table 2-4). [District Rule 2201] Federally Enforceable Through Title V Permit
15. Permittee shall maintain a current list of all thermally enhanced production wells associated with this operation and accurate records of fugitive inspection component counts of non-exempt components and leak inspection results, and make such records readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Permittee shall maintain a current listing of wells with a packer installed and include the label "Packer" on wells with packers. Wells with a packer are not subject to VOC emissions checks. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a written record of VOC content of the gas (sampled not less than annually) and location of sampling point. [District Rule 1070] Federally Enforceable Through Title V Permit
18. Well casing vents or downstream valves may be closed if wells are producing to tanks equipped with 99% vapor control or if the wells are idle. [District Rules 2201 and 4401, 5.4] Federally Enforceable Through Title V Permit
19. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
20. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
21. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
23. Steam-enhanced crude oil production well vents shall be closed, except when temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, and the front line production equipment downstream of the wells that carry produced fluids be connected to a VOC collection and control system. Alternatively, steam-enhanced crude oil production well vents shall be open and the well vents connected to a VOC collection and control system. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
24. The operator shall be in violation of Rule 4401 if any District inspection, or operator inspection conducted as a requirement of this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401, 5.6.1] Federally Enforceable Through Title V Permit
25. There shall not be an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.6.2.1] Federally Enforceable Through Title V Permit
26. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
27. There shall be no components with major liquid leaks or with gas leaks greater than 50,000 ppmv. [District Rule 4401, 5.6.2.2 and 5.6.2.3] Federally Enforceable Through Title V Permit
28. There shall not be more minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv than the following: 3 leaks for 1 - 25 wells, 6 leaks for 26 - 50 wells, 8 leaks for 51 - 100 wells, 10 leaks for 101 - 250 wells, 15 leaks for 251 - 500 wells, and 1 leak for each 20 wells (with a minimum of 50 wells test) for more than 500 wells connected to a VOC collection and control system. [District Rule 4401, 5.6.2.4] Federally Enforceable Through Title V Permit
29. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.7.1] Federally Enforceable Through Title V Permit

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30. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.7.2] Federally Enforceable Through Title V Permit
31. Except for pipes and unsafe-to-monitor components, all other components shall be inspected pursuant to the requirements of section 6.3.3 at least once every year. [District Rule 4401, 5.8.1] Federally Enforceable Through Title V Permit
32. All pipes shall be visually inspected at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.2] Federally Enforceable Through Title V Permit
33. The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401, 5.8.3.1] Federally Enforceable Through Title V Permit
34. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.3.2] Federally Enforceable Through Title V Permit
35. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401, 5.8.4.1] Federally Enforceable Through Title V Permit
36. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. The operator shall inspect a component, other than PRDs, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.8.4.2, 5.8.4.3, 5.8.5] Federally Enforceable Through Title V Permit
37. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.8.6] Federally Enforceable Through Title V Permit
38. The operator, upon detection of a leaking component, shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected and the date and time of the leak measurement. For gaseous leaks, the tag shall indicate the leak concentration in ppmv. For liquid leaks, the tag shall indicate whether it is a major liquid leak or a minor liquid leak. The tag shall indicate, when applicable, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. The tag shall remain in place until the leaking component is repaired or replaced and reinspected and found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.1, 5.9.2] Federally Enforceable Through Title V Permit
39. The operator shall minimize all component leaks immediately, to the extent possible, but not later than one hour after detection of the leak in order to stop or reduce leakage to the atmosphere. Except for leaking critical components or leaking essential components, if the leak has been minimized but the leak still exceeds the applicable leak standards specified in this permit, the operator shall do one of the following within the timeframes specified within this permit: 1) repair or replace the leaking component; 2) vent the leaking component to a closed vent system; 3) or remove the leaking component from operation. A closed vent system is a District approved system that is not open to the atmosphere. It is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a District approved control device that has a overall VOC collection and destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rule 4401, 5.9.3, 5.9.4] Federally Enforceable Through Title V Permit

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40. The operator shall repair minor gas leaks within 14 days, major gas leaks which less than or equal to 50,000 ppmv within 5 days., major gas leaks which are greater than 50,000 ppmv within two days, minor liquid leaks within 3 days, and major liquid leaks within 2 days. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4401, 5.9.4, 5.9.5, and 5.9.6] Federally Enforceable Through Title V Permit
41. If a leaking component is an essential component or a critical component which cannot be shut down immediately for repairs, and after being minimized still exceeds the applicable leak standard, the operator shall repair or replace the component to eliminate the leak during the next process unit turnaround or no later than one year from the date of original leak detection, which ever is earlier. [District Rule 4401, 5.9.7] Federally Enforceable Through Title V Permit
42. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
43. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
44. The operator shall maintain copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.7, 6.1.8] Federally Enforceable Through Title V Permit
45. The results of periodic gauge tank TVP testing conducted shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
46. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit
47. Except as elsewhere in this permit, the operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
48. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual control efficiency testing requirement if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare, or if the vapor collection and control does not have a VOC destruction device. [District Rule 4401, 6.2.2, 6.2.3] Federally Enforceable Through Title V Permit
49. An operator seeking approval a waiver of the annual control efficiency testing requirement shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401, 6.2.4] Federally Enforceable Through Title V Permit
50. The operator shall conduct TVP testing of each gauge tank, as defined by Section 3.17 of Rule 4401, at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4401, 6.2.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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51. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
52. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
53. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
54. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.5] Federally Enforceable Through Title V Permit
55. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
56. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description (the results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the OMP); a detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
57. Records of leaks detected during annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
58. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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59. All records required by this permit shall be maintained and retained for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-865-5

EXPIRATION DATE: 02/29/2016

SECTION: SW18 TOWNSHIP: 30S RANGE: 22E

**EQUIPMENT DESCRIPTION:**

1110 BBL GAS/LIQUID SEPARATOR V-100 VENTED TO TEOR SYSTEM S-1129-864

## PERMIT UNIT REQUIREMENTS

1. Equipment may include a compressor, or a compressor and chiller. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall comply in full with all applicable Rule 4401 requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Except for releases from pressure relief valve(s), vapors separated from fluid handled by vessel shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above the ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
5. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Fugitive components in crude oil service shall handle oil with API gravities less than 30 degrees as determined by ASTM Methods D-1298, or D-287 with D-4057. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Permittee shall demonstrate that any components in condensate service handle fluid streams that contain at least 50% water (by weight). If the components are shown to contain greater than 80% water (by weight), then no further demonstration will be required, otherwise annual analysis will be required. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content shall be tested using methods and procedures approved by the District and conducted under circumstances representative of normal operation. VOC content shall be analyzed using the latest version of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be done using CARB Method 422. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of fugitive leak inspection results. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operator shall conduct gas sampling at McKittrick MCK-DIA-VOC sample point located between the Master Trap Vessel and the first liquid knockout vessel to qualify for exemption from fugitive component counts for components handling fluids with 10% or less VOC by weight. The testing required by permit S-1129-864 shall be used to demonstrate compliance, which is representative of all components downstream of the first liquid knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain a written record of VOC content of the gas (sampled not less than annually). Testing performed for permit S-1129-864 shall be deemed representative of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-866-4

EXPIRATION DATE: 02/29/2016

**EQUIPMENT DESCRIPTION:**

906 BBL GAS/LIQUID SEPARATOR VESSEL V-200 VENTED TO TEOR SYSTEM S-1129-864

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## PERMIT UNIT REQUIREMENTS

1. Equipment may include a compressor, or a compressor and chiller. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall comply in full with all applicable Rule 4401 requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Except for releases from pressure relief valve(s), vapors separated from fluid handled by vessel shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above the ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
5. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Fugitive components in crude oil service shall handle oil with API gravities less than 30 degrees as determined by ASTM Methods D-1298, or D-287 with D-4057. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Permittee shall demonstrate that any components in condensate service handle fluid streams that contain at least 50% water (by weight). If the components are shown to contain greater than 80% water (by weight), then no further demonstration will be required, otherwise annual analysis will be required. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content shall be tested using methods and procedures approved by the District and conducted under circumstances representative of normal operation. VOC content shall be analyzed using the latest version of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be done using CARB Method 422. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of fugitive leak inspection results. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operator shall conduct gas sampling at McKittrick MCK-DIA-VOC sample point located between the Master Trap Vessel and the first liquid knockout vessel to qualify for exemption from fugitive component counts for components handling fluids with 10% or less VOC by weight. The testing required by permit S-1129-864 shall be used to demonstrate compliance, which is representative of all components downstream of the first liquid knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain a written record of VOC content of the gas (sampled not less than annually). Testing performed for permit S-1129-864 shall be deemed representative of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-867-3

EXPIRATION DATE: 02/29/2016

## EQUIPMENT DESCRIPTION:

1190 BBL (49,980 GALLONS) (12.5 FT DIA X 50 FT) HEAVY CRUDE OIL WET LACT SEPARATOR VESSEL AND ASSOCIATED PIPING AND COMPONENTS, VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1129-386

## PERMIT UNIT REQUIREMENTS

1. Except for releases from pressure relief valve(s), vapors separated from fluid handled by vessel shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All gas/light liquid components to be screened shall be identified and categorized according to the following equipment types: connectors, flanges, open-ended lines (sample connections, drains, bleed valves, etc.), pump seals, valves with visible actuators, polish rod stuffing boxes and other (pressure relief devices, compressor seals, meters, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vapor service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
8. Maximum VOC content of vapor in the vessel vapor control system shall not exceed 50% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

9. Fugitive VOC emissions from components in vapor service shall not exceed 10.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain with the permit accurate fugitive component counts of vapor handling equipment and resulting emissions calculated using the average fugitive emissions factors in the USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, Table 2-4). [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling. If gas samples are less than 50% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content by weight percent (wt. %) shall be determined using ASTM D1945 for gases and SCAQMD Method 304 or the latest revision of ASTM Method E168, E169, or E260 for liquids. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain records of the VOC content of vapor in the vessel vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-868-1

EXPIRATION DATE: 02/29/2016

SECTION: 18 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

5.285 MW (NOMINAL RATING) GAS TURBINE ENGINE COGENERATION UNIT #1 (MCKITTRICK) EQUIPPED WITH: 63 MMBTU/HR (NOMINAL) SOLAR TAURUS 60-7901 GAS TURBINE ENGINE (GTE); HEAT RECOVERY STEAM GENERATOR (HRSG) WITH A 40 MMBTU/HR (NOMINAL) DUCT BURNER; WATER INJECTION SYSTEM FOR INTERMEDIATE NOX CONTROL; SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMV NOX @ 15% O2; OXIDATION CATALYST FOR CO CONTROL; AND SHARED CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO, AND O2 CONCENTRATIONS

## PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content in the fuel being combusted shall not exceed 0.71 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
5. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
6. If the gas turbine system is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.4360, 40 CFR 60.4365(a), 40 CFR 60.4370(c)] Federally Enforceable Through Title V Permit
7. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
8. Upon concluding the initial shakedown period, emissions from the gas turbine system, except during periods of startup, shutdown, and black start, shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 29 ppmvd CO @ 15% O2; 0.013 lb-PM10/MMBtu; 0.024 lb-VOC/MMBtu referenced as methane; and 0.00233 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 3-hour rolling average period. If unit is in either startup, shutdown, or black start mode during any portion of a clock hour, the unit will not be subject to the ppmvd limits for NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
9. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 64.1 lb-NOx/day referenced as NO2; 1,658.9 lb-CO/day; 5.8 lb-SOx/day; 32.1 lb-PM10/day; 138.8 lb-VOC/day referenced as methane; and 70.2 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 16,615 lb-NOx/year; 65,810 lb-CO/year; 2,102 lb-SOx/year; 11,730 lb-PM10/year; 22,052 lb-VOC/year; 25,637 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine systems (S-1129-868, '-869) at least once every seven years. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmvd @ 15% O2) during normal operation shall be conducted annually. [District Rules 2201 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
19. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
20. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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21. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, and 40 CFR 60.4400 (1)(i)] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NO<sub>x</sub>, CO, and O<sub>2</sub> concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.4340(b)(1) and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
24. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
25. The NO<sub>x</sub>, CO and O<sub>2</sub> CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
26. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-868, '-869), and rotate the unit tested so that the two units are tested over two years, 2) annual RAA testing for the one gas turbine engine for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
28. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
29. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
30. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
33. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 40 CFR 60.4375(a) and 40 CFR 60.4395] Federally Enforceable Through Title V Permit
34. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.4380(b)(2)] Federally Enforceable Through Title V Permit
35. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H2S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit
36. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit
37. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
38. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
39. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
40. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
41. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
42. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
43. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
44. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

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

45. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, the type and quantity of fuel used, duration of each start-up (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit
46. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; SJVUAPCD Rule 4703 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.2, 6.4.3, and 6.4.5; 60.4320(a); 40 CFR 60.4330(a)(2); 40 CFR 60.4340(b)(1); 40 CFR 60.4345(a) and (b); 40 CFR 60.4350; 40 CFR 60.4360; 40 CFR 60.4365(a); 40 CFR 60.4370(c); 40 CFR 60.4375(a); 40 CFR 60.4380(b)(2); 40 CFR 60.4395; 40 CFR 60.4400(a); 40 CFR 60.4400(1)(i); and 40 CFR 60.4415(a)(1)(i). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-869-1

EXPIRATION DATE: 02/29/2016

SECTION: 18 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

5.285 MW (NOMINAL RATING) GAS TURBINE ENGINE COGENERATION UNIT #2 (MCKITTRICK) EQUIPPED WITH: 63 MMBTU/HR (NOMINAL) SOLAR TAURUS 60-7901 GAS TURBINE ENGINE (GTE); HEAT RECOVERY STEAM GENERATOR (HRSG) WITH A 40 MMBTU/HR (NOMINAL) DUCT BURNER; WATER INJECTION SYSTEM FOR INTERMEDIATE NOX CONTROL; SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMV NOX @ 15% O2; OXIDATION CATALYST FOR CO CONTROL; AND SHARED CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO, AND O2 CONCENTRATIONS

## PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content in the fuel being combusted shall not exceed 0.71 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
5. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
6. If the gas turbine system is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.4360, 40 CFR 60.4365(a), 40 CFR 60.4370(c)] Federally Enforceable Through Title V Permit
7. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
8. Upon concluding the initial shakedown period, emissions from the gas turbine system, except during periods of startup, shutdown, and black start, shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 29 ppmvd CO @ 15% O2; 0.013 lb-PM10/MMBtu; 0.024 lb-VOC/MMBtu referenced as methane; and 0.00233 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 3-hour rolling average period. If unit is in either startup, shutdown, or black start mode during any portion of a clock hour, the unit will not be subject to the ppmvd limits for NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
9. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 64.1 lb-NOx/day referenced as NO2; 1,658.9 lb-CO/day; 5.8 lb-SOx/day; 32.1 lb-PM10/day; 138.8 lb-VOC/day referenced as methane; and 70.2 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 16,615 lb-NOx/year; 65,810 lb-CO/year; 2,102 lb-SOx/year; 11,730 lb-PM10/year; 22,052 lb-VOC/year; 25,637 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine systems (S-1129-868, '-869) at least once every seven years. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmvd @ 15% O2) during normal operation shall be conducted annually. [District Rules 2201 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
19. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
20. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit

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

21. The following test methods shall be used: NOx - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, and 40 CFR 60.4400 (1)(i)] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.4340(b)(1) and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
24. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
25. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
26. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-868, '869), and rotate the unit tested so that the two units are tested over two years, 2) annual RAA testing for the one gas turbine engine for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
28. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
29. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
30. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



32. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
33. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 40 CFR 60.4375(a) and 40 CFR 60.4395] Federally Enforceable Through Title V Permit
34. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.4380(b)(2)] Federally Enforceable Through Title V Permit
35. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H2S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit
36. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit
37. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
38. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
39. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
40. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
41. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
42. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
43. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
44. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

45. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, the type and quantity of fuel used, duration of each start-up (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit
46. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; SJVUAPCD Rule 4703 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.2, 6.4.3, and 6.4.5; 60.4320(a); 40 CFR 60.4330(a)(2); 40 CFR 60.4340(b)(1); 40 CFR 60.4345(a) and (b); 40 CFR 60.4350; 40 CFR 60.4360; 40 CFR 60.4365(a); 40 CFR 60.4370(c); 40 CFR 60.4375(a); 40 CFR 60.4380(b)(2); 40 CFR 60.4395; 40 CFR 60.4400(a); 40 CFR 60.4400(1)(i); and 40 CFR 60.4415(a)(1)(i). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

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# ATTACHMENT B

Previous Title V Operating Permit

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# San Joaquin Valley Air Pollution Control District

FACILITY: S-1129-0-3

EXPIRATION DATE: 02/29/2016

## FACILITY-WIDE REQUIREMENTS

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1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: CHEVRON U S A INC  
Location: HEAVY OIL WESTERN, CA  
S-1129-0-3 - Apr 24 2017 10:37AM - TORID

10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit
22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. In use includes, but is not limited to: being accessed, filled, emptied, maintained or repaired. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
25. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
30. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit
31. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit
32. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
33. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit
34. Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit
35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permit shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
42. All permits for facilities S-1128, S-1129, S-1141, S-1549, and S-2592 are included in the Chevron USA, Inc. Heavy Oil Western stationary source. [District Rule 2201] Federally Enforceable Through Title V Permit
43. When applicable to 40 CFR Part 68, a subject facility shall submit to the proper authority a Risk Management Plan when mandated by the regulation. [40 CFR Part 68] Federally Enforceable Through Title V Permit
44. For vapor recovery systems connected to tanks with pressure relief valves, operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. For tanks equipped with pressure relief valves, operator shall inspect pressure relief valves for fugitive leaks annually in accordance with EPA Method 21, with the instrument calibrated with methane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. On June 30, 2002, the initial Title V permit was issued, the reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin July 1 of every year, unless alternative dates are approved by the District Compliance Division. These reports are due within 45 days of the end of reporting period. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1129-24-21

**EXPIRATION DATE:** 02/29/2016

**SECTION:** NE34 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

NON-COMPLIANT DORMANT 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE

## PERMIT UNIT REQUIREMENTS

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1. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary permit changes and/or modifications required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320] Federally Enforceable Through Title V Permit
3. When designated as a dormant emissions unit, the permittee shall not be required to perform fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, tuning, and monitoring requirements. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. Steam generator shall be equipped with a non-resettable, operational gas volume flowmeter that measures the combined fuel gas and vapor recovery gas volume sent to the steam generator. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. The operator shall fire the unit only on natural gas and vapor recovery gas from the following permit unit: PTO S-1129-386. [District Rules 2201, 4406, and 4320; and CH&SC 41700] Federally Enforceable Through Title V Permit
7. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
8. Upon recommencing operation, permittee shall not exceed the following: PM10: 0.010 lb/MMBtu, SOx: 1.768 lb/MMBtu, VOC: 0.003 lb/MMBtu, [District Rule 2201] Federally Enforceable Through Title V Permit
9. Upon recommencing operation, permittee shall not exceed the following: NOx (as NO2): 0.0365 lb/MMBtu or 30 ppmv @ 3% O2 or CO: 0.0355 lb/MMBtu or 48 ppmv @ 3% O2, except during start-up or shutdown. [District Rules 2201] Federally Enforceable Through Title V Permit
10. Including startup and shutdown periods, maximum emissions from the steam generator shall not exceed any of the following limits: 0.1 lb-NOx/MMBtu, 22.1 lb-NOx/day, 1,095 lb-NOx/year, 0.084 lb-CO/MMBtu, 21.5 lb-CO/day, and 1,065 lb-CO/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of startup or shutdown shall not exceed two hours each per occurrence. The emissions control system shall be in operation and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



12. Permittee shall maintain records of duration of each start-up and shutdown that exceeds two hours. Startup is defined as the period of time to reach operating temperature and pressure once fuel is supplied, including the time required by the emission control system to reach full operation. Shutdown is defined as the period of time taken from operating temperature and pressure until the fuel supply is completely turned off. [District Rules 4306] Federally Enforceable Through Title V Permit
13. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 1070]
15. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Upon recommencing operation, permittee shall submit an analysis to the District demonstrating compliance with the fuel sulfur content and higher heating value within 60 days of startup and at least once every 12 months. The sulfur content and higher heating value of the fuel shall be determined using the test methods referenced in this permit or certified by a third party fuel supplier. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Upon recommencing operation, a source test to demonstrate compliance with NO<sub>x</sub> and CO emission limits shall be performed within 60 days of startup of this unit. [District Rules 2201] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit
19. If either the NO<sub>x</sub> or CO concentrations corrected to 3% O<sub>2</sub>, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2520, 9.3.2 and 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, and 4306] Federally Enforceable Through Title V Permit
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 2201 and 4306] Federally Enforceable Through Title V Permit
24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture - EPA Method 4, PM10 - EPA Method 5, SOx (lb/MMBtu) - EPA Method 6C or 8 or ARB Method 100, or fuel gas sulfur content analysis (as H2S) - EPA Method 11 or 15 or ASTM D6228 and (as total sulfur) - ASTM D1072, D3246, or D6228, or grab sample analysis by double GC for H2S and mercaptans, performed in the laboratory, fuel hhv (MMBtu) - ASTM D 1826 or D 1945 (as methane) in conjunction with ASTM D 3588. [District Rules 1081, 2201, and 4306] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 2201, 2520, and 4306] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 2520, 9.3.2 and 4306] Federally Enforceable Through Title V Permit
28. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
29. An operating log shall be maintained for each unit of the group. The log shall include, on a monthly basis, the total hours of operation, type and quantity of fuel used, and preventative and corrective maintenance and modifications performed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4306] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

33. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-225-8

EXPIRATION DATE: 02/29/2016

SECTION: SW18 TOWNSHIP: 30S RANGE: 22E

**EQUIPMENT DESCRIPTION:**

420,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK #10GM5 STA. L

## PERMIT UNIT REQUIREMENTS

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1. Host vapor pressure (ROC - C2) of any organic liquid introduced to the tank shall not exceed 0.23 psia. [District Rule 4623, and District NSR Rule] Federally Enforceable Through Title V Permit
2. Daily volume of liquids introduced into tank shall not exceed 16,000 barrels on any given day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Annual volume of liquids introduced into tank shall not exceed 960,000 barrels per year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank, or a representative tank as provided in Section 6.2 of District Rule 4623, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2] Federally Enforceable Through Title V Permit
5. The API gravity of crude oil or petroleum distillate shall be determined at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.2] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph" (Host Method), as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623, 6.2] Federally Enforceable Through Title V Permit
8. Instead of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP test of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
9. Permittee shall submit records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, API gravity, and throughput. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. All records required to be maintained by this permit shall be maintained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-1129-385-15

**EXPIRATION DATE:** 02/29/2016

**SECTION:** SW17 **TOWNSHIP:** 30S **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION PIPING NETWORK AND FLARE SERVING 40 OIL PRODUCTION WELLS (MCKITTRICK OILFIELD); INCORPORATE FACILITY COMMENTS

## PERMIT UNIT REQUIREMENTS

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1. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit
2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(as amended December 16, 1993). [District Rule 1081 and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
3. Well casing vents or downstream valves may be closed if wells are producing to tanks equipped with 99% vapor control or if the wells are idle. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
4. Fugitive VOC emissions from TEOR system including condensate collection and handling shall not exceed 29.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC limit listed above does not include components at the well-head up to the point of initial gas/liquid separation, or existing production handling or flow measurement facilities, or shown to be handling produced fluids with an API gravity less than 30 degrees or fluid streams containing more than 50% water (by weight) or with a VOC content of 10% (by weight) or less. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Components to be screened and counted for determining compliance with fugitive VOC limit listed above shall be identified and categorized according to the appropriate fluid types (gas or water/oil) in Table 2-4 of the EPA's "1995 Protocol for Equipment Leak Emission Estimates" (EPA-453/R-95-017) and the following component types: valves, fittings, threaded connections, open-ended lines, pumps, compressors, pressure relief devices, pipes, flanges, process drains, sealing mechanisms, hatches, sight-glasses, meters, or seal fluid systems. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The VOC content of the casing gas shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Maximum amount of gas combusted in flare shall not exceed 21.6 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as NO2): 0.068 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur emissions from flare shall not exceed 49.4 lb SO2/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Operator shall conduct quarterly sampling of the well casing gas. If the gas sampled is 25% or less VOC by weight for eight consecutive quarterly samplings, the sampling frequency shall only be required annually. If a test shows noncompliance with the percent VOC requirement, the source must return to quarterly testing until eight consecutive quarters show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The higher heating value of the flared gas shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limit. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520] Federally Enforceable Through Title V Permit
15. Operation shall include condenser vessel, air-cooled heat exchanger, 500 barrel condensate vessel and 0.9 MMBtu/hr Sur-Lite Model 20 SLF enclosed flare. [District Rule 2201] Federally Enforceable Through Title V Permit
16. A flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
17. All vapors from condenser shall be incinerated in flare. [District Rule 2201] Federally Enforceable Through Title V Permit
18. A flame or heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be operational. [District Rule 4311] Federally Enforceable Through Title V Permit
19. Flame temperature of the flare shall be greater than 1200 degrees F or another temperature established during source testing which documents compliance with all emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Flare shall be equipped with operational fuel meters to measure quantity of PUC quality makeup gas and TEOR gas incinerated. [District Rule 2520] Federally Enforceable Through Title V Permit
21. If the flare is fired on noncertified gaseous fuel (including TEOR gas) and compliance with SO<sub>x</sub> emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using EPA Method 11 or 15, ASTM D 1072, D 3031, D 4084, D 3246, D6288, Double GC, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520] Federally Enforceable Through Title V Permit
22. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source (including TEOR gas) shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance with the sulfur limits can be demonstrated for 8 consecutive weeks for a fuel source. [District Rule 2520] Federally Enforceable Through Title V Permit
23. Sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H<sub>2</sub>S and Mercaptans. H<sub>2</sub>S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source test results shall be submitted to the District within 60 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
26. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4401] Federally Enforceable Through Title V Permit
29. Steam-enhanced crude oil production well vents shall be closed, except when temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, and the front line production equipment downstream of the wells that carry produced fluids be connected to a VOC collection and control system. Alternatively, steam-enhanced crude oil production well vents shall be open and the well vents connected to a VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
30. The operator shall be in violation of Rule 4401 if any District inspection, or operator inspection conducted as a requirement of this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401] Federally Enforceable Through Title V Permit
31. There shall not be an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
32. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
33. There shall be no components with major liquid leaks or with gas leaks greater than 50,000 ppmv. [District Rule 4401] Federally Enforceable Through Title V Permit
34. There shall not be more minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv than the following: 3 leaks for 1 - 25 wells, 6 leaks for 26 - 50 wells, 8 leaks for 51 - 100 wells, 10 leaks for 101 - 250 wells, 15 leaks for 251 - 500 wells, and 1 leak for each 20 wells (with a minimum of 50 wells test) for more than 500 wells connected to a VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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35. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
37. Except for pipes and unsafe-to-monitor components, all other components shall be inspected pursuant to the requirements of section 6.3.3 at least once every year. [District Rule 4401] Federally Enforceable Through Title V Permit
38. All pipes shall be visually inspected at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
39. The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401] Federally Enforceable Through Title V Permit
40. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
41. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. The operator shall inspect a component, other than PRDs, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
43. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The operator, upon detection of a leaking component, shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected and the date and time of the leak measurement. For gaseous leaks, the tag shall indicate the leak concentration in ppmv. For liquid leaks, the tag shall indicate whether it is a major liquid leak or a minor liquid leak. The tag shall indicate, when applicable, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. The tag shall remain in place until the leaking component is repaired or replaced and reinspected and found to be in compliance with the requirements of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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45. The operator shall minimize all component leaks immediately, to the extent possible, but not later than one hour after detection of the leak in order to stop or reduce leakage to the atmosphere. Except for leaking critical components or leaking essential components, if the leak has been minimized but the leak still exceeds the applicable leak standards specified in this permit, the operator shall do one of the following within the timeframes specified within this permit: 1) repair or replace the leaking component; 2) vent the leaking component to a closed vent system; 3) or remove the leaking component from operation. A closed vent system is a District approved system that is not open to the atmosphere. It is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a District approved control device that has a overall VOC collection and destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rule 4401] Federally Enforceable Through Title V Permit
46. The operator shall repair minor gas leaks within 14 days, major gas leaks which less than or equal to 50,000 ppmv within 5 days., major gas leaks which are greater than 50,000 ppmv within two days, minor liquid leaks within 3 days, and major liquid leaks within 2 days. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4401] Federally Enforceable Through Title V Permit
47. If a leaking component is an essential component or a critical component which cannot be shut down immediately for repairs, and after being minimized still exceeds the applicable leak standard, the operator shall repair or replace the component to eliminate the leak during the next process unit turnaround or no later than one year from the date of original leak detection, which ever is earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
49. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
50. The operator shall maintain copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
51. The results of periodic gauge tank TVP testing conducted shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
52. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
53. Except as elsewhere in this permit, the operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 44016] Federally Enforceable Through Title V Permit
54. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual control efficiency testing requirement if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare, or if the vapor collection and control does not have a VOC destruction device. [District Rule 4401] Federally Enforceable Through Title V Permit
55. An operator seeking approval a waiver of the annual control efficiency testing requirement shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The operator shall conduct TVP testing of each gauge tank, as defined by Section 3.17 of Rule 4401, at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4401] Federally Enforceable Through Title V Permit
57. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
58. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
59. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
60. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
61. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
62. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description (the results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the OMP); a detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
63. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rules 4201 and 4801; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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64. Compliance with permit conditions in the Title V permit shall be deemed compliance with subsumed Kern County Rule 404. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit
65. Permittee shall maintain records of number and type of fugitive emissions components and calculated fugitive emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
66. Permittee shall keep accurate records of daily heat input to the flare in MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
67. Permittee shall maintain with this permit a current listing of all steam enhanced wells connected to the casing collection system and shall make such listing readily available for District inspection upon request. [District Rule 2520] Federally Enforceable Through Title V Permit
68. Daily records of TEOR gas and makeup gas consumed by flare shall be retained on site and shall be made readily available for District inspection upon request. [District Rule 2520] Federally Enforceable Through Title V Permit
69. Records of leaks detected during annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
70. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401] Federally Enforceable Through Title V Permit
71. All records required by this permit shall be maintained and retained for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-386-17

EXPIRATION DATE: 02/29/2016

SECTION: 34 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION PIPING NETWORK SERVING 119 STEAM DRIVE WELLS, 1 CYCLIC WELL AND WET LACT SEPARATOR VESSEL/PERMIT S-1129-867 (NORTH MIDWAY)

## PERMIT UNIT REQUIREMENTS

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1. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
3. Well casing vents or downstream valves may be closed if wells are producing to tanks equipped with 99% vapor control or if the wells are idle. [District Rules 2201 and 4401, 5.5] Federally Enforceable Through Title V Permit
4. Fugitive emissions from TEOR system including condensate collection and handling shall not exceed 118.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC limit listed above does not include components at the well-head up to the point of initial gas/liquid separation, or existing production handling or flow measurement facilities, or shown to be handling produced fluids with an API gravity less than 30 degrees or fluid streams containing more than 50% water (by weight) or with a VOC content of 10% (by weight) or less. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Components to be screened and counted for determining compliance with fugitive VOC limit listed above shall be identified and categorized according to the appropriate fluid types (gas or water/oil) in Table 2-4 of the EPA's "1995 Protocol for Equipment Leak Emission Estimates" (EPA-453/R-95-017) and the following component types: valves, fittings, threaded connections, open-ended lines, pumps, compressors, pressure relief devices, pipes, flanges, process drains, sealing mechanisms, hatches, sight-glasses, meters, or seal fluid systems. [District Rule 2201] Federally Enforceable Through Title V Permit
7. TEOR operation with well vent vapor control system including: gas/liquid separators, water-cooled heat exchangers, fin-fan cooling towers, vacuum pumps with separators, liquid transfer pumps, casing gathering line, liquid traps and pumps, compressors, fin fan heat exchangers, 2-phase separators, and non-condensable gas line with liquid traps to existing incineration steam generator S-1129-24 or DOGGR approved vapor disposal wells. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Operation shall include condensate piping to existing crude oil wash tank. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Gas/liquid separators and condensate drums/tanks and all other equipment used to handle or store condensate shall be enclosed and shall vent only to vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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10. Water/VOC condensate from gas/liquid separators and condensate drums shall be pumped only to production manifold or to production facilities equipped with an operating vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Condensate storage/production wash tank shall be operated at a constant fluid level. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Collected vapors shall be disposed of in District approved incineration devices as listed on this permit or in Department of Oil, Gas and Geothermal Resources (DOGGR) approved vapor disposal wells. Permittee shall make copies of DOGGR approval for injection wells and make such documentation readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Permittee shall document Department of Oil & Gas Geothermal Resources approval for vapor disposal wells prior to injection of vapors. [District Rules 4401 and NSR] Federally Enforceable Through Title V Permit
14. Permittee shall cease injection vapors & notify the District immediately if DOGGR injection approval is revoked, denied, terminated, surrendered or altered to disallow injection. [District NSR Rule] Federally Enforceable Through Title V Permit
15. The VOC content of the casing gas shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Operator shall conduct quarterly sampling of the well casing gas. If the gas sampled is 25% or less VOC by weight for eight consecutive quarterly samplings, the sampling frequency shall only be required annually. If a test shows noncompliance with the percent VOC requirement, the source must return to quarterly testing until eight consecutive quarters show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
18. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
19. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Steam-enhanced crude oil production well vents shall be closed, except when temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, and the front line production equipment downstream of the wells that carry produced fluids be connected to a VOC collection and control system. Alternatively, steam-enhanced crude oil production well vents shall be open and the well vents connected to a VOC collection and control system. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
22. The operator shall be in violation of Rule 4401 if any District inspection, or operator inspection conducted as a requirement of this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401, 5.6.1] Federally Enforceable Through Title V Permit
23. There shall not be an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.6.2.1] Federally Enforceable Through Title V Permit
24. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
25. There shall be no components with major liquid leaks or with gas leaks greater than 50,000 ppmv. [District Rule 4401, 5.6.2.2 and 5.6.2.3] Federally Enforceable Through Title V Permit
26. There shall not be more minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv than the following: 3 leaks for 1 - 25 wells, 6 leaks for 26 - 50 wells, 8 leaks for 51 - 100 wells, 10 leaks for 101 - 250 wells, 15 leaks for 251 - 500 wells, and 1 leak for each 20 wells (with a minimum of 50 wells test) for more than 500 wells connected to a VOC collection and control system. [District Rule 4401, 5.6.2.4] Federally Enforceable Through Title V Permit
27. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.7.1] Federally Enforceable Through Title V Permit
28. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.7.2] Federally Enforceable Through Title V Permit
29. Except for pipes and unsafe-to-monitor components, all other components shall be inspected pursuant to the requirements of section 6.3.3 at least once every year. [District Rule 4401, 5.8.1] Federally Enforceable Through Title V Permit
30. All pipes shall be visually inspected at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.2] Federally Enforceable Through Title V Permit
31. The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401, 5.8.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.3.2] Federally Enforceable Through Title V Permit
33. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401, 5.8.4.1] Federally Enforceable Through Title V Permit
34. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. The operator shall inspect a component, other than PRDs, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.8.4.2, 5.8.4.3, 5.8.5] Federally Enforceable Through Title V Permit
35. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.8.6] Federally Enforceable Through Title V Permit
36. The operator, upon detection of a leaking component, shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected and the date and time of the leak measurement. For gaseous leaks, the tag shall indicate the leak concentration in ppmv. For liquid leaks, the tag shall indicate whether it is a major liquid leak or a minor liquid leak. The tag shall indicate, when applicable, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. The tag shall remain in place until the leaking component is repaired or replaced and reinspected and found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.1, 5.9.2] Federally Enforceable Through Title V Permit
37. The operator shall minimize all component leaks immediately, to the extent possible, but not later than one hour after detection of the leak in order to stop or reduce leakage to the atmosphere. Except for leaking critical components or leaking essential components, if the leak has been minimized but the leak still exceeds the applicable leak standards specified in this permit, the operator shall do one of the following within the timeframes specified within this permit: 1) repair or replace the leaking component; 2) vent the leaking component to a closed vent system; 3) or remove the leaking component from operation. A closed vent system is a District approved system that is not open to the atmosphere. It is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a District approved control device that has a overall VOC collection and destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rule 4401, 5.9.3, 5.9.4] Federally Enforceable Through Title V Permit
38. The operator shall repair minor gas leaks within 14 days, major gas leaks which less than or equal to 50,000 ppmv within 5 days., major gas leaks which are greater than 50,000 ppmv within two days, minor liquid leaks within 3 days, and major liquid leaks within 2 days. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4401, 5.9.4, 5.9.5, and 5.9.6] Federally Enforceable Through Title V Permit
39. If a leaking component is an essential component or a critical component which cannot be shut down immediately for repairs, and after being minimized still exceeds the applicable leak standard, the operator shall repair or replace the component to eliminate the leak during the next process unit turnaround or no later than one year from the date of original leak detection, which ever is earlier. [District Rule 4401, 5.9.7] Federally Enforceable Through Title V Permit
40. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
41. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

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42. The operator shall maintain copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.7, 6.1.8] Federally Enforceable Through Title V Permit
43. The results of periodic gauge tank TVP testing conducted shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
44. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit
45. Except as elsewhere in this permit, the operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
46. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual control efficiency testing requirement if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare, or if the vapor collection and control does not have a VOC destruction device. [District Rule 4401, 6.2.2, 6.2.3] Federally Enforceable Through Title V Permit
47. An operator seeking approval a waiver of the annual control efficiency testing requirement shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401, 6.2.4] Federally Enforceable Through Title V Permit
48. The operator shall conduct TVP testing of each gauge tank, as defined by Section 3.17 of Rule 4401, at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4401, 6.2.5] Federally Enforceable Through Title V Permit
49. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
50. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
51. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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52. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.5] Federally Enforceable Through Title V Permit
53. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
54. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description (the results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the OMP); a detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
55. Permittee shall maintain records of number and type of fugitive emissions components and calculated fugitive emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
56. Records of leaks detected during annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
57. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
58. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-864-12

EXPIRATION DATE: 02/29/2016

## EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WITH A MAXIMUM OF 200 CLOSED CASING VENT STEAM-ENHANCED WELLS AND PRODUCTION FACILITIES INCLUDING AUTOMATIC WELL TEST VESSEL(S), MASTER TRAP VESSEL, COMPRESSOR(S), COOLERS AND CHILLER(S) WITH VAPOR PIPING FROM '1-865 AND '1-866; AND TO TEOR PERMIT S-1128-116

## PERMIT UNIT REQUIREMENTS

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1. Except for pressure relief streams, area drains, and pressure drains, produced fluids shall be routed to gas/liquid separation equipment prior to transfer to storage tank(s). Except for releases from pressure relief valves, vapors separated from fluids produced from any well associated with this operation shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above the ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
3. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
4. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All components not excluded from counting shall be identified and categorized according to the following component types: connectors, flanges, open-ended lines (sample connections, drains, bleed valves, etc.) pump seals, valves with visible actuators, polish rod stuffing boxes and other ( pressure relief devices, compressor seals, meters, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit

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8. Fugitive components in crude oil service shall handle oil with API gravities less than 30 degrees as determined by ASTM Methods D-1298, or D-287 with D-4057. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall conduct gas sampling at McKittrick MCK-DIA-VOC sample point located between the Master Trap Vessel and the first liquid knockout vessel to qualify for exemption from fugitive component counts for components handling fluids with 10% or less VOC by weight. The testing required by permit S-1129-864 shall be used to demonstrate compliance, which is representative of all components downstream of the first liquid knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall demonstrate that any components in condensate service handle fluid streams that contain at least 50% water (by weight). If the components are shown to contain greater than 80% water (by weight), then no further demonstration will be required, otherwise annual analysis will be required. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content shall be tested using methods and procedures approved by the District and conducted under circumstances representative of normal operation. VOC content shall be analyzed using the latest version of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be done using CARB Method 422. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fugitive VOC emissions from TEOR operation shall not exceed 36.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC limit listed above does not include piping and components exempt from counting including: piping and components handling produced fluids with an API gravity less than 30 degrees, piping and components in water/oil service (water content greater than or equal to 50%), piping and components handling fluids having less than 10% VOC by weight, or existing production handling or flow measurement facilities. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Except for components specified above, permittee shall maintain with the permit accurate counts of fugitive components subject to counting by type and service and resulting emissions calculated using the average emissions factors in the USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, Table 2-4). [District Rule 2201] Federally Enforceable Through Title V Permit
15. Permittee shall maintain a current list of all thermally enhanced production wells associated with this operation and accurate records of fugitive inspection component counts of non-exempt components and leak inspection results, and make such records readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Permittee shall maintain a current listing of wells with a packer installed and include the label "Packer" on wells with packers. Wells with a packer are not subject to VOC emissions checks. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a written record of VOC content of the gas (sampled not less than annually) and location of sampling point. [District Rule 1070] Federally Enforceable Through Title V Permit
18. Well casing vents or downstream valves may be closed if wells are producing to tanks equipped with 99% vapor control or if the wells are idle. [District Rules 2201 and 4401, 5.4] Federally Enforceable Through Title V Permit
19. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
20. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
21. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
23. Steam-enhanced crude oil production well vents shall be closed, except when temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, and the front line production equipment downstream of the wells that carry produced fluids be connected to a VOC collection and control system. Alternatively, steam-enhanced crude oil production well vents shall be open and the well vents connected to a VOC collection and control system. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
24. The operator shall be in violation of Rule 4401 if any District inspection, or operator inspection conducted as a requirement of this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401, 5.6.1] Federally Enforceable Through Title V Permit
25. There shall not be an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.6.2.1] Federally Enforceable Through Title V Permit
26. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
27. There shall be no components with major liquid leaks or with gas leaks greater than 50,000 ppmv. [District Rule 4401, 5.6.2.2 and 5.6.2.3] Federally Enforceable Through Title V Permit
28. There shall not be more minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv than the following: 3 leaks for 1 - 25 wells, 6 leaks for 26 - 50 wells, 8 leaks for 51 - 100 wells, 10 leaks for 101 - 250 wells, 15 leaks for 251 - 500 wells, and 1 leak for each 20 wells (with a minimum of 50 wells test) for more than 500 wells connected to a VOC collection and control system. [District Rule 4401, 5.6.2.4] Federally Enforceable Through Title V Permit
29. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.7.1] Federally Enforceable Through Title V Permit

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30. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.7.2] Federally Enforceable Through Title V Permit
31. Except for pipes and unsafe-to-monitor components, all other components shall be inspected pursuant to the requirements of section 6.3.3 at least once every year. [District Rule 4401,5.8.1] Federally Enforceable Through Title V Permit
32. All pipes shall be visually inspected at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.2] Federally Enforceable Through Title V Permit
33. The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401, 5.8.3.1] Federally Enforceable Through Title V Permit
34. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.3.2] Federally Enforceable Through Title V Permit
35. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401, 5.8.4.1] Federally Enforceable Through Title V Permit
36. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. The operator shall inspect a component, other than PRDs, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.8.4.2, 5.8.4.3, 5.8.5] Federally Enforceable Through Title V Permit
37. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.8.6] Federally Enforceable Through Title V Permit
38. The operator, upon detection of a leaking component, shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected and the date and time of the leak measurement. For gaseous leaks, the tag shall indicate the leak concentration in ppmv. For liquid leaks, the tag shall indicate whether it is a major liquid leak or a minor liquid leak. The tag shall indicate, when applicable, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. The tag shall remain in place until the leaking component is repaired or replaced and reinspected and found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.1, 5.9.2] Federally Enforceable Through Title V Permit
39. The operator shall minimize all component leaks immediately, to the extent possible, but not later than one hour after detection of the leak in order to stop or reduce leakage to the atmosphere. Except for leaking critical components or leaking essential components, if the leak has been minimized but the leak still exceeds the applicable leak standards specified in this permit, the operator shall do one of the following within the timeframes specified within this permit: 1) repair or replace the leaking component; 2) vent the leaking component to a closed vent system; 3) or remove the leaking component from operation. A closed vent system is a District approved system that is not open to the atmosphere. It is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a District approved control device that has a overall VOC collection and destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rule 4401, 5.9.3, 5.9.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

40. The operator shall repair minor gas leaks within 14 days, major gas leaks which less than or equal to 50,000 ppmv within 5 days., major gas leaks which are greater than 50,000 ppmv within two days, minor liquid leaks within 3 days, and major liquid leaks within 2 days. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4401, 5.9.4, 5.9.5, and 5.9.6] Federally Enforceable Through Title V Permit
41. If a leaking component is an essential component or a critical component which cannot be shut down immediately for repairs, and after being minimized still exceeds the applicable leak standard, the operator shall repair or replace the component to eliminate the leak during the next process unit turnaround or no later than one year from the date of original leak detection, which ever is earlier. [District Rule 4401, 5.9.7] Federally Enforceable Through Title V Permit
42. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
43. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
44. The operator shall maintain copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.7, 6.1.8] Federally Enforceable Through Title V Permit
45. The results of periodic gauge tank TVP testing conducted shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
46. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit
47. Except as elsewhere in this permit, the operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
48. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual control efficiency testing requirement if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare, or if the vapor collection and control does not have a VOC destruction device. [District Rule 4401, 6.2.2, 6.2.3] Federally Enforceable Through Title V Permit
49. An operator seeking approval a waiver of the annual control efficiency testing requirement shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401, 6.2.4] Federally Enforceable Through Title V Permit
50. The operator shall conduct TVP testing of each gauge tank, as defined by Section 3.17 of Rule 4401, at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Rule 4623 (Storage of Organic Liquids). [District Rule 4401, 6.2.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

51. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
52. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
53. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
54. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.5] Federally Enforceable Through Title V Permit
55. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
56. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description (the results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the OMP); a detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
57. Records of leaks detected during annual operator inspections, and each subsequent repair and re-inspection, shall be submitted to the District, ARB, and EPA upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
58. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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59. All records required by this permit shall be maintained and retained for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-865-4

EXPIRATION DATE: 02/29/2016

SECTION: SW18 TOWNSHIP: 30S RANGE: 22E

**EQUIPMENT DESCRIPTION:**

1110 BBL GAS/LIQUID SEPARATOR V-100 VENTED TO TEOR SYSTEM S-1129-864

## PERMIT UNIT REQUIREMENTS

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1. Equipment may include a compressor, or a compressor and chiller. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall comply in full with all applicable Rule 4401 requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Except for releases from pressure relief valve(s), vapors separated from fluid handled by vessel shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above the ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
5. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Fugitive components in crude oil service shall handle oil with API gravities less than 30 degrees as determined by ASTM Methods D-1298, or D-287 with D-4057. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. Permittee shall demonstrate that any components in condensate service handle fluid streams that contain at least 50% water (by weight). If the components are shown to contain greater than 80% water (by weight), then no further demonstration will be required, otherwise annual analysis will be required. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content shall be tested using methods and procedures approved by the District and conducted under circumstances representative of normal operation. VOC content shall be analyzed using the latest version of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be done using CARB Method 422. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of fugitive leak inspection results. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operator shall conduct gas sampling at McKittrick MCK-DIA-VOC sample point located between the Master Trap Vessel and the first liquid knockout vessel to qualify for exemption from fugitive component counts for components handling fluids with 10% or less VOC by weight. The testing required by permit S-1129-864 shall be used to demonstrate compliance, which is representative of all components downstream of the first liquid knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain a written record of VOC content of the gas (sampled not less than annually). Testing performed for permit S-1129-864 shall be deemed representative of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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



# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-866-3

EXPIRATION DATE: 02/29/2016

**EQUIPMENT DESCRIPTION:**

906 BBL GAS/LIQUID SEPARATOR VESSEL V-200 VENTED TO TEOR SYSTEM S-1129-864

## PERMIT UNIT REQUIREMENTS

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1. Equipment may include a compressor, or a compressor and chiller. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall comply in full with all applicable Rule 4401 requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Except for releases from pressure relief valve(s), vapors separated from fluid handled by vessel shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above the ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
5. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Fugitive components in crude oil service shall handle oil with API gravities less than 30 degrees as determined by ASTM Methods D-1298, or D-287 with D-4057. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



10. Permittee shall demonstrate that any components in condensate service handle fluid streams that contain at least 50% water (by weight). If the components are shown to contain greater than 80% water (by weight), then no further demonstration will be required, otherwise annual analysis will be required. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC content shall be tested using methods and procedures approved by the District and conducted under circumstances representative of normal operation. VOC content shall be analyzed using the latest version of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be done using CARB Method 422. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee shall maintain accurate records of fugitive leak inspection results. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operator shall conduct gas sampling at McKittrick MCK-DIA-VOC sample point located between the Master Trap Vessel and the first liquid knockout vessel to qualify for exemption from fugitive component counts for components handling fluids with 10% or less VOC by weight. The testing required by permit S-1129-864 shall be used to demonstrate compliance, which is representative of all components downstream of the first liquid knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain a written record of VOC content of the gas (sampled not less than annually). Testing performed for permit S-1129-864 shall be deemed representative of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-867-2

EXPIRATION DATE: 02/29/2016

## EQUIPMENT DESCRIPTION:

1190 BBL (49,980 GALLONS) (12.5 FT DIA X 50 FT) HEAVY CRUDE OIL WET LACT SEPARATOR VESSEL AND ASSOCIATED PIPING AND COMPONENTS, VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1129-386

## PERMIT UNIT REQUIREMENTS

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1. Except for releases from pressure relief valve(s), vapors separated from fluid handled by vessel shall be handled only in closed and/or vapor controlled production equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All vapor and condensate service piping, fittings, and valves dedicated to the vapor recovery system shall be maintained in a gas-tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background shall be considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emissions from components which have been tagged by the facility operator for repair within 15 days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. An operator shall reinspect a component for leaks within working 30 days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All gas/light liquid components to be screened shall be identified and categorized according to the following equipment types: connectors, flanges, open-ended lines (sample connections, drains, bleed valves, etc.), pump seals, valves with visible actuators, polish rod stuffing boxes and other (pressure relief devices, compressor seals, meters, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit
6. A facility operator, upon detection of a leaking component, shall affix to that component not immediately repaired a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vapor service piping, fittings, and valves dedicated to the vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201] Federally Enforceable Through Title V Permit
8. Maximum VOC content of vapor in the vessel vapor control system shall not exceed 50% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



9. Fugitive VOC emissions from components in vapor service shall not exceed 10.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain with the permit accurate fugitive component counts of vapor handling equipment and resulting emissions calculated using the average fugitive emissions factors in the USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, Table 2-4). [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling. If gas samples are less than 50% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content by weight percent (wt. %) shall be determined using ASTM D1945 for gases and SCAQMD Method 304 or the latest revision of ASTM Method E168, E169, or E260 for liquids. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain records of the VOC content of vapor in the vessel vapor control system, including date and test results. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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



# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-868-0

EXPIRATION DATE: 02/29/2016

SECTION: 18 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

5.285 MW (NOMINAL RATING) GAS TURBINE ENGINE COGENERATION UNIT #1 (MCKITTRICK) EQUIPPED WITH: 63 MMBTU/HR (NOMINAL) SOLAR TAURUS 60-7901 GAS TURBINE ENGINE (GTE); HEAT RECOVERY STEAM GENERATOR (HRSG) WITH A 40 MMBTU/HR (NOMINAL) DUCT BURNER; WATER INJECTION SYSTEM FOR INTERMEDIATE NOX CONTROL; SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMV NOX @ 15% O2; OXIDATION CATALYST FOR CO CONTROL; AND SHARED CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO, AND O2 CONCENTRATIONS

## PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content in the fuel being combusted shall not exceed 0.71 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
5. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
6. If the gas turbine system is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.4360, 40 CFR 60.4365(a), 40 CFR 60.4370(c)] Federally Enforceable Through Title V Permit
7. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
8. Upon concluding the initial shakedown period, emissions from the gas turbine system, except during periods of startup, shutdown, and black start, shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 29 ppmvd CO @ 15% O2; 0.013 lb-PM10/MMBtu; 0.024 lb-VOC/MMBtu referenced as methane; and 0.00233 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 3-hour rolling average period. If unit is in either startup, shutdown, or black start mode during any portion of a clock hour, the unit will not be subject to the ppmvd limits for NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
9. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 64.1 lb-NOx/day referenced as NO2; 1,658.9 lb-CO/day; 5.8 lb-SOx/day; 32.1 lb-PM10/day; 138.8 lb-VOC/day referenced as methane; and 70.2 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



10. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 16,615 lb-NOx/year; 65,810 lb-CO/year; 2,102 lb-SOx/year; 11,730 lb-PM10/year; 22,052 lb-VOC/year; 25,637 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine systems (S-1129-868, -869) at least once every seven years. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmvd @ 15% O2) during normal operation shall be conducted annually. [District Rules 2201 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
19. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
20. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. The following test methods shall be used: NO<sub>x</sub> - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM<sub>10</sub> - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O<sub>2</sub> - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, and 40 CFR 60.4400 (1)(i)] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NO<sub>x</sub>, CO, and O<sub>2</sub> concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.4340(b)(1) and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
24. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
25. The NO<sub>x</sub>, CO and O<sub>2</sub> CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
26. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-868, '-869), and rotate the unit tested so that the two units are tested over two years, 2) annual RAA testing for the one gas turbine engine for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
28. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
29. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
30. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
33. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 40 CFR 60.4375(a) and 40 CFR 60.4395] Federally Enforceable Through Title V Permit
34. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.4380(b)(2)] Federally Enforceable Through Title V Permit
35. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H2S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit
36. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit
37. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
38. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
39. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
40. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
41. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
42. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
43. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
44. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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45. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, the type and quantity of fuel used, duration of each start-up (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit
46. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; SJVUAPCD Rule 4703 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.2, 6.4.3, and 6.4.5; 60.4320(a); 40 CFR 60.4330(a)(2); 40 CFR 60.4340(b)(1); 40 CFR 60.4345(a) and (b); 40 CFR 60.4350; 40 CFR 60.4360; 40 CFR 60.4365(a); 40 CFR 60.4370(c); 40 CFR 60.4375(a); 40 CFR 60.4380(b)(2); 40 CFR 60.4395; 40 CFR 60.4400(a); 40 CFR 60.4400(1)(i); and 40 CFR 60.4415(a)(1)(i). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1129-869-0

EXPIRATION DATE: 02/29/2016

SECTION: 18 TOWNSHIP: 30S RANGE: 22E

## EQUIPMENT DESCRIPTION:

5.285 MW (NOMINAL RATING) GAS TURBINE ENGINE COGENERATION UNIT #2 (MCKITTRICK) EQUIPPED WITH: 63 MMBTU/HR (NOMINAL) SOLAR TAURUS 60-7901 GAS TURBINE ENGINE (GTE); HEAT RECOVERY STEAM GENERATOR (HRSG) WITH A 40 MMBTU/HR (NOMINAL) DUCT BURNER; WATER INJECTION SYSTEM FOR INTERMEDIATE NOX CONTROL; SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMV NOX @ 15% O2; OXIDATION CATALYST FOR CO CONTROL; AND SHARED CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO, AND O2 CONCENTRATIONS

## PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content in the fuel being combusted shall not exceed 0.71 grains/100 scf, otherwise, the fuel shall be of PUC-regulated quality. [District Rule 2201] Federally Enforceable Through Title V Permit
5. If the gas turbine system is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520] Federally Enforceable Through Title V Permit
6. If the gas turbine system is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.4360, 40 CFR 60.4365(a), 40 CFR 60.4370(c)] Federally Enforceable Through Title V Permit
7. HHV and LHV of the fuel shall be determined by using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703] Federally Enforceable Through Title V Permit
8. Upon concluding the initial shakedown period, emissions from the gas turbine system, except during periods of startup, shutdown, and black start, shall not exceed any of the following limits: 5 ppmvd NOx @ 15% O2 referenced as NO2; 29 ppmvd CO @ 15% O2; 0.013 lb-PM10/MMBtu; 0.024 lb-VOC/MMBtu referenced as methane; and 0.00233 lb-SOx/MMBtu referenced as SO2. NOx and CO emission limits are based on 3-hour rolling average period. If unit is in either startup, shutdown, or black start mode during any portion of a clock hour, the unit will not be subject to the ppmvd limits for NOx and CO during that clock hour. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
9. Upon concluding the initial shakedown period, emissions from the gas turbine system shall not exceed any of the following limits: 64.1 lb-NOx/day referenced as NO2; 1,658.9 lb-CO/day; 5.8 lb-SOx/day; 32.1 lb-PM10/day; 138.8 lb-VOC/day referenced as methane; and 70.2 lb-NH3/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Upon concluding the initial shakedown period, the emissions from the gas turbine system shall not exceed any of the following limits: 16,615 lb-NOx/year; 65,810 lb-CO/year; 2,102 lb-SOx/year; 11,730 lb-PM10/year; 22,052 lb-VOC/year; 25,637 lb-NH3/year. All annual emission limits are based on 12 consecutive month rolling emissions totals. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Each three hour rolling average will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each calendar month in a twelve consecutive month rolling emissions total shall commence at the beginning of the first day of the month. The twelve consecutive month rolling emissions totals used to determine compliance with annual emission limits shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Source testing to measure start-up mass emission rates of NOx, CO, and VOC shall be conducted for one of the gas turbine systems (S-1129-868, '-869) at least once every seven years. CEMS relative accuracy shall be determined during source testing in accordance with the procedure listed in 40 CFR Part 60, Appendix F with any necessary changes approved by the District. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing to determine compliance with the NOx, CO and NH3 emission rates (ppmvd @ 15% O2) during normal operation shall be conducted annually. [District Rules 2201 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
19. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
20. For the purpose of determining compliance with the emissions limits (ppmvd @ 15% O2) during normal operation in this permit, the arithmetic mean of three test runs shall apply, unless two of the three results are above an applicable limit. If two of three runs are above the applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. The following test methods shall be used: NOx - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, and 40 CFR 60.4400 (1)(i)] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The owner or operator shall install, certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) which continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns, provided that CEMS passes the relative accuracy requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS-2) and District approved protocol for startups. If relative accuracy of CEMS cannot be demonstrated during the startup, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from the source test conducted by the facility to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.4340(b)(1) and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
24. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
25. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2), or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit
26. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CEMS must be audited at least once each calendar quarter. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The requirements in 40 CFR 60, Appendix F, shall be met through the following EPA and District approved modified procedures: 1) annual RATA testing of at least one gas turbine engine (S-1129-868, '-869), and rotate the unit tested so that the two units are tested over two years, 2) annual RAA testing for the one gas turbine engine for which the annual RATA testing is not performed, 3) if any of the gas turbine engines fail the RAA testing, they must have a RATA test within 60 days, and 4) for every quarter that RATA or RAA testing is not performed, a CGA is to be performed for each gas turbine engine. [District Rule 1080] Federally Enforceable Through Title V Permit
28. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
29. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
30. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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32. The permittee shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
33. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 40 CFR 60.4375(a) and 40 CFR 60.4395] Federally Enforceable Through Title V Permit
34. Monitor downtime for NOx shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOx concentration or diluent O2 (or both). [40 CFR 60.4380(b)(2)] Federally Enforceable Through Title V Permit
35. If the gas turbine system is not fired on PUC-regulated or FERC-regulated natural gas, then a fuel sample shall be collected during the source test to determine sulfur content of the fuel combusted in the turbine. The fuel sample shall be analyzed for the total sulfur content using ASTM D1072; D3246; D4084; D4468; D6228; or D6667; or double GC for H2S and mercaptans. The applicable ranges of some ASTM methods are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of dilution ratio) may be used after getting a prior approval from the District. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit
36. A totalizing mass or volumetric fuel flow computer shall be utilized and maintained to calculate the amount of natural gas combusted based on measured flow meter parameters (fuel pressure and temperature) and gas composition. [District Rule 4703] Federally Enforceable Through Title V Permit
37. Except during black start, start-up shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
38. Shutdown shall not exceed 2.0 hours per event. [District Rule 4703] Federally Enforceable Through Title V Permit
39. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup (black start) and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
40. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703] Federally Enforceable Through Title V Permit
41. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
42. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
43. A black start event is defined as the startup of a unit while the cogen plant is electrically separated from the utility grid. A black start shall not exceed 4.0 hours per event. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
44. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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45. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, the type and quantity of fuel used, duration of each start-up (or black start) and each shutdown time period. [District Rule 4703] Federally Enforceable Through Title V Permit
46. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407; SJVUAPCD Rule 4703 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.2, 6.4.3, and 6.4.5; 60.4320(a); 40 CFR 60.4330(a)(2); 40 CFR 60.4340(b)(1); 40 CFR 60.4345(a) and (b); 40 CFR 60.4350; 40 CFR 60.4360; 40 CFR 60.4365(a); 40 CFR 60.4370(c); 40 CFR 60.4375(a); 40 CFR 60.4380(b)(2); 40 CFR 60.4395; 40 CFR 60.4400(a); 40 CFR 60.4400(1)(i); and 40 CFR 60.4415(a)(1)(i). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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





# PROJECT ROUTING FORM

FACILITY NAME: Chevron U S A Inc

FACILITY ID: S-1129 PROJECT NUMBER: S-1171631

PERMIT #'s: \_\_\_\_\_

DATE RECEIVED: April 17, 2017

PRELIMINARY REVIEW	ENGR	DATE	SUPR	DATE
A. Application Deemed Incomplete				
Second Information Letter				
B. Application Deemed Complete				
C. Application Pending Denial				
D. Application Denied				

ENGINEERING EVALUATION	INITIAL	DATE
E. Engineering Evaluation Complete <ul style="list-style-type: none"> <li>• Project triggering Federal Major Modification:               <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes AND Information entered into database (AirNet)</li> <li><input type="checkbox"/> No (not Fed MMod)</li> </ul> </li> <li>• District is Lead Agency for CEQA purposes AND the project GHG emissions increase exceeds 230 metric tons/year:               <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes AND Information Entered in database (AirNet)</li> <li><input type="checkbox"/> Not Required</li> </ul> </li> </ul>		
F. Supervising Engineer Approval Direct Convert <input type="checkbox"/> Yes <input type="checkbox"/> No		
G. Compliance Division Approval <input type="checkbox"/> Not Required		
H. Applicant's Review of Draft Authority to Construct Completed <ul style="list-style-type: none"> <li><input type="checkbox"/> 3-day Review</li> <li><input type="checkbox"/> 10-day Review</li> <li><input type="checkbox"/> No Review Requested</li> </ul>		
I. Minor source with emission increase and SSPE2 > 80% major source threshold: <ul style="list-style-type: none"> <li><input type="checkbox"/> Yes – send ATC synthetic minor letter and copy of ATC to EPA, <input type="checkbox"/> No</li> </ul>		
J. Permit Services Regional Manager Approval		

DIRECTOR REVIEW <input type="checkbox"/> Not Required	INITIAL	DATE
K. Preliminary Approval to Director		
L. Final Approval to Director		







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# ATTACHMENT C

Detailed Summary List of Facility Permits

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**Detailed Facility Report**

For Facility=1129, excluding Deleted Permits and excluding CMP Only Facilities  
Sorted by Facility Name and Permit Number

CHEVRON U S A INC HEAVY OIL WESTERN CA	FAC # STATUS: TELEPHONE:	S 1129 A	TYPE: TOXIC ID:	50307	EXPIRE ON: AREA: INSP. DATE:	02/29/2016 101 / 21 06/17
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PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
S-1129-24-21	25.2 MMBtu/hr	3020-02 H	1	1,128.00	1,128.00	A	NON-COMPLIANT DORMANT 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED C.E. NATCO STEAM GENERATOR (HSG #60; DIS# 20754-66) WITH O2 ANALYZER/CONTROLLER, NORTH AMERICAN BURNER, AND FLUE GAS RECIRCULATION - DERBY ACRES LEASE
S-1129-225-8	420,000 gallons	3020-05 E	1	270.00	270.00	A	420,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK #10GM5 STA. L
S-1129-385-15	40 wells	3020-09 A	40	10.23	409.20	A	MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION PIPING NETWORK AND FLARE SERVING 40 OIL PRODUCTION WELLS (MCKITTRICK OILFIELD); INCORPORATE FACILITY COMMENTS
S-1129-386-17	120 wells	3020-09 A	120	10.23	1,227.60	A	THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION PIPING NETWORK SERVING 119 STEAM DRIVE WELLS, 1 CYCLIC WELL AND WET LACT SEPARATOR VESSEL/PERMIT S-1129-867 (NORTH MIDWAY)
S-1129-864-12	200 TEOR wells	3020-09 B	200	10.23	1,533.00	A	THERMALLY ENHANCED OIL RECOVERY OPERATION WITH A MAXIMUM OF 200 CLOSED CASING VENT STEAM-ENHANCED WELLS AND PRODUCTION FACILITIES INCLUDING AUTOMATIC WELL TEST VESSEL(S), MASTER TRAP VESSEL, COMPRESSOR(S), COOLERS AND CHILLER(S) WITH VAPOR PIPING FROM *-865 AND *-866; AND TO TEOR PERMIT S-1128-116
S-1129-865-4	46,620 gallons	3020-05 C	1	149.00	149.00	A	1110 BBL GAS/LIQUID SEPARATOR V-100 VENTED TO TEOR SYSTEM S-1129-864
S-1129-866-3	38,052 gallons	3020-05 C	1	149.00	149.00	A	906 BBL GAS/LIQUID SEPARATOR VESSEL V-200 VENTED TO TEOR SYSTEM S-1129-864
S-1129-867-2	49,980 gallons	3020-05 C	1	149.00	149.00	A	1190 BBL (49,980 GALLONS) (12.5 FT DIA X 50 FT) HEAVY CRUDE OIL WET LACT SEPARATOR VESSEL AND ASSOCIATED PIPING AND COMPONENTS, VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1129-386
S-1129-868-0	5,285 MW	3020-08A D	1	3,351.00	3,351.00	A	5,285 MW (NOMINAL RATING) GAS TURBINE ENGINE COGENERATION UNIT #1 (MCKITTRICK) EQUIPPED WITH: 63 MMBTU/HR (NOMINAL) SOLAR TAURUS 60-7901 GAS TURBINE ENGINE (GTE); HEAT RECOVERY STEAM GENERATOR (HRSG) WITH A 40 MMBTU/HR (NOMINAL) DUCT BURNER; WATER INJECTION SYSTEM FOR INTERMEDIATE NOX CONTROL; SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMV NOX @ 15% O2; OXIDATION CATALYST FOR CO CONTROL; AND SHARED CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO, AND O2 CONCENTRATIONS





**Detailed Facility Report**

For Facility=1129, excluding Deleted Permits and excluding CMP Only Facilities  
Sorted by Facility Name and Permit Number

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
S-1129-869-0	5.285 MW	3020-08A D	1	3,351.00	3,351.00	A	5.285 MW (NOMINAL RATING) GAS TURBINE ENGINE COGENERATION UNIT #2 (MCKITTRICK) EQUIPPED WITH: 63 MMBTU/HR (NOMINAL) SOLAR TAURUS 60-7901 GAS TURBINE ENGINE (GTE); HEAT RECOVERY STEAM GENERATOR (HRSG) WITH A 40 MMBTU/HR (NOMINAL) DUCT BURNER; WATER INJECTION SYSTEM FOR INTERMEDIATE NOX CONTROL; SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION TO COMPLY WITH RULE 4703 TIER 3 EMISSION LIMIT OF 5 PPMV NOX @ 15% O2; OXIDATION CATALYST FOR CO CONTROL; AND SHARED CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) TO MEASURE NOX, CO, AND O2 CONCENTRATIONS

Number of Facilities Reported: 1

