



DEC 29 2011

Todd Griffith
Exxon Mobil Corporation
CORP-MI-3049
PO Box 4358
Houston, TX 77210-4358

**Re: Notice of Final Action - Title V Permit Renewal
District Facility # S-1328
Project # 1094887**


Dear Mr. Griffith:

The District has issued the Final Renewed Title V Permit for Exxon Mobil Corporation. The preliminary decision for this project was made on 10/24/11. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation.

The public notice for issuance of the Final Renewed Title V Permit will be published approximately three days from the date of this letter.

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

Sincerely,



David Warner
Director of Permit Services

Attachments

cc: Steve Roeder, Permit Services Engineer

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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



DEC 29 2011

Gerardo C. Rios, Chief
Permits Office (AIR-3)
U.S. EPA - Region IX
75 Hawthorne St.
San Francisco, CA 94105

**Re: Notice of Final Action - Title V Permit Renewal
District Facility # S-1328
Project # 1094887**

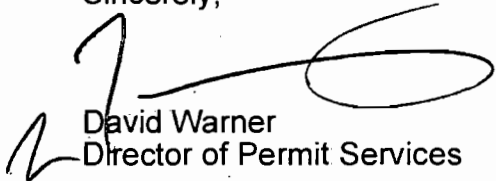
Dear Mr. Rios:

The District has issued the Final Renewed Title V Permit for Exxon Mobil Corporation. The preliminary decision for this project was made on 10/24/11. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation.

The public notice for issuance of the Final Renewed Title V Permit will be published approximately three days from the date of this letter.

I would like to thank you and your staff for working with us. We appreciate your concurrence with this action. Should you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,



David Warner
Director of Permit Services

Attachments

cc: Steve Roeder, Permit Services Engineer

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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
www.valleyair.org www.healthyairliving.com

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



DEC 29 2011

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

**Re: Notice of Final Action - Title V Permit Renewal
District Facility # S-1328
Project # 1094887**

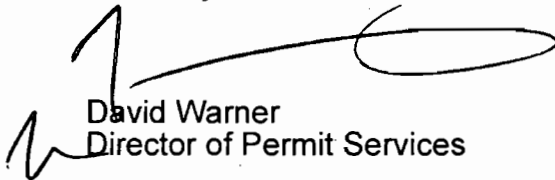
Dear Mr. Tollstrup:

The District has issued the Final Renewed Title V Permit for Exxon Mobil Corporation. The preliminary decision for this project was made on 10/24/11. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation.

The public notice for issuance of the Final Renewed Title V Permit will be published approximately three days from the date of this letter.

I would like to thank you and your staff for working with us. Should you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,



David Warner
Director of Permit Services

Attachments

cc: Steve Roeder, Permit Services Engineer

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Bakersfield Californian

**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT
NOTICE OF FINAL DECISION TO ISSUE
RENEWED FEDERALLY MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District has made its final decision to issue the renewed Federally Mandated Operating Permit to Exxon Mobil Corporation for its Oil Field in the South Belridge field near McKittrick, California.

The District's analysis of the legal and factual basis for this proposed action, project #1094887, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. For additional information regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500, or contact David Warner, Director of Permit Services, in writing at SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.

**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT**

**Final Title V Permit Renewal Evaluation
Exxon Mobil Corporation
S-1328**

TABLE OF CONTENTS

I.	PROPOSAL.....	2
II.	FACILITY LOCATION.....	2
III.	EQUIPMENT LISTING.....	2
IV.	GENERAL PERMIT TEMPLATE USAGE.....	3
V.	SCOPE OF EPA AND PUBLIC REVIEW.....	3
VI.	FEDERALLY ENFORCEABLE REQUIREMENTS	3
VII.	REQUIREMENTS NOT FEDERALLY ENFORCEABLE	4
VIII.	PERMIT REQUIREMENTS	5
IX.	PERMIT SHIELD	23
X.	PERMIT CONDITIONS.....	26
XI.	ATTACHMENTS.....	26
A.	RENEWED TITLE V OPERATING PERMIT	
B.	PREVIOUS TITLE V OPERATING PERMIT	
C.	DETAILED FACILITY REPORT	
D.	COMMENTS AND RESPONSES	

TITLE V PERMIT RENEWAL EVALUATION

Petroleum and Natural Gas Production

Engineer: Steve Roeder
Date: 12/23/11

Facility Number: S-1328
Facility Name: Exxon Mobil Corporation
Mailing Address: PO Box 4358
Houston, TX 77210-4385

Contact Name: Todd Griffith
Phone: (281) 654-1001

Responsible Official: Troy M. Tranquada
Title: Operations Superintendent

Project # : 1094887
Deemed Complete: 10/5/09

I. PROPOSAL

Exxon Mobil Corporation (Exxon) was issued a Title V permit on August 8, 2005. 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 initial Title V permit.

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

Exxon is located in the Heavy Oil Western Oil Fields in the South Belridge Field, near McKittrick, CA, West of Interstate-5 in Kern County.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is included as Attachment C. Equipment consists of three 62.5 MMBtu/hr Steam Generators, two TEOR systems, one set of uncontrolled cyclic and test pilot wells, one 305 hp natural gas-fired emergency IC engine powering an electrical generator, and one WEMCO unit.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant does not propose to use any general permit templates. However, the Umbrella Permit UM-02 brought forward from the initial Title V permit is still in use, and has been revised to include new Rule References, Rule Revision dates, and two conditions have been revised to specify reporting periods and report-submission dates.

V. SCOPE OF EPA AND PUBLIC REVIEW

Since the Umbrella Permit has been revised, and the applicant is not requesting any other model general permit templates, 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 Since August 8, 2005

- District Rule 2020, Exemptions (amended 12/20/07)
- District Rule 2201, New and Modified Stationary Source Review (amended 4/21/11)
- District Rule 4101, Visible Emissions (amended 2/15/05)
- District Rule 4306, Boilers, Steam Generators and Process Heaters - Phase 3 (amended 10/16/08)
- District Rule 4311, Flares (amended 6/18/09)
- District Rule 4401 Steam-Enhanced Crude Oil Production Wells (amended 6/16/11)
- District Rule 4601, Architectural Coatings (amended 12/17/09)
- District Rule 4702, Internal Combustion Engines, Phase 2 (amended 8/18/11)

B. Rules Removed

No Rules appearing on the original Title V permit have been removed.

C. Rules Added

- District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater than 5 MMBtu/hr (adopted 10/16/08)

Newly proposed Authorities to Construct S-1328-1-21, 2-22 and 3-22 address Rule 4320, and this Rule will not otherwise be addressed in this evaluation.

D. Rules Not Updated Since August 8, 2005

- District Rule 1070, Inspections (amended 12/17/92)
- District Rule 1100, Equipment Breakdown (amended 12/17/92)
- District Rule 1160, Emission Statements (adopted 11/18/92)
- District Rule 1081, Source Sampling (amended 12/17/03)
- District Rule 2010, Permits Required (amended 12/17/92)
- District Rule 2031, Transfer of Permits (amended 12/17/92)
- District Rule 2040, Applications (amended 12/17/92)
- District Rule 2070, Standards for Granting Applications (amended 12/17/92)
- District Rule 2080, Conditional Approval (amended 12/17/92)
- District Rule 2520, Federally Mandated Operating Permits (amended 6/21/01)
- District Rule 4201, Particulate Matter Concentration (amended 12/17/92)
- District Rule 4301, Fuel Burning Equipment (amended 12/17/92)
- District Rule 4305, Boilers, Steam Generators and Process Heaters - Phase 2 (amended 8/21/03)
- District Rule 4801, Sulfur Compounds (amended 12/17/92)
- District Rule 8011, General Requirements (amended 8/19/04)
- District Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities (amended 8/19/04)
- District Rule 8031, Bulk Materials (amended 8/19/04)
- District Rule 8041, Carryout and Trackout (amended 8/19/04)
- District Rule 8051, Open Areas (amended 8/19/04)
- District Rule 8061, Paved and Unpaved Roads (amended 8/19/04)
- District Rule 8071, Unpaved Vehicle/Equipment Traffic Areas (amended 9/16/04)
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos
- 40 CFR Part 82, Subpart F, Stratospheric Ozone

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 Permit. 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 is not federally enforceable and will not be discussed in further detail.

District Rule 4102, Nuisance (adopted May 21, 1992, amended December 17, 1992)

A. Rules Added

No non-federally enforceable Rules have been added.

B. Rules Not Updated

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

Condition 42 of the facility-wide permit 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.*

A. District Rule 2020 - Exemptions

District Rule 2020 lists equipment which are 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

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 4101 - Visible Emissions

District Rule 4101 has been submitted to the EPA to replace SIP approved Rule 401 (all counties of the SJVUAPCD). EPA made a preliminary determination that District Rule 4101 is "more stringent" than the county versions previously referenced, per correspondence dated August 20, 1996.

Section 5.0 prohibits the discharge of any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart; or is of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described in Section 5.1 of Rule 4101.

Condition 22 of the facility-wide permit ensures compliance.

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

The purpose of this Rule is to limit emissions of oxides of nitrogen (NO_x) and carbon monoxide (CO) from boilers, steam generators, and process heaters.

Section 5.1 limits NO_x and CO emissions from oilfield steam generators to 15 ppmv·NO_x and 400 ppmv·CO.

Condition 4 on permits S-1328-1-20, -2-21 and -3-21 ensures compliance.

4. Emission rates, except during startup and shutdown, shall not exceed any of the following: NO_x (as NO₂): 0.018 lb/MMBtu or 15 ppmvd @ 3% O₂, or CO: 0.016 lb/MMBtu or 21.7 ppmv @ 3% O₂. [District Rules 2201, 4301, 4305, 5.1 and 4306, 5.1]

Section 5.4 requires alternate emissions monitoring provisions.

Conditions 15 - 19 on permits S-1328-1-20, -2-21 and -3-21 ensure compliance.

15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar 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 4305, 5.4 and 4306, 5.4]
16. If either the NO_x or CO concentrations corrected to 3% O₂, 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 Rules 4305, 5.4 and 4306, 5.4]

17. 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 4305, 5.4 and 4306, 5.4]
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 4305, 5.4 and 4306, 5.4]
19. 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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2]

Section 5.5.1 specifies that the permittee shall identify whether lb/MMBtu or ppmv will serve as the basis for compliance for the source testing.

Condition 22 on permits S-1328-1-20, -2-21 and -3-21 ensures compliance.

22. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1]

Section 5.5.2 specifies the conditions necessary to perform testing.

Condition 20 on permits S-1328-1-20, -2-21 and -3-21 ensures compliance.

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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2]

Section 5.5.5 requires three consecutive 30-minute runs for source testing.

Condition 20 on permits S-1328-1-20, -2-21 and -3-21 ensures compliance.

20. 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 4305, 5.5.5 and 4306, 5.5.5]

Section 6.2 specifies the source test methods that may be used.

Condition 24 on permits S-1328-1-20, -2-21 and -3-21 ensures compliance.

24. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, 6.2; and 4351]

Section 6.2.1 specifies that either the fuel hhv be certified by third party fuel suppliers or tested by the following test methods.

Condition 24 on permits S-1328-1-20, -2-21 and -3-21 ensures compliance.

25. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1]

Section 6.3 specifies the time period between source testing.

Condition 21 on permits S-1328-1-20, -2-21 and -3-21 ensures compliance.

21. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas 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 4305 and 4306, 6.3]

E. District Rule 4311 - Flares

To limit the emissions of volatile organic compounds (VOC), oxides of nitrogen (NO_x), and sulfur oxides (SO_x) from the operation of flares, and is applicable to all operations using flares.

This facility employs one standby flare, and Sections 5 and 6 of Rule 4311 list a variety of requirements.

Section 5.8 requires that, in order to operate a flare past July 1, 2011, that a flare minimization plan be submitted to the District. The plan was submitted on 6/30/10 and subsequently approved (Project 1103494).

The following conditions ensure compliance with Rule 4311.

12. Standby flare shall comply with all requirements of District Rule 4311. [District Rule 4311]
13. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2]
14. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3]
15. Except for flares equipped with a flow-sensing ignition system, a 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 installed and operated. [District Rule 4311, 5.4]
16. {2332} Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5]

F. District Rule 4401 - Steam-Enhanced Crude Oil Production Wells

District Rule 4401 has been revised since the original Title V permit has been issued.

This Rule applies to all steam-enhanced crude oil production wells and any associated vapor collection and control systems, including S-1328-7-1 and 57-2. Permit S-1328-25-3 only includes Rule-4401-exempt wells.

One of the changes to the Rule has been that the number of wells that are exempt from this Rule has decreased from 20 to 5 uncontrolled cyclically steamed oil wells. The number of exempt uncontrolled cyclic wells undergoing pilot testing has remained 40.

Therefore, permit S-1328-25 has been administratively revised.

The equipment description now reads:

S-1328-25-3: UP TO 5 UNCONTROLLED CYCLICALLY STEAMED OIL WELLS AND UP TO 40 UNCONTROLLED CYCLIC WELLS UNDERGOING PILOT TESTING

The permit conditions have also been revised to correct outdated Rule references and include the definitions and loss-of-exemption conditions as follows:

1. Permittee shall maintain current roster of all open vent cyclically steamed wells that have been steamed within the previous 5 years being operated under this permit. [District Rule 4401 and District Rule 2520, 9.4.2]
2. Cyclic wells undergoing pilot testing, or exempt pursuant to Rule 4401 section 4.4, shall be located more than 1,000 feet from any existing well vent vapor recovery system operated by permittee. [District Rule 4401, 4.2.2 and 4.4.2]
3. Well roster shall include identification of all uncontrolled cyclic wells undergoing pilot testing. [District Rule 4401]
4. Total number of uncontrolled cyclic wells exempt from control requirements pursuant to Rule 4401 Section 4.4 shall not exceed 5. [District Rule 4401, 4.4]
5. Total number of uncontrolled cyclic wells undergoing pilot testing (pursuant to Rule 4401 section 4.2) shall not exceed 40. [District Rule 4401, 4.2]
6. Wells undergoing pilot testing shall not produce from a zone on that property that has been injected with steam during the preceding two years. [District Rule 4401, 4.2.1]
7. Wells undergoing pilot testing shall be located more than 1,000 feet from an existing well vent vapor collection and control system operated by the company. [District Rule 4401, 4.2.2]
8. Pilot testing of wells for the purpose of determining the viability of developing a steam-enhanced production zone shall not exceed 180 days for each production zone. [District Rule 4401, 3.25]

9. The operator of any new steam-enhanced crude oil production well, or any non-steam-enhanced crude oil production well converted to a steam-enhanced crude oil production well, which commences steam-enhancement operations on or after April 11, 1991, shall comply with the requirements of this rule and the applicable permit requirements of Rule 2201 (New and Modified Stationary Source Review Rule) before steam injection and no later than the first detectable flow at the casing vent. [District Rule 4401, 7.1]
10. Steam-enhanced crude oil production wells and components that are exempt pursuant to Section 4.3, 4.4, 4.5, 4.8 or 4.9 that become subject to this rule through loss of exemption status shall not be operated until such time that they are in full compliance with the requirements of this rule. [District Rule 4401, 7.2]
11. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2]

The other two oil well permits S-1328-7-12 and 57-2 are subject to Rule 4401.

Section 3 provides definitions.

Section 4 details exemptions.

Section 5.1 identifies the requirements for well vents.

Sections 5.2 and 5.3 identifies the leak standards.

Section 5.4 identifies the requirements for inspections.

Section 5.5 identifies the requirements for leak repair.

Section 6.1 details record-keeping and submission requirements.

Section 6.4 identifies requirements for the inspection log.

Section 6.5 requires an employee training program.

Section 6.6 and 6.7 specify the requirements for the Operator Management Program.

The following conditions are listed on permits S-1328-7-13 and 57-2.

24. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20]
25. Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing shall be exempt from the requirements of Rule 4401. [District Rule 4401, 4.1]
26. The requirements of this rule shall not apply to components serving the produced fluid line. [District Rule 4401, 4.5]
27. Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an

exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6]

28. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be 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, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2]
29. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of 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 as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2]
30. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2]
31. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1]
32. 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 with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2]

33. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3]
34. Unless exempt under Section 4.7 or Rule 4401, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1]
35. Unless exempt under Section 4.7 or Rule 4401, an operator shall visually inspect all pipes 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 the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2]
36. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An 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. 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 the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3]
37. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: 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, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4]
38. Unless exempt under Section 4.7 or Rule 4401, an operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5]
39. 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, 5.4.6]

40. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1]
41. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2]
42. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3]
43. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4]
44. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4]
45. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5]
46. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6]
47. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year

from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7]

48. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4401, 6.1]
49. 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]
50. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5]
51. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6]
52. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7]
53. 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. An 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, 6.1.10]
54. If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2]
55. 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]

56. 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]
57. 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]
58. 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, 6.3.4]
59. Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify 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 earlier, methods 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, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4]

60. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5]
61. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6]
62. By January 30 of each year, permittee 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]

G. District Rule 4601 - Architectural Coatings

This rule limits the emissions of VOCs from architectural coatings. It requires limiting the application of any architectural coating to no more than what is listed in the Table of Standards (Section 5.0). This rule further specifies labeling requirements, coatings thinning recommendations, and storage requirements.

The following changed conditions were included in the latest rule amendment that resulted in adding new permit requirements and/or revising current permit requirements, and are posted on the facility-wide permit.

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 the Table of Standards 2 of District Rule 4601 for use or sale within the District. [District Rule 4601, 5.1]
24. All VOC-containing materials subject to Rule 4601 shall be stored in closed containers when not in use. [District Rule 4601, 5.4]
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]
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]

H. District Rule 4702 - Internal Combustion Engines - Phase 2

The purpose of this Rule is limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines, and it applies to any internal combustion engine with a rated brake horsepower greater than 50 horsepower.

Permit S-1328-55-5 is subject to this Rule, and had been updated on 4/9/07 with a minor modification to comply with all requirements of Rule 4702.

Therefore, none of the requirements of Rule 4702 shall be added to this permit.

I. District Rule 8011 - General Requirements

The purpose of Regulation VIII (Fugitive PM₁₀ Prohibitions) is to reduce ambient concentrations of fine particulate matter (PM₁₀) by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions. The Rules contained in this Regulation have been developed pursuant to United States Environmental Protection Agency guidance for Serious PM₁₀ Nonattainment Areas. The rules are applicable to specified anthropogenic fugitive dust sources. Fugitive dust contains PM₁₀ and particles larger than PM₁₀. Controlling fugitive dust missions when visible emissions are detected will not prevent all PM₁₀ emissions, but will substantially reduce PM₁₀ emissions.

The provisions of this rule are applicable to specified outdoor fugitive dust sources. The definitions, exemptions, requirements, administrative requirements, recordkeeping requirements, and test methods set forth in this rule are applicable to all Rules under Regulation VIII (Fugitive PM₁₀ Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District.

Conditions 29 thru 34 on the facility-wide permit have been revised ensure compliance.

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 Rule 8021 and 8011]
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 Rule 8031 and 8011]
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 Rule 8041 and 8011]

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 Rule 8051 and 8011]
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 Rule 8061 and Rule 8011]
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 Rule 8071 and Rule 8011]

J. District Rule 8021 - Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities

The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities.

This rule applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site. This rule also applies to the construction of new landfill disposal sites or modification to existing landfill disposal sites prior to commencement of landfilling activities.

Section 5.0 requires that no person shall perform any construction, demolition, excavation, extraction, or other earthmoving activities unless the appropriate requirements in sections 5.1 and 5.2 are sufficiently implemented to limit VDE to 20% opacity. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

Condition 29 on the facility-wide permit has been revised to ensure compliance.

K. District Rule 8031 - Bulk Materials

The purpose of this rule is to limit fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials.

This rule applies to the outdoor handling, storage, and transport of any bulk material.

Section 5.0 requires that no person shall perform any outdoor handling, storage, and transport of bulk materials unless the appropriate requirements in Table 8031-1 of this rule are sufficiently implemented to limit VDE to 20% opacity or to comply with the conditions for a stabilized surface as defined in Rule 8011. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

Condition 30 on the facility-wide permit has been revised to ensure compliance.

L. District Rule 8041 - Carryout and Trackout

The purpose of this rule is to limit fugitive dust emissions from carryout and trackout.

This rule applies to all sites that are subject to Rules 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), 8031 (Bulk Materials), and 8071 (Unpaved Vehicle and Equipment Traffic Areas) where carryout or trackout has occurred or may occur.

Section 5.0 requires that an owner/operator shall sufficiently prevent or cleanup carryout and trackout as specified in sections 5.1 through 5.8. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII. The use of blower devices, or dry rotary brushes or brooms, for removal of carryout and trackout on public roads is expressly prohibited. The removal of carryout and trackout from paved public roads does not exempt an owner/operator from obtaining state or local agency permits which may be required for the cleanup of mud and dirt on paved public roads.

Condition 31 on the facility-wide permit has been revised to ensure compliance.

M. District Rule 8051 - Open Areas

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

This rule applies to any open area having 3.0 acres or more of disturbed surface area, that has remained undeveloped, unoccupied, unused, or vacant for more than seven days.

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

Condition 32 on the facility-wide permit has been revised to ensure compliance.

N. District Rule 8061 - Paved and Unpaved Roads

The purpose of this rule is to limit fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria.

This rule applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.

Condition 33 on the facility-wide permit has been revised to ensure compliance.

O. District Rule 8071 - Unpaved Vehicle/Equipment Traffic Area

The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas by implementing control measures and design criteria.

This rule applies to any unpaved vehicle/equipment traffic area of 1.0 acre or larger.

Condition 34 on the facility-wide permit has been revised to ensure compliance.

P. 40 CFR Part 64-CAM (Compliance Assurance Monitoring)

40 CFR Part 64 requires 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 flares; and
- 3) The unit must have a pre-control potential to emit of greater than at least one major source threshold.

A. Steam Generators S-1328-1, -2 and -3

Steam generators have emission limits and add-on control devices, in this case FGR is considered to be an add-on control device for NO_x control. In order to be subject to CAM, the steam generator must also be a pre-control major source for NO_x emissions.

Steam generators have low-NO_x burners, which are not bolt-on control devices, and which are the source of emissions.

Since steam generators are not source tested with and without the FGR system operating, the effectiveness of the FGR system must be determined by other means in order to determine if the steam generators are major NO_x sources without the add-on FGR systems.

EPA AP-42, Table 1.4-1 lists the following emission factors for large boilers.

EPA AP-42 Emission Factors	
	Emissions Factor (lb·NO _x per MMscf)
Uncontrolled	100
Controlled – low NO _x burners	50
Controlled – Low NO _x burners/Flue gas recirculation	32

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

$$\frac{(50 - 32) \text{ lb} \cdot \text{NO}_x / \text{MMscf}}{50 \text{ lb} \cdot \text{NO}_x / \text{MMscf}} \times 100\% = 36\%$$

Therefore the FGR reduces NO_x by 36%.

Since the permitted NO_x level for the steam generators is 15 ppmv (or 0.018 lb/MMBtu), the pre-FGR emission factor is calculated as follows.

$$\frac{0.018 \frac{\text{lb} \cdot \text{NO}_x}{\text{MMBtu}}}{(100\% - 36\%)} = 0.028 \frac{\text{lb} \cdot \text{NO}_x}{\text{MMBtu}}$$

The size of a 15 ppm·NO_x steam generator operating with no annual fuel-use limit required to surpass the major source threshold for NO_x (20,000 lb·NO_x/yr) is:

$$\frac{20,000 \text{ lb} \cdot \text{NO}_x}{\text{year}} \times \frac{\text{MMBtu}}{0.028 \text{ lb} \cdot \text{NO}_x} \times \frac{1 \text{ year}}{8,760 \text{ hours}} = 81.5 \frac{\text{MMBtu}}{\text{hr}}$$

Since none of the steam generators at this facility exceed 81.5 MMBtu/hr, none of the steam generators are pre-FGR major sources of NO_x, and as such, none require CAM.

B. TEOR Operation with 86 Wells

The TEOR system S-1328-7 includes 86 wells.

In our preliminary decision to renew the TV permit for this facility, we concluded vapor control systems serving crude oil tanks and production wells were inherent process equipment and as such the underlying emissions units were not equipped with a “control device” and therefore not subject to CAM requirements. We believe that this analysis is accurate and offer the following additional justification below.

For oilfield tanks and wells, CAM is required if an emission unit is subject to emission limit or standard to the pollutant of concern, uses a control device to comply with the emission limit or standard, and has a potential pre-control emissions greater than 10 ton/year.

While most tanks and wells equipped with a vapor control system include an emission limit or standard and have uncontrolled potential to emit greater than 10 ton/year, we have concluded that the vapor control systems that they are equipped with do not meet the criteria of control device as defined in 40 CFR part 64.

The definition of control device from 40 CFR Part 64 is as follows (emphasis added):

Control device means equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices (such as carbon beds), condensers, scrubbers (such as wet collection and gas absorption devices), selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants, sulfur recovery plants, injection systems (such as water, steam, ammonia, sorbent or limestone injection), and combustion devices independent of the particular process being conducted at an emissions unit (e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters). For purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment which otherwise meets this definition of a control device does not constitute a control device as applied to a particular pollutant-specific emissions unit, then that definition shall be binding for purposes of this part.

It is important to note that this definition includes an exemption for "inherent process equipment. Inherent process equipment is by definition not a control device. Emission units equipped with inherent process equipment are not subject to the requirements of CAM.

40 CFR Part 64 defines inherent process equipment as (emphasis added):

Inherent process equipment means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process

equipment. For the purposes of this part, inherent process equipment is not considered a control device.

Please note that the above definition requires that inherent process equipment must be used "... for the proper or safe operation of the process ...". It is important to note that the equipment need not be used solely for the proper or safe operation of the process. Such systems could be used for compliance with regulations as well.

We have concluded that vapor control systems installed on oilfield tanks and oil production wells are inherent process equipment (and by definition not a control device) for the reasons stated below.

- Tank and well vapor control systems reduce emission of H₂S (a toxic substance) from the tanks/wells and as such assure worker safety for OSHA and other regulatory requirements.
- Tank vapor control systems minimize air intrusion into the vapor space and as such reduces corrosion of the tank interior. Such systems are commonly installed even though they are not required to comply with District regulations. District Rule 4623 – Storage of Organic Liquids does not require vapor control on storage tanks storing liquids with a true vapor pressure of less than 0.5 psia. Due to the relatively low actual emissions from such tanks, vapor control is typically not a Rule 2201 best available control technology (BACT) requirement for most heavy crude oil storage tanks. Even though not required by District rules, facilities commonly install vapor control on storage tanks for safety and corrosion prevention purposes.
- As stated above, facilities commonly install vapor control on tanks even though there is not an requirement to do so. Vapor control has historically been installed on crude oil production well vents as well prior to the requirement to install such controls. In fact, the District has issued emission reduction credits for the installation of well vent vapor control systems.
- Vapors collected by tank and well vapor control systems are commonly burned in multiple existing units, e.g. steam generators, in which useful energy is recovered. Steam generators, are used in oil production to enhance oil recovery from production wells. The steam generators, wells and tanks (with their associated vapor control systems) are part of the overall process to thermally enhance oil production.

Such systems typically distribute the vapors to multiple steam generators (or other devices) for use as a fuel. The quantity of vapors from such vapor control systems combusted in a particular steam generator varies as the operational needs of the facility change. For example, vapors that are typically combusted in a given steam generator would be burned in a different approved steam generator instead if the first steam generator is taken out of service.

For all of the reasons stated above, we believe that tank and well vapor control systems are truly inherent to the oil production process. As such we believe that these systems meet the criteria for “inherent process systems”, and as such are not a control device for the purposes of CAM applicability. Therefore, we do not believe that the emission units that are served by such systems are subject to the requirements of CAM.

Notwithstanding the above, we agree to work cooperatively with EPA Region IX to address CAM applicability issues on a programmatic basis in the future.

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

No general templates have been proposed.

B. Requirements not Addressed by Model General Permit Templates

No extra permit shields have been proposed.

C. Obsolete Permit Shields From Existing Permit Requirements

There are no obsolete permit shields on the permit.

Therefore, the permit shields already stated on the original Title V permit will remain in place.

X. PERMIT CONDITIONS

See Attachment A - Renewed Title V Operating Permit.

XI. APPENDIXES

- A. Renewed Title V Operating Permit
- B. Previous Title V Operating Permit
- C. Detailed Facility Report
- D. Comments and Responses

ATTACHMENT A

Renewed Title V Operating Permit



Permit to Operate

FACILITY: S-1328

EXPIRATION DATE: 03/31/2016

LEGAL OWNER OR OPERATOR:
MAILING ADDRESS:

EXXON MOBIL CORPORATION
CORP-MI-3049
P O BOX 4358
HOUSTON, TX 77210-4358

FACILITY LOCATION:

HEAVY OIL WESTERN STATIONARY SOURCE
CA

FACILITY DESCRIPTION:

PETROLEUM AND NATURAL GAS PRODUCTION

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

Seyed Sadredin
Executive Director / APCO

David Warner
Director of Permit Services

San Joaquin Valley Air Pollution Control District

FACILITY: S-1328-0-2

EXPIRATION DATE: 03/31/2016

FACILITY-WIDE REQUIREMENTS

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 (3/21/02). [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, 9.9.1 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: EXXON MOBIL CORPORATION
Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA
S-1328-0-2 : Dec 23 2011 2:58PM - SCANDURL

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. For the reporting period from August 9th thru February 8th, the report shall be submitted no later than March 8th. For the reporting period from February 9th thru August 8th, the report shall be submitted no later than September 8th. [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

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

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
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 the Table of Standards 2 of District Rule 4601 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 shall be stored in closed containers when not in use. [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 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 82, Subpart B. [40 CFR 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 Rule 8021 and 8011] 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 Rule 8031 and 8011] 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 Rule 8041 and 8011] 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 Rule 8051 and 8011] 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 Rule 8061 and Rule 8011] 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 Rule 8071 and Rule 8011] 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.

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
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 no later than September 8th for the reporting period from August 9th thru August 8th (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 permits 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), and Rule 111 (Kern, Tulare, Kings). 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. On August 8, 2005, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based on this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit
42. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
43. All records required shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule and 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-1328-1-20

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR GAS-FIRED STRUTHERS STEAM GENERATOR (UNIT #64) WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
2. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such 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 Rule 4320] Federally Enforceable Through Title V Permit
3. On and after 7/1/2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit
4. If steam generator is inoperative, non-condensable vapors shall not vent to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: SOx (as SO2): 115.0 lb/day, PM10: 0.005 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4201, 3.1, 4301, 5.1 and 5.2, 4406 and 4801] Federally Enforceable Through Title V Permit
6. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H2S in sweet gas, P2 = ppmv H2S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmvd @ 3% O2, or CO: 0.016 lb/MMBtu or 21.7 ppmv @ 3% O2. [District Rules 2201, 4301, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
8. During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Daily maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day or 24.0 lb-CO/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. Start-up is defined as that 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. Shutdown is defined as that 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 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit
11. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit
12. For this emission unit the overall throttle and use factor used in the SLC plan is 87%. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Combined annual combustion emissions from permit units S-1328-1, '-2, '-3 and the flare identified on permit unit S-1328-7 shall not exceed any of the following: NOx (as NO2): 25,733 lb/yr, SOx (as SO2): 41,975 lb/yr, PM10: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall sample sweet and noncondensable vapor gas monthly for H2S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District Rule 2201] Federally Enforceable Through Title V Permit
15. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. If either the NOx or CO concentrations corrected to 3% O2, 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 Rules 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 4305, 5.4 and 4306, 5.4] 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.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
22. 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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
23. 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 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
24. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas 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 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit
25. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
26. 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
27. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, 6.2; and 4351] Federally Enforceable Through Title V Permit
28. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1] Federally Enforceable Through Title V Permit
29. Source testing shall be District witnessed or authorized and conducted by an ARB certified testing contractor. [District Rule 1081] Federally Enforceable Through Title V Permit
30. 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
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
32. 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; 4305, 6.1; and 4306, 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-1328-2-21

EXPIRATION DATE: 03/31/2016

SECTION: NE19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR GAS-FIRED STRUTHERS STEAM GENERATOR (UNIT #65) WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
2. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such 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 Rule 4320] Federally Enforceable Through Title V Permit
3. On and after 7/1/2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit
4. If steam generator is inoperative, non-condensable vapors shall not vent to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: SOx (as SO2): 115.0 lb/day, PM10: 0.005 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District NSR Rule and District Rules 4201, 3.1, 4301, 5.1 and 5.2, 4406 and 4801] Federally Enforceable Through Title V Permit
6. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H2S in sweet gas, P2 = ppmv H2S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District NSR Rule] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmvd @ 3% O2, or CO: 0.016 lb/MMBtu or 21.7 ppmv @ 3% O2. [District NSR Rule and District Rules 4301, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
8. During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Daily maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day or 24.0 lb-CO/day. [District NSR Rule] 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. Start-up is defined as that 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. Shutdown is defined as that 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 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit
11. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit
12. For this emission unit the overall throttle and use factor used in the SLC plan is 87%. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Combined annual combustion emissions from permit units S-1328-1, '-2, '-3 and the flare identified on permit unit S-1328-7 shall not exceed any of the following: NOx (as NO2): 25,733 lb/yr, SOx (as SO2): 41,975 lb/yr, PM10: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Permittee shall sample sweet and noncondensable vapor gas monthly for H2S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District NSR Rule] Federally Enforceable Through Title V Permit
15. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every calendar 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. If either the NOx or CO concentrations corrected to 3% O2, 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 Rules 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 4305, 5.4 and 4306, 5.4] 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.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
22. 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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
23. 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 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
24. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas 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 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit
25. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
26. 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
27. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, 6.2; and 4351] Federally Enforceable Through Title V Permit
28. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1] Federally Enforceable Through Title V Permit
29. Source testing shall be District witnessed or authorized and conducted by an ARB certified testing contractor. [District Rule 1081] Federally Enforceable Through Title V Permit
30. 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
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
32. 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; 4305, 6.1; and 4306, 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-1328-3-21

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS STEAM GENERATOR (UNIT #66) WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
2. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such 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 Rule 4320] Federally Enforceable Through Title V Permit
3. On and after 7/1/2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheers, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit
4. If steam generator is inoperative, non-condensable vapors shall not vent to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: SOx (as SO2): 115.0 lb/day, PM10: 0.005 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District NSR Rule and District Rules 4201, 3.1, 4301, 5.1 and 5.2, 4406 and 4801] Federally Enforceable Through Title V Permit
6. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H2S in sweet gas, P2 = ppmv H2S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District NSR Rule] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmvd @ 3% O2, or CO: 0.016 lb/MMBtu or 21.7 ppmv @ 3% O2. [District NSR Rule and District Rules 4301, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
8. During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Daily maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day or 24.0 lb-CO/day. [District NSR Rule] 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. Start-up is defined as that 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. Shutdown is defined as that 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 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit
11. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit
12. For this emission unit the overall throttle and use factor used in the SLC plan is 87%. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Combined annual combustion emissions from permit units S-1328-1, '-2, '-3 and the flare identified on permit unit S-1328-7 shall not exceed any of the following: NO_x (as NO₂): 25,733 lb/yr, SO_x (as SO₂): 41,975 lb/yr, PM₁₀: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Permittee shall sample sweet and noncondensable vapor gas monthly for H₂S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District NSR Rule] Federally Enforceable Through Title V Permit
15. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, 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 Rules 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 4305, 5.4 and 4306, 5.4] 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.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
22. 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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
23. 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 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
24. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas 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 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit
25. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
26. 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
27. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, 6.2; and 4351] Federally Enforceable Through Title V Permit
28. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1] Federally Enforceable Through Title V Permit
29. Source testing shall be District witnessed or authorized and conducted by an ARB certified testing contractor. [District Rule 1081] Federally Enforceable Through Title V Permit
30. 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
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
32. 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; 4305, 6.1; and 4306, 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-1328-7-13

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 86 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM, INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H₂S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain a current list of all steam enhanced wells, including identification of all steam enhanced wells with polish rod boxes subject to BACT I&M program connected to this system, and shall update the list whenever a well is added, replaced or deleted. The updated list shall be submitted to the District 60 days prior to the permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor control system shall serve thermally enhanced well vents, permit exempt heater treater, and Wemco S-1328-58. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Scrubbing solution shall consist only of Sulfa-Check and/or Sulfa-Treat media and additives unless prior District approval is obtained. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Noncondensable vapor gas from this well vent vapor control system may be incinerated in the following devices: steam generator permits S-1328-1, S-1328-2, and S-1328-3, and the standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Noncondensable vapor gas throughput to flare shall not exceed 0.333 MMscf per day if two (2) or three (3) steam generators are in operation, 0.666 MMscf if one (1) steam generator is in operation, and 1.0 MMscf per day if none of the steam generators are in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Fugitive VOC emission rate from TEOR components shall not exceed 123.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from the standby flare shall not exceed any of the following: NO_x (as NO₂): 0.0725 lb/MMBtu, SO_x (as SO₂): 115.0 lb/day, PM₁₀: 0.0202 lb/MMBtu, CO: 0.022 lb/MMBtu, or VOC: 0.0021 lb/MMBtu. [District Rules 2201, 4201, 4301 and 4801] Federally Enforceable Through Title V Permit
8. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H₂S in sweet gas, P2 = ppmv H₂S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District Rule 2201] Federally Enforceable Through Title V Permit
9. Combined annual combustion emissions from units S-1328-1, -2, -3 and the flare identified on S-1328-7 shall not exceed any of the following: NO_x (as NO₂): 25,733 lb/yr, SO_x (as SO₂): 41,975 lb/yr, PM₁₀: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [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.

12. Standby flare shall comply with all requirements of District Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
13. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
14. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
15. Except for flares equipped with a flow-sensing ignition system, a 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 installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
16. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
17. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
18. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
19. Permittee shall sample sweet and noncondensable vapor gas monthly for H₂S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District Rule 2201] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Permittee shall measure H₂S concentration from on-line scrubber(s) outlet with District-approved device (e.g. MSA Samplair pump unit No. 463998 and MSA H₂S detector tubes) at least daily when scrubber is in operation. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
22. Permittee shall measure daily the non-condensibles gas flow rate and, at least monthly, the non-condensable gas H₂S concentration. Records shall be maintained and made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
23. Permittee shall maintain accurate daily records of volume noncondensable gas incinerated in flare. [District Rule 1070] Federally Enforceable Through Title V Permit
24. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
25. Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing shall be exempt from the requirements of Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
26. The requirements of this rule shall not apply to components serving the produced fluid line. [District Rule 4401, 4.5] Federally Enforceable Through Title V Permit
27. Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6] 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.

28. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be 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, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
29. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of 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 as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
30. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
31. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
32. 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 with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
33. An operator shall comply with the requirements of Section 5.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
34. Unless exempt under Section 4.7 or Rule 4401, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
35. Unless exempt under Section 4.7 or Rule 4401, an operator shall visually inspect all pipes 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 the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
36. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An 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. 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 the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] 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.

37. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: 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, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
38. Unless exempt under Section 4.7 or Rule 4401, an operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
39. 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, 5.4.6] Federally Enforceable Through Title V Permit
40. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
41. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
42. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
43. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
44. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
45. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
46. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
47. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
48. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4401, 6.1] 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.

49. 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
50. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
51. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
52. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
53. 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. An 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, 6.1.10] Federally Enforceable Through Title V Permit
54. If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
55. 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
56. 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
57. 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
58. 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, 6.3.4] 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.

59. Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify 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 earlier, methods 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, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4] Federally Enforceable Through Title V Permit
60. Permittee 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
61. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
62. By January 30 of each year, permittee 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
63. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
64. Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
65. The requirements of District Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit because it is not an in situ combustion well vent. 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-1328-25-3

EXPIRATION DATE: 03/31/2016

EQUIPMENT DESCRIPTION:

UP TO 5 UNCONTROLLED CYCLICALLY STEAMED OIL WELLS AND UP TO 40 UNCONTROLLED CYCLIC WELLS UNDERGOING PILOT TESTING

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain current roster of all open vent cyclically steamed wells that have been steamed within the previous 5 years being operated under this permit. [District Rule 4401 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
2. Cyclic wells undergoing pilot testing, or exempt pursuant to Rule 4401 section 4.4, shall be located more than 1,000 feet from any existing well vent vapor recovery system operated by permittee. [District Rule 4401, 4.2.2 and 4.4.2] Federally Enforceable Through Title V Permit
3. Well roster shall include identification of all uncontrolled cyclic wells undergoing pilot testing. [District Rule 4401] Federally Enforceable Through Title V Permit
4. Total number of uncontrolled cyclic wells exempt from control requirements pursuant to Rule 4401 Section 4.4 shall not exceed 5. [District Rule 4401, 4.4] Federally Enforceable Through Title V Permit
5. Total number of uncontrolled cyclic wells undergoing pilot testing (pursuant to Rule 4401 section 4.2) shall not exceed 40. [District Rule 4401, 4.2] Federally Enforceable Through Title V Permit
6. Wells undergoing pilot testing shall not produce from a zone on that property that has been injected with steam during the preceding two years. [District Rule 4401, 4.2.1] Federally Enforceable Through Title V Permit
7. Wells undergoing pilot testing shall be located more than 1,000 feet from an existing well vent vapor collection and control system operated by the company. [District Rule 4401, 4.2.2] Federally Enforceable Through Title V Permit
8. Pilot testing of wells for the purpose of determining the viability of developing a steam-enhanced production zone shall not exceed 180 days for each production zone. [District Rule 4401, 3.25] Federally Enforceable Through Title V Permit
9. The operator of any new steam-enhanced crude oil production well, or any non-steam-enhanced crude oil production well converted to a steam-enhanced crude oil production well, which commences steam-enhancement operations on or after April 11, 1991, shall comply with the requirements of this rule and the applicable permit requirements of Rule 2201 (New and Modified Stationary Source Review Rule) before steam injection and no later than the first detectable flow at the casing vent. [District Rule 4401, 7.1] Federally Enforceable Through Title V Permit
10. Steam-enhanced crude oil production wells and components that are exempt pursuant to Section 4.3, 4.4, 4.5, 4.8 or 4.9 that become subject to this rule through loss of exemption status shall not be operated until such time that they are in full compliance with the requirements of this rule. [District Rule 4401, 7.2] Federally Enforceable Through Title V Permit
11. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 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-1328-55-5

EXPIRATION DATE: 03/31/2016

SECTION: S19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

305 BHP CATERPILLAR MODEL SR-4 TIER 0 CERTIFIED DIESEL-FIRED TRANSPORTABLE EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (HILL PROPERTY)

PERMIT UNIT REQUIREMENTS

1. This IC engine shall be replaced with a certified engine meeting Tier 4 emission standard and removed from service within two years of the first engine of this class and category being offered for sale that satisfies the Tier 4 emission standards. [17 CCR 93116]
2. This transportable IC engine shall not be operated at any single site at this facility for more than 12 consecutive months. The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination. [17 CCR 93116]
3. This engine shall be equipped with a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District NSR Rule and District Rule 4801 and 17 CCR 93116] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed any of the following limits: 11.16 g-NOx/bhp-hr, 2.5 g-CO/bhp-hr, or 1.14 g-VOC/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from this IC engine shall not exceed 0.382 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
9. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4] Federally Enforceable Through Title V Permit
10. This engine shall be operated only for maintenance, testing, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201 and District Rule 4702, 4.3.1.2] Federally Enforceable Through Title V Permit
11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] 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.

12. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
13. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
14. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702, 3.15] Federally Enforceable Through Title V Permit
15. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702, 3.15] Federally Enforceable Through Title V Permit
16. 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. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702, 6.2.3] Federally Enforceable Through Title V Permit

5

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1328-57-2

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

40 THERMALLY ENHANCED PRODUCTION WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Operation shall include no more than 40 steam enhanced crude oil production wells with closed casing vents. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to tanks S-1330-16, '17, '18, '19, '24, '25 and '26 that are vented to an approved vapor collection and control system achieving 99% control. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Volatile Organic Compound (VOC) emission rate shall not exceed 1.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
5. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
6. The requirements of this rule shall not apply to components serving the produced fluid line. [District Rule 4401, 4.5] Federally Enforceable Through Title V Permit
7. Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6] Federally Enforceable Through Title V Permit
8. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be 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, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
9. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of 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 as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] 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.

10. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
11. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
12. 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 with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
13. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
14. Unless exempt under Section 4.7 or Rule 4401, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
15. Unless exempt under Section 4.7 or Rule 4401, an operator shall visually inspect all pipes 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 the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
16. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An 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. 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 the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
17. Unless exempt under Section 4.7 or Rule 4401, in addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: 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, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
18. Unless exempt under Section 4.7 or Rule 4401, an operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
19. 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, 5.4.6] 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.

20. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
21. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
22. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
23. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
24. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
25. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
26. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
27. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
28. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
29. 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
30. 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 as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
31. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
32. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] 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. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
34. 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. An 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, 6.1.10] Federally Enforceable Through Title V Permit
35. If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
36. 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
37. 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
38. 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
39. 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, 6.3.4] Federally Enforceable Through Title V Permit
40. Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, the date of repair, replacement, or removal from operation of leaking components, identify 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 earlier, methods 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, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4] Federally Enforceable Through Title V Permit
41. Permittee 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

42. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
43. By January 30 of each year, permittee 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
44. Permittee shall maintain a current list of all steam-enhanced wells with closed casing vents authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. Upon request, the current list of wells authorized by this permit shall be submitted to the District's Compliance Division. [District Rule 2201] Federally Enforceable Through Title V Permit
45. Permittee shall retain copies of all previous lists of steam-enhanced wells with closed casing vents authorized by this permit. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by an Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
47. Steam-enhanced production wells with closed well casing vents shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of the closed casing vent wells. A copy of the written instructions shall be submitted to the District prior to implementation of this ATC. [District Rule 2201] 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-1328-58-1

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

WEMCO MODEL 84X INDUCED GAS FLOATATION UNIT, WITH 61 HP MOTOR CONNECTED TO THE TEOR VAPOR CONTROL SYSTEM LISTED IN S-1328-7 (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Volatile organic compounds (VOC) emissions shall not exceed 0.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vessel shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from vessel and a VOC control device. The vapor control system shall be APCO-approved and maintained in gas-tight condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Vessel shall be designed and maintained to vent only to vapor control system S-1328-7. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. A leak free 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. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A reading in excess of 10,000 ppmv above background is a violation of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. Any gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors with 100% VOC content in components. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this vessel 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 leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
10. If any of the vessel components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 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. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) eliminate or minimize the leak within 8 hours after detection, (b) if the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices and eliminate the leak within 48 hours after detection. In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 4623, 5.7.9 (Table 3)] Federally Enforceable Through Title V Permit
12. If a component type for a given vessel is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the vessel or vessel system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
13. Operator shall maintain an inspection log containing the following: 1) type of component leaking; 2) date and time of leak detection, and method of detection; 3) date and time of leak repair, and emission level of recheck after leak is repaired; 4) method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 1070] Federally Enforceable Through Title V Permit
14. The efficiency of any VOC destruction device shall be measured by EPA Method 25, 25a, or 25b. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit
15. Except as otherwise provided in this permit, operator shall ensure that the vapor control system is functional and is operating as designed at all times. [District Rules 4623 and 2201] Federally Enforceable Through Title V Permit
16. Permittee shall maintain accurate records of fugitive emissions and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

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

ATTACHMENT B

Previous Title V Operating Permit



Permit to Operate

FACILITY: S-1328

EXPIRATION DATE: 03/31/2016

LEGAL OWNER OR OPERATOR:
MAILING ADDRESS:

EXXON MOBIL CORPORATION
CORP-MI-3049
P O BOX 4358
HOUSTON, TX 77210-4358

FACILITY LOCATION:

HEAVY OIL WESTERN STATIONARY SOURCE
CA

FACILITY DESCRIPTION:

PETROLEUM AND NATURAL GAS PRODUCTION

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

Seyed Sadredin
Executive Director / APCO

David Warner
Director of Permit Services

San Joaquin Valley Air Pollution Control District

FACILITY: S-1328-0-1

EXPIRATION DATE: 03/31/2016

FACILITY-WIDE REQUIREMENTS

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 (3/21/02). [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 9.12.1] 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: EXXON MOBIL CORPORATION
Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA
S-1328-0-1; Dec 23 2011 10:53AM - ROEDERS

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 (11/15/01). 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 the Table of Standards of District Rule 4601 (10/31/01) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. All VOC-containing materials for architectural coatings subject to Rule 4601 (10/31/01) shall be stored in closed containers when not in use. [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 (10/31/01). [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 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 82, Subpart B. [40 CFR 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8021 and 8011] 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8031 and 8011] 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8041 and 8011] 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8051 and 8011] 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit
34. Any unpaved vehicle/equipment area that anticipates more than 75 vehicle trips per day shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 100 vehicle trips per day shall comply with the requirements of Section 5.1.2 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8071 and Rule 8011] 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 permits 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), and Rule 111 (Kern, Tulare, Kings). 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 7.1 (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 (11/15/01); 4601, sections 5.1, 5.2, 5.3, 5.8 and 8.0 (10/31/01); 8021 (11/15/01); 8031 (11/15/01); 8041 (11/15/01); 8051 (11/15/01); 8061 (11/15/01); and 8071 (11/15/01). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. On August 8, 2005, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based on this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit
42. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
43. All records required shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule and 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-1328-1-18

EXPIRATION DATE: 03/31/2016

SECTION: NE19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR GAS-FIRED STRUTHERS STEAM GENERATOR UNIT #64 WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
2. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such 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 Rule 4320]
3. On and after 7/1/2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
4. If steam generator is inoperative, non-condensable vapors shall not vent to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: SOx (as SO2): 115.0 lb/day, PM10: 0.005 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District NSR Rule and District Rules 4201, 3.1, 4301, 5.1 and 5.2, 4406 and 4801] Federally Enforceable Through Title V Permit
6. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H2S in sweet gas, P2 = ppmv H2S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District NSR Rule] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmvd @ 3% O2, or CO: 0.016 lb/MMBtu or 21.7 ppmv @ 3% O2. [District NSR Rule and District Rules 4301, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
8. During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Daily maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day or 24.0 lb-CO/day. [District NSR Rule] 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. Start-up is defined as that 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. Shutdown is defined as that 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 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit
11. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit
12. For this emission unit the overall throttle and use factor used in the SLC plan is 87%. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Combined annual combustion emissions from permit units S-1328-1, '-2, '-3 and the flare identified on permit unit S-1328-7 shall not exceed any of the following: NO_x (as NO₂): 25,733 lb/yr, SO_x (as SO₂): 41,975 lb/yr, PM₁₀: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Permittee shall sample sweet and noncondensable vapor gas monthly for H₂S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District NSR Rule] Federally Enforceable Through Title V Permit
15. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, 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 Rules 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 4305, 5.4 and 4306, 5.4] 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.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
22. 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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
23. 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 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
24. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas 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 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit
25. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
26. 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
27. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, 6.2; and 4351] Federally Enforceable Through Title V Permit
28. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1] Federally Enforceable Through Title V Permit
29. Source testing shall be District witnessed or authorized and conducted by an ARB certified testing contractor. [District Rule 1081] Federally Enforceable Through Title V Permit
30. 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. [District Rule 1081] Federally Enforceable Through Title V Permit
31. 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
32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
33. 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; 4305, 6.1; and 4306, 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-1328-2-19

EXPIRATION DATE: 03/31/2016

SECTION: NE19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR GAS-FIRED STRUTHERS STEAM GENERATOR UNIT #65 WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
2. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such 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 Rule 4320]
3. On and after 7/1/2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
4. If steam generator is inoperative, non-condensable vapors shall not vent to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: SOx (as SO2): 115.0 lb/day, PM10: 0.005 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District NSR Rule and District Rules 4201, 3.1, 4301, 5.1 and 5.2, 4406 and 4801] Federally Enforceable Through Title V Permit
6. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H2S in sweet gas, P2 = ppmv H2S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District NSR Rule] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmvd @ 3% O2, or CO: 0.016 lb/MMBtu or 21.7 ppmv @ 3% O2. [District NSR Rule and District Rules 4301, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
8. During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Daily maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day or 24.0 lb-CO/day. [District NSR Rule] 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. Start-up is defined as that 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. Shutdown is defined as that 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 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit
11. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit
12. For this emission unit the overall throttle and use factor used in the SLC plan is 87%. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Combined annual combustion emissions from permit units S-1328-1, '-2, '-3 and the flare identified on permit unit S-1328-7 shall not exceed any of the following: NOx (as NO2): 25,733 lb/yr, SOx (as SO2): 41,975 lb/yr, PM10: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Permittee shall sample sweet and noncondensable vapor gas monthly for H2S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District NSR Rule] Federally Enforceable Through Title V Permit
15. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. If either the NOx or CO concentrations corrected to 3% O2, 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 Rules 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 4305, 5.4 and 4306, 5.4] 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.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
22. 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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
23. 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 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
24. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas 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 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit
25. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
26. 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
27. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, 6.2; and 4351] Federally Enforceable Through Title V Permit
28. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1] Federally Enforceable Through Title V Permit
29. Source testing shall be District witnessed or authorized and conducted by an ARB certified testing contractor. [District Rule 1081] Federally Enforceable Through Title V Permit
30. 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. [District Rule 1081] Federally Enforceable Through Title V Permit
31. 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
32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
33. 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; 4305, 6.1; and 4306, 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-1328-3-19

EXPIRATION DATE: 03/31/2016

SECTION: NE19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS STEAM GENERATOR UNIT #66 WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
2. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such 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 Rule 4320]
3. On and after 7/1/2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
4. If steam generator is inoperative, non-condensable vapors shall not vent to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: SOx (as SO2): 115.0 lb/day, PM10: 0.005 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District NSR Rule and District Rules 4201, 3.1, 4301, 5.1 and 5.2, 4406 and 4801] Federally Enforceable Through Title V Permit
6. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H2S in sweet gas, P2 = ppmv H2S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District NSR Rule] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmvd @ 3% O2, or CO: 0.016 lb/MMBtu or 21.7 ppmv @ 3% O2. [District NSR Rule and District Rules 4301, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
8. During start-up and shutdown periods, emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Daily maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 54.0 lb-NOx/day or 24.0 lb-CO/day. [District NSR Rule] 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. Start-up is defined as that 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. Shutdown is defined as that 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 4306, 3.22, 3.25] Federally Enforceable Through Title V Permit
11. The duration of each start-up or each shutdown shall not exceed two hours per occurrence. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown. The operator shall maintain daily records of the number and duration of start-up and shutdown periods. [District Rule 4306, 5.3] Federally Enforceable Through Title V Permit
12. For this emission unit the overall throttle and use factor used in the SLC plan is 87%. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Combined annual combustion emissions from permit units S-1328-1, '-2, '-3 and the flare identified on permit unit S-1328-7 shall not exceed any of the following: NOx (as NO2): 25,733 lb/yr, SOx (as SO2): 41,975 lb/yr, PM10: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Permittee shall sample sweet and noncondensable vapor gas monthly for H2S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District NSR Rule] Federally Enforceable Through Title V Permit
15. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. If either the NOx or CO concentrations corrected to 3% O2, 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 Rules 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 4305, 5.4 and 4306, 5.4] 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.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
22. 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 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
23. 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 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
24. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas 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 4305 and 4306, 6.3] Federally Enforceable Through Title V Permit
25. The source plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
26. 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
27. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (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, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, 6.2; and 4351] Federally Enforceable Through Title V Permit
28. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1] Federally Enforceable Through Title V Permit
29. Source testing shall be District witnessed or authorized and conducted by an ARB certified testing contractor. [District Rule 1081] Federally Enforceable Through Title V Permit
30. 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. [District Rule 1081] Federally Enforceable Through Title V Permit
31. 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
32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
33. 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; 4305, 6.1; and 4306, 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-1328-7-12

EXPIRATION DATE: 03/31/2016

SECTION: NE19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED CRUDE OIL PRODUCTION WELL OPERATION SERVING 86 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H2S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING

PERMIT UNIT REQUIREMENTS

1. Listing of all steam enhanced wells, including identification of all steam enhanced wells with polish rod boxes subject to BACT I&M program connected to this system, shall be submitted to the District 60 days prior to the permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Vapor control system shall serve thermally enhanced well vents, permit exempt heater treater, and Wemco S-1328-58. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Scrubbing solution shall consist only of Sulfa-Check and/or Sulfa-Treat media and additives unless prior District approval is obtained. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Noncondensable vapor gas from this well vent vapor control system may be incinerated in the following devices: steam generator permits S-1328-1, S-1328-2, and S-1328-3, and the standby flare. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Noncondensable vapor gas throughput to flare shall not exceed 0.333 MMscf per day if two (2) steam generators are in operation, 0.666 MMscf if one (1) steam generator is in operation, and 1.0 MMscf per day if none of the steam generators are in operation. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Fugitive VOC emission rate from TEOR components shall not exceed 123.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Emission rates from the standby flare shall not exceed any of the following: NO_x (as NO₂): 0.0725 lb/MMBtu, SO_x (as SO₂): 115.0 lb/day, PM₁₀: 0.0202 lb/MMBtu, CO: 0.022 lb/MMBtu, or VOC: 0.0021 lb/MMBtu. [District NSR Rule and District Rules 4201, 4301 and 4801] Federally Enforceable Through Title V Permit
8. $SO_x \text{ (as } SO_2) = (1.68 \times 10E-7) \times \{(P1 \times F1) + (P2 \times F2)\} = \text{lb/day}$: P1 = ppmv H₂S in sweet gas, P2 = ppmv H₂S in noncondensable vapor gas, F1 = sweet gas (scf/day), and F2 = noncondensable vapor gas (scf/day). [District NSR Rule] Federally Enforceable Through Title V Permit
9. Combined annual combustion emissions from units S-1328-1, -2, -3 and the flare identified on S-1328-7 shall not exceed any of the following: NO_x (as NO₂): 25,733 lb/yr, SO_x (as SO₂): 41,975 lb/yr, PM₁₀: 7,154 lb/yr, CO: 22,849 lb/yr, or VOC: 4,271 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit
10. If fuel use monitoring provisions fail, emissions shall be calculated based on operational data, or if not available, on set equal to the average of four days prior to failure. [District NSR Rule] Federally Enforceable Through Title V Permit
11. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule] 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. Total number of component leaks shall not exceed 8 leaks. Except as specified above for stuffing boxes, a leak is defined as a reading in excess of 10,000 ppmv when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule and District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
13. Standby flare shall comply with all requirements of District Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
14. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 4401] Federally Enforceable Through Title V Permit
15. All components of well vent vapor collection and control systems shall be maintained in good working condition. [District Rule 4401] Federally Enforceable Through Title V Permit
16. Leaks shall be inspected and repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
17. Total number of leaks shall not exceed 8 leaks. Except as specified above for stuffing boxes, a leak is defined as a reading in excess of 10,000 ppmv when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
18. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended January 15, 1998). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
19. The operator shall maintain monitoring 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
20. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit
21. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single vapor collection and control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit
22. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended January 15, 1998) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
23. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit
24. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
25. Operator shall repair each leak within 15 calendar days of detection. The APCO may grant a 10 calendar day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
26. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] 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.

27. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by source testers certified by the California Air Resources Board (CARB) during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the annual testing requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless open flare, and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2, 6.2.1 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components and number of components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
29. VOC content shall be determined using the latest revision of ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
30. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2520, 3.3 and 4401, 6.3.3] Federally Enforceable Through Title V Permit
31. Inspection of each affected component identified in the Operator's Maintenance Plan (OMP) shall be performed at least once per 12 month period, except where the underlying rule requires more frequent testing to meet 99% control. [District Rule 4401, 7.1] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 4401 (Amended January 15, 1998), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. The requirements of District Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit because it is not an in situ combustion well vent. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. Except for flares equipped with a flow-sensing ignition system, a 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 installed and operated. [District Rule 4311, 5.4 and 40 CFR Part 64] 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.

38. A trained observer as defined EPA method 22, shall check visible emissions from the flare at least once per year for a period of 15 minutes. If visible emissions are detected at any time during this period, the operator shall take action as needed to eliminate the visible emissions and a trained observer shall recheck the visible emissions the next time the flare is in operation. A record containing the results of these observations shall be maintained, which also includes observers name and affiliation, date, estimated wind speed and direction, sky condition and the observer's location relative to the source and sun. [40 CFR Part 64] Federally Enforceable Through Title V Permit
39. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
40. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
41. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
42. Permittee shall sample sweet and noncondensable vapor gas monthly for H₂S concentration and shall maintain daily records of sweet & noncondensable vapor gas flowrate (scfd). [District NSR Rule] Federally Enforceable Through Title V Permit
43. The permittee shall maintain records of fuel type, quantity, heating value of gas burned, permitted emission factors and annual emissions for each unit. Records shall be updated at least monthly. Reports of annual emissions and fuel usage shall be submitted within 30 days after the end of the calendar year. [District NSR Rule] Federally Enforceable Through Title V Permit
44. Permittee shall measure H₂S concentration from on-line scrubber(s) outlet with District-approved device (e.g. MSA Samplair pump unit No. 463998 and MSA H₂S detector tubes) at least daily when scrubber is in operation. [District NSR Rule] Federally Enforceable Through Title V Permit
45. H₂S concentration shall be measured by Exxon with District-approved device (e.g. MSA Samplair pump unit No. 463998 and MSA H₂S detector tubes) from on-line scrubber(s) outlet at least daily when scrubber is in operation. [District Rule 1070] Federally Enforceable Through Title V Permit
46. Exxon shall measure daily the non-condensibles gas flow rate and, at least monthly, the non-condensable gas H₂S concentration. Records shall be maintained and made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
47. Permittee shall maintain accurate daily records of volume noncondensable gas incinerated in flare. [District Rule 1070] Federally Enforceable Through Title V Permit
48. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 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-1328-25-2

EXPIRATION DATE: 03/31/2016

EQUIPMENT DESCRIPTION:

20 UNCONTROLLED CYCLICLY STEAMED OIL WELLS AND UP TO 40 UNCONTROLLED CYCLIC WELLS UNDERGOING PILOT TESTING.

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain current roster of all open vent cyclically steamed wells that have been steamed within the previous 5 years being operated under this permit. [District Rule 4401 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
2. Cyclic wells undergoing pilot testing, or exempt pursuant to Rule 4401 section 4.5, shall be located more than 1,000 feet from any existing well vent vapor recovery system operated by permittee. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Well roster shall include identification of all uncontrolled cyclic wells undergoing pilot testing. [District Rule 4401] Federally Enforceable Through Title V Permit
4. Total number of uncontrolled cyclic wells exempt from control requirements pursuant to Rule 4401 section 4.5 shall not exceed 20. [District Rule 4401] Federally Enforceable Through Title V Permit
5. Total number of uncontrolled cyclic wells undergoing pilot testing (pursuant to Rule 4401 section 4.3) shall not exceed 40. [District Rule 4401] Federally Enforceable Through Title V Permit
6. Wells undergoing pilot testing shall not produce from a zone on that property that has been injected with steam during the preceding two years. [District Rule 4401] Federally Enforceable Through Title V Permit
7. Pilot testing of wells for the purpose of determining the viability of developing a steam-enhanced production zone shall not exceed 180 days for each production zone. [District Rule 4401] 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-1328-55-4

EXPIRATION DATE: 03/31/2016

SECTION: S19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

305 BHP CATERPILLAR MODEL SR-4 TIER 0 DIESEL-FIRED TRANSPORTABLE EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (HILL PROPERTY)

PERMIT UNIT REQUIREMENTS

1. This IC engine shall be replaced with a certified engine meeting Tier 4 emission standard and removed from service within two years of the first engine of this class and category being offered for sale that satisfies the Tier 4 emission standards. [17 CCR 93116]
2. This transportable IC engine shall not be operated at any single site at this facility for more than 12 consecutive months. The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination. [17 CCR 93116]
3. This engine shall be equipped with a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District NSR Rule and District Rule 4801 and 17 CCR 93116] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed any of the following limits: 11.16 g-NOx/bhp-hr, 2.5 g-CO/bhp-hr, or 1.14 g-VOC/bhp-hr. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Emissions from this IC engine shall not exceed 0.382 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District NSR Rule and District Rule 4102] Federally Enforceable Through Title V Permit
9. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4] Federally Enforceable Through Title V Permit
10. This engine shall be operated only for maintenance, testing, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District NSR Rule and District Rule 4702, 4.3.1.2] Federally Enforceable Through Title V Permit
11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] 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.

12. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
13. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 6.2.1] Federally Enforceable Through Title V Permit
14. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702, 3.15] Federally Enforceable Through Title V Permit
15. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702, 3.15] Federally Enforceable Through Title V Permit
16. 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. For units at unstaffed sites or operated remotely, records may be maintained and retained at a District-approved off-site location. [District Rule 4702, 6.2.3] 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-1328-57-1

EXPIRATION DATE: 03/31/2016

SECTION: NE19 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

40 STEAM ENHANCED PRODUCTION WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Operation shall include no more than 40 steam enhanced crude oil production wells with closed casing vents. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Well casing vents shall remain closed at all times except during periods of actual service or repair when wells are not producing. [District NSR Rule and District Rule 4401, 5.0] Federally Enforceable Through Title V Permit
3. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to tanks S-1330-16, '17, '18, '19, '24, '25 and '26 that are vented to an approved vapor collection and control system achieving 99% control. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain a current list of all steam-enhanced wells with closed casing vents authorized by this permit and shall update the list whenever a well is added, replaced, or deleted. Upon request, the current list of wells authorized by this permit shall be submitted to the District's Compliance Division. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Permittee shall retain copies of all previous lists of steam-enhanced wells with closed casing vents authorized by this permit. [District NSR Rule and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
6. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by an Authority to Construct. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Steam-enhanced production wells with closed well casing vents shall each have a visible identification number. Field personnel shall be provided with written instructions concerning proper operation and maintenance of the closed casing vent wells. A copy of the written instructions shall be submitted to the District prior to implementation of this ATC. [District NSR Rule] Federally Enforceable Through Title V Permit
8. An inspection and maintenance program consistent with Rule 4403 shall be implemented and maintained for polish rod stuffing boxes for all wells drilled after December 10, 1991 (identified by annual well roster as required by permit) Stuffing box leaks are defined as per Rule 4403, as a drip of more than three drops per minute or a reading in excess of 20,000 ppmv as methane using a portable hydrocarbon detection instrument. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Total number of component leaks shall not exceed 2 leaks. Except as specified above for stuffing boxes, a leak is defined as a reading in excess of 10,000 ppmv when measured with a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule and District Rule 4401, 5.0] Federally Enforceable Through Title V Permit
10. Leak inspection shall be performed using a portable hydrocarbon detection instrument calibrated with methane in accordance with EPA Reference Method 21. [District NSR Rule] 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. Portable hydrocarbon detection instrument shall be operated and calibrated in accordance with recommendations in CAPCOA/CARB's California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities (February, 1999): detection instrument shall be calibrated with methane; instrument flow rate range shall be maintained at 0.7 to 1.2 liters per minute; 5 second response time to maximum reading shall be achieved; instrument probe outside diameter of 3/16 inch; and background screening distance shall be no less than 25 centimeters. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Flanges shall be inspected with portable hydrocarbon detection instrument along the entire circumference of the flange-gasket interface. Threaded connections, tubing fittings, and other types of non-permanent joints shall be monitored along the entire circumference of joint interface. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Valves shall be inspected with portable hydrocarbon detection instrument where the stem comes through the packing gland, and at any attached or connected body flange(s), bonnet flange(s), or plug(s). [District NSR Rule] Federally Enforceable Through Title V Permit
14. Polished rod stuffing boxes and all other components shall be inspected at all points of possible emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Volatile Organic Compound (VOC) emission rate shall not exceed 1.2 lb/day. [District NSR Rule] 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-1328-58-0

EXPIRATION DATE: 03/31/2016

SECTION: NE19 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

WEMCO INDUCED GAS FLOATION UNIT MODEL 84X, WITH 61 HP MOTOR CONNECTED TO TEOR VAPOR CONTROL SYSTEM LISTED IN S-1328-7 (HILL LEASE)

PERMIT UNIT REQUIREMENTS

1. Volatile organic compounds (VOC) emissions shall not exceed 0.5 lb/day. [District Rule 2201]
2. Vessel shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from vessel and a VOC control device. The vapor control system shall be APCO-approved and maintained in gas-tight condition. [District Rules 2201 and 4623]
3. Vessel shall be designed and maintained to vent only to vapor control system S-1328-7. [District Rules 2201 and 4623]
4. All piping, valves, and fittings shall be constructed and maintained in a leak free condition. [District Rules 2201 and 4623]
5. A leak free 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. [District Rules 2201 and 4623]
6. A reading in excess of 10,000 ppmv above background is a violation of this permit. [District Rules 2201 and 4623]
7. Any gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623]
8. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors with 100% VOC content in components. [District Rule 2201]
9. All piping, fittings, and valves on this vessel 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 leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)]
10. If any of the vessel components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)]
11. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) eliminate or minimize the leak within 8 hours after detection, (b) if the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices and eliminate the leak within 48 hours after detection. In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 4623, 5.7 9 (Table 3)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. If a component type for a given vessel is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the vessel or vessel system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)]
13. Operator shall maintain an inspection log containing the following: 1) type of component leaking; 2) date and time of leak detection, and method of detection; 3) date and time of leak repair, and emission level of recheck after leak is repaired; 4) method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 1070]
14. The efficiency of any VOC destruction device shall be measured by EPA Method 25, 25a, or 25b. [District Rule 4623, 6.4.7]
15. Except as otherwise provided in this permit, operator shall ensure that the vapor control system is functional and is operating as designed at all times. [District Rules 4623 and 2201]
16. Permittee shall maintain accurate records of fugitive emissions and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 2201]

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



PERMIT-EXEMPT EQUIPMENT REGISTRATION (PEER)

PEER NO: S-1328-1-0

EXPIRATION DATE: 04/02/2014

LEGAL OWNER OR OPERATOR: EXXON MOBIL CORPORATION
MAILING ADDRESS: CORP-MI-3049
P O BOX 4358
HOUSTON, TX 77210-4358

FACILITY LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

LOCATION DESCRIPTION: SOUTH BELRIDGE HILL PROPERTY - HEAVY OIL FACILITY

EQUIPMENT DESCRIPTION:

2.0 MMBTU/HR PETROTHERM MODEL GWC-B-2.0 MM S/N 1185 NATURAL GAS-FIRED NATURAL DRAFT PROCESS HEATER WITH A PETROTHERM MODEL GWC-B-2.0 MM BURNER

CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. The owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4307]
5. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4307]
6. The owner/operator shall maintain records to verify that the required tune-ups have been performed. [District Rule 4307]
7. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307]

CONDITIONS CONTINUE ON NEXT PAGE

This PEER remains valid through the expiration date listed above, subject to payment of the annual registration fees and compliance with the PEER conditions and all applicable local, state, and federal regulations. This PEER is valid only within the San Joaquin Valley Air Pollution Control District. Any equipment or operation change may require a PEER application be filed with the District.

Seyed Sadredin
Executive Director / APCO

S-1328-1-0 12/23/2011 -- ROEDERS Joint Inspection NOT Required

David Warner
Director of Permit Services

8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 4307]
9. This unit shall be in full compliance with District Rule 4307 by the applicable compliance plan. The full compliance date for Group 1 units is July 1, 2008. The full compliance date for Group 2 units is July 1, 2009. If this facility has only one unit subject to Rule 4307, the unit falls under Group 2. [District Rule 4307]



PERMIT-EXEMPT EQUIPMENT REGISTRATION (PEER)

PEER NO: S-1328-2-0

EXPIRATION DATE: 04/02/2014

LEGAL OWNER OR OPERATOR: EXXON MOBIL CORPORATION
MAILING ADDRESS: CORP-MI-3049
P O BOX 4358
HOUSTON, TX 77210-4358

FACILITY LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

LOCATION DESCRIPTION: SOUTH BELRIDGE HILL PROPERTY - TULARE HEAVY OIL FACILITY

EQUIPMENT DESCRIPTION:

4.888 MMBTU/HR NATURAL GAS-FIRED NATURAL DRAFT PROCESS HEATER WITH A KVAERNER MODEL 5M-3430-3L LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR)

CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. The owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4307]
5. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4307]
6. The owner/operator shall maintain records to verify that the required tune-ups have been performed. [District Rule 4307]
7. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307]

CONDITIONS CONTINUE ON NEXT PAGE

This PEER remains valid through the expiration date listed above, subject to payment of the annual registration fees and compliance with the PEER conditions and all applicable local, state, and federal regulations. This PEER is valid only within the San Joaquin Valley Air Pollution Control District. Any equipment or operation change may require a PEER application be filed with the District.

Sayed Sadredin
Executive Director / APCO

David Warner
Director of Permit Services

S-1328-2-0 12/23/2011 - ROEDERS Joint Inspection NOT Required

8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 4307]
9. This unit shall be in full compliance with District Rule 4307 by the applicable compliance plan. The full compliance date for Group 1 units is July 1, 2008. The full compliance date for Group 2 units is July 1, 2009. If this facility has only one unit subject to Rule 4307, the unit falls under Group 2. [District Rule 4307]

ATTACHMENT C

Detailed Facility Report

Detailed Facility Report
For Facility=1328 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

EXXON MOBIL CORPORATION HEAVY OIL WESTERN STATIONARY SOURCE CA	FAC # STATUS: TELEPHONE:	S 1328 A 7134311018	TYPE: TOXIC ID:	TitleV 50086	EXPIRE ON: AREA: INSP. DATE:	03/31/2010 3 / 03/12
--	--------------------------------	---------------------------	--------------------	-----------------	------------------------------------	----------------------------

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
S-1328-1-18	62.5 MMBTU/HR	3020-02 H	1	1,030.00	1,030.00	A	62.5 MMBTU/HR GAS-FIRED STRUTHERS STEAM GENERATOR UNIT #64 WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)
S-1328-2-19	62.5 MMBTU/HR	3020-02 H	1	1,030.00	1,030.00	A	62.5 MMBTU/HR GAS-FIRED STRUTHERS STEAM GENERATOR UNIT #65 WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)
S-1328-3-19	62.5 MMBTU/HR	3020-02 H	1	1,030.00	1,030.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STRUTHERS STEAM GENERATOR UNIT #66 WITH NORTH AMERICAN MAGNA FLAME GLE NOX BURNER, FGR AND O2 CONTROLLER (HILL LEASE)
S-1328-7-12	86 WELLS W/VAPOR CONTROL	3020-09 A	86	9.34	803.24	A	THERMALLY ENHANCED CRUDE OIL PRODUCTION WELL OPERATION SERVING 86 STEAM DRIVE WELLS WITH VAPOR CONTROL SYSTEM INCLUDING PERMIT EXEMPT HEATER TREATER (FORMERLY S-1328-56) OFF-GAS, GAS/LIQUID SEPARATOR, COMPRESSOR, CONDENSERS, TWO H2S SCRUBBING VESSELS, FLARE, AND ASSOCIATED PIPING
S-1328-25-2	60 Wells total	3020-09 A	60	9.34	560.40	A	20 UNCONTROLLED CYCLICLY STEAMED OIL WELLS AND UP TO 40 UNCONTROLLED CYCLIC WELLS UNDERGOING PILOT TESTING.
S-1328-55-4	305 bhp IC engine	3020-10 C	1	240.00	240.00	A	305 BHP CATERPILLAR MODEL SR-4 TIER 0 DIESEL-FIRED TRANSPORTABLE EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (HILL PROPERTY)
S-1328-57-1	40 Wells	3020-09 B	40	9.34	373.60	A	40 STEAM ENHANCED PRODUCTION WELLS WITH CLOSED CASING VENTS
S-1328-58-0	61 hp	3020-01 C	1	197.00	197.00	A	WEMCO INDUCED GAS FLOATATION UNIT MODEL 84X, WITH 61 HP MOTOR CONNECTED TO TEOR VAPOR CONTROL SYSTEM LISTED IN S-1328-7 (HILL LEASE)

Number of Facilities Reported: 1

ATTACHMENT D

Comments and Responses

The District has received comments from the facility and EPA regarding Title V Renewal Project S-1094887. The engineering evaluation and permit conditions have been revised to reflect the changes discussed below.

1. The following summarizes Exxon's requested changes and the District's responses to those comments. (EPA's comments follow.)

Permit No.	Equipment	Comments and Responses
	All	The Expiration Date will need to be updated. This will be done upon finalization of the TV renewal project, and will state 3/31/15.
	All	The permit conditions contain bracketed form numbers. These brackets are part of our data base and are only printed on draft permits. The numbers will be removed upon printing of the finalized permits.
Facility-Wide Permit 0-2	All	Conditions 18-21 are the same condition. Delete 19-21. These conditions are part of the accepted Title V Umbrella permit. Although they seem similar, Condition 18 allows the District to enter the facility, 19 allows the District to access and copy records, 20 allows the District to inspect the equipment, and 21 allows the District to monitor and sample substances. Therefore, the conditions must remain on the permit.
S-1328-1-20	62.5 MMBtu/hr steam generator	Conditions 1, 2 and 3 have been omitted. Please replace them. The conditions regarding Rule 4320 fees should not have been removed and have been replaced as requested.
S-1328-2-21	62.5 MMBtu/hr steam generator	Conditions 1, 2 and 3 have been omitted. Please replace them. The conditions regarding Rule 4320 fees should not have been removed and have been replaced as requested.
		Revise Condition 15 to require monitoring each "calendar" month. The proposed wording is consistent with modern permit language and the condition has been revised accordingly.
		Condition 27, requiring Source testing to be conducted using the methods and procedures approved by the District, is a duplicate of 23. The redundant condition has been removed.

Permit No.	Equipment	Comments and Responses
S-1328-3-21	62.5 MMBtu/hr steam generator	<p>Conditions 1, 2 and 3 have been omitted. Please replace them.</p> <p>The conditions regarding Rule 4320 fees should not have been removed and have been replaced as requested.</p>
		<p>Revise Condition 15 to require monitoring each "calendar" month.</p> <p>The proposed wording is consistent with modern permit language and the condition has been revised accordingly.</p>
		<p>Condition 27, requiring Source testing to be conducted using the methods and procedures approved by the District, is a duplicate of 23.</p> <p>The redundant condition has been removed.</p>
S-1328-7-13	<p style="text-align: center;">THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 86 STEAM DRIVE WELLS</p>	<p>Revise condition 1 to state: that the "Permittee shall maintain a current list" of all steam enhanced wells, and replace "shall be submitted to the District 60 days prior to the permit anniversary" with "and shall update the list whenever a well is added, replaced or deleted. Upon request, the current list of wells authorized by this permit shall be submitted to the District's Compliance Division."</p> <p>The wording "Permittee shall maintain a current list" is consistent with modern permit language and shall be added.</p> <p>The suggestion to have the list updated whenever a well is added, replaced or deleted is good and is consistent with modern permit language, and will eliminate compliance issues, and shall be added.</p> <p>However, the requirement to submit the list to the District every year was a Rule 2201 requirement and cannot be removed at this time.</p> <p>The condition has been revised as follows:</p> <p>Permittee shall maintain a current list of all steam enhanced wells, including identification of all steam enhanced wells with polish rod boxes subject to BACT I&M program connected to this system, and shall update the list whenever a well is added, replaced or deleted. The updated list shall be submitted to the District 60 days prior to the permit anniversary.</p>
		<p>Revise condition 5 to reflect 3 steam generators.</p> <p>This request more accurately reflects the fact that there are 3 steam generators, and the condition has been revised as</p>

Permit No.	Equipment	Comments and Responses
		<p>follows:</p> <p>Noncondensable vapor gas throughput to flare shall not exceed 0.333 MMscf per day if two (2) or three (3) steam generators are in operation, 0.666 MMscf if one (1) steam generator is in operation, and 1.0 MMscf per day if none of the steam generators are in operation.</p>
		<p>Delete condition 22 regarding H2S, since 21 and 22 are essentially the same.</p> <p>Condition 22 has been removed and condition 21 has been reworded to include both rule references as follows:</p> <p>Permittee shall measure H2S concentration from on-line scrubber(s) outlet with District-approved device (e.g. MSA Samplair pump unit No. 463998 and MSA H2S detector tubes) at least daily when scrubber is in operation. [District Rules 1070 and 2201]</p>
		<p>Replace "Exxon" with "Permittee" on condition 23 regarding daily gas flowrate records.</p> <p>This revision is more consistent with modern permit language and the condition has been revised as requested.</p>
		<p>Revise the rule reference in condition 36 to state District Rule 4401, 5.4.5.</p> <p>The suggested rule reference is correct and the condition has been revised as requested.</p>
		<p>Revise conditions 32 - 37 to include "Unless exempted under Section 4.7 of Rule 4401,".</p> <p>This phrase clarifies the intent of the permit conditions and has been added to conditions 32-36. However, condition 37 does not include an action that may be exempted, so it will stand as written, and the rule reference for condition 36 will be corrected to reflect Rule 4401, 5.4.6.</p>
		<p>The exemptions from Rule 4401 Section 4.6 are not captured in this permit.</p> <p>The 4.6 exemptions are good, therefore, the following condition has been added:</p> <p>Except for complying with the applicable requirements of Section 6.1, Section 6.6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption</p>

Permit No.	Equipment	Comments and Responses
		<p>pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6]</p>
		<p>Remove condition 48 which states: "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 as defined in Section 3.0.", since all of all of the gas is combusted in steam generators subject to Rule 4320 and a flare that is subject to Rule 4311.</p> <p>Since Section 6.2.2 states that "If approved by the APCO, a VOC collection and control system is not subject to Section 6.2.1 if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the requirements in Sections 6.2.2.1 through 6.2.2.3, including an internal combustion engine subject to District Rule 4702; a combustion device subject to District Rule 4320, 4307, or 4308; or a flare subject to District Rule 4311.", and there are no other control devices present at your facility, condition 48 has been removed.</p>
		<p>Streamline conditions 49 and 63 because 49 is essentially redundant.</p> <p>These conditions can be combined for clarity and to avoid redundancy.</p> <p>Therefore, condition 49 shall be removed and 63 has been revised as follows:</p> <p>Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify 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 earlier, methods 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, the date of re-inspection and the leak concentration in ppmv after the component is</p>

Permit No.	Equipment	Comments and Responses
		repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4]
		Remove conditions 53, 54 and 58 relating to gauge tanks, since your facility has none. Since there are no gauge tanks, the conditions have been removed.
		Include the condition "The requirements of this rule shall not apply to components serving the produced fluid line. [District Rule 4401, 4.5] This is a relevant condition and has been added as requested.
		Include the condition "Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing. [District Rule 4401, 4.1] This is a relevant condition and has been added as requested.
		Remove condition 56 which states: "An operator shall source test annually all VOC 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. A process system as defined in Section 3.30 of Rule 4401 not subject to compliance source testing requirements.", since all of all of the gas is combusted in steam generators subject to Rule 4320 and a flare that is subject to Rule 4311. Since Section 6.2.2 states that "If approved by the APCO, a VOC collection and control system is not subject to Section 6.2.1 if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the requirements in Sections 6.2.2.1 through 6.2.2.3, including an internal combustion engine subject to District Rule 4702; a combustion device subject to District Rule 4320, 4307, or 4308; or a flare subject to District Rule 4311.", and there are no other control devices present at your facility, condition 48 has been removed.
		Revise condition 57 which states: "If approved by EPA, ARB, and the APCO, an operator need not comply with the annual

Permit No.	Equipment	Comments and Responses
		<p>testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311.", to remove the words, "EPA, ARB".</p> <p>Since the wording of Section 6.2.2 does not contain the words, the condition has been revised as follows:</p> <p>If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2]</p>
S-1328-57-2	40 THERMALLY ENHANCED PRODUCTION WELLS WITH CLOSED CASING VENTS	<p>Multiple conditions. Revise all rule references that reflect "District NSR Rule" to state "District Rule 2201".</p> <p>This wording is consistent with modern permit language and the rule references have been revised as requested.</p>
		<p>Conditions 13-18 to include "Unless exempted under Section 4.7 of Rule 4401,".</p> <p>This phrase clarifies the intent of the permit conditions and has been added to conditions 13-16. However, condition 18 does not include an action that may be exempted, so it will stand as written, and the rule reference on condition 17 will be corrected to reflect Rule 4401, 5.4.6.</p>
		<p>Remove condition 29 which states, "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 as defined in Section 3.0.", since all of all of the gas is combusted in steam generators subject to Rule 4320 and a flare that is subject to Rule 4311.</p> <p>Since Section 6.2.2 states that "If approved by the APCO, a VOC collection and control system is not subject to Section 6.2.1 if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the requirements in Sections 6.2.2.1 through 6.2.2.3, including an internal combustion engine subject to District Rule 4702; a combustion device subject to District Rule 4320, 4307, or 4308; or a flare subject to District Rule 4311.", and there are no other control devices present at your facility, condition 29 has been removed.</p>
		Remove conditions 34, 35 and 39 relating to gauge tanks, since

Permit No.	Equipment	Comments and Responses
		<p>your facility has none.</p> <p>Since there are no gauge tanks, the conditions have been removed.</p>
		<p>The exemptions from Rule 4401 Section 4.6 are not captured in this permit.</p> <p>The 4.6 exemptions are good, therefore, the following condition has been added:</p> <p>Except for complying with the applicable requirements of Section 6.1, Section 6.6 and Section 7.2, the requirements of this rule shall not apply to components described in Section 4.6.1 through Section 4.6.4. An operator claiming an exemption pursuant to Section 4.6 shall provide proof of the applicable criteria to the satisfaction of the APCO. [District Rule 4401, 4.6]</p>
		<p>Remove condition 37 which states: "An operator shall source test annually all VOC 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. A process system as defined in Section 3.30 of Rule 4401 not subject to compliance source testing requirements.", since all of all of the gas is combusted in steam generators subject to Rule 4320 and a flare that is subject to Rule 4311.</p> <p>Since Section 6.2.2 states that "If approved by the APCO, a VOC collection and control system is not subject to Section 6.2.1 if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the requirements in Sections 6.2.2.1 through 6.2.2.3, including an internal combustion engine subject to District Rule 4702; a combustion device subject to District Rule 4320, 4307, or 4308; or a flare subject to District Rule 4311.", and there are no other control devices present at your facility, condition 37 has been removed.</p>
		<p>Revise condition 38 which states: "If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311.", to remove the words, "EPA, ARB".</p>

Permit No.	Equipment	Comments and Responses
		<p>Since the wording of Section 6.2.2 does not contain the words, the condition has been revised as follows:</p> <p>If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2]</p>
		<p>Streamline conditions 30 and 44 because 30 is essentially redundant.</p> <p>These conditions can be combined for clarity and to avoid redundancy.</p> <p>Therefore, condition 30 shall be removed and 44 has been revised as follows:</p> <p>Operator shall maintain an inspection log pursuant to Section 6.4 of Rule 4401, including, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify 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 earlier, methods 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, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.1.4 and 6.4]</p>

2. EPA's comments are as follows:

Comment 1:

On page 23 of the Districts evaluation emission unit S-1328-7 is evaluated for CAM (Part 64 applicability). In particular, in Section P.B (the text is provided below) the District determines that the TEOR system is "inherent process equipment" and therefore not subject to CAM requirements. EPA disagrees.

B. TEOR System S-1328-7

40 CFR 64.1 defines a control device as equipment, other than inherent process equipment, that is used to destroy or remove air pollutants prior to discharge to the atmosphere. For TEOR systems, the District has determined that the vapor piping is "inherent process equipment". Such a network is an array of pipes that connect the wells and route the vapors to where they must go. The piping network is inherent to the TEOR system. Inherent process equipment is explicitly excluded from the definition of control device as defined in 40 CFR 64.

In the TEOR system the uncontrolled emissions are coming from the off-gassing of the steam enhanced wells, which is the emission unit. The control device consists of two parts, the capture and collection system and the device that destroys the captured emissions. For this permit the emissions are vented to a flare that destroys the VOC emissions.

The permit unit consists of both the emission unit (the steam enhanced wells) and a required capture/collection and control system. (See Cond. # 2 & 26) Thus to properly evaluate CAM applicability the District must determine the uncontrolled emission rates from the emission units and the post control emission rates from the control devices. Any fugitive emissions from the capture and control system must be included in the post control emission rates.

Please review this permit for CAM applicability using the methodology EPA has outlined above. For all conditions that are imposed to ensure compliance with Part 63 CAM requirements, the District must include a Part 64 citation to show the basis for the condition.

Response: The Evaluation has been revised to reflect the following discussion.

In our preliminary decision to renew the TV permit for this facility, we concluded vapor control systems serving crude oil tanks and production wells were inherent process equipment and as such the underlying emissions units were not equipped with a "control device" and therefore not subject to CAM requirements. We believe that this analysis is accurate and offer the following additional justification below.

For oilfield tanks and wells, CAM is required if an emission unit is subject to emission limit or standard to the pollutant of concern, uses a control device to comply with the emission limit or standard, and has a potential pre-control emissions greater than 10 ton/year.

While most tanks and wells equipped with a vapor control system include an emission limit or standard and have uncontrolled potential to emit greater than 10 ton/year, we have

concluded that the vapor control systems that they are equipped with do not meet the criteria of control device as defined in 40 CFR part 64.

The definition of control device from 40 CFR Part 64 is as follows (emphasis added):

Control device means equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices (such as carbon beds), condensers, scrubbers (such as wet collection and gas absorption devices), selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants, sulfur recovery plants, injection systems (such as water, steam, ammonia, sorbent or limestone injection), and combustion devices independent of the particular process being conducted at an emissions unit (e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters). For purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment which otherwise meets this definition of a control device does not constitute a control device as applied to a particular pollutant-specific emissions unit, then that definition shall be binding for purposes of this part.

It is important to note that this definition includes an exemption for “inherent process equipment. Inherent process equipment is by definition not a control device. Emission units equipped with inherent process equipment are not subject to the requirements of CAM.

40 CFR Part 64 defines inherent process equipment as (emphasis added):

Inherent process equipment means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. For the purposes of this part, inherent process equipment is not considered a control device.

Please note that the above definition requires that inherent process equipment must be used “... for the proper or safe operation of the process ...”. It is important to note that the equipment need not be used solely for the proper or safe operation of the process. Such systems could be used for compliance with regulations as well.

We have concluded that vapor control systems installed on oilfield tanks and oil production wells are inherent process equipment (and by definition not a control device) for the reasons stated below.

- Tank and well vapor control systems reduce emission of H₂S (a toxic substance) from the tanks/wells and as such assure worker safety for OSHA and other regulatory requirements.
- Tank vapor control systems minimize air intrusion into the vapor space and as such reduces corrosion of the tank interior. Such systems are commonly installed even though they are not required to comply with District regulations. District Rule 4623 – Storage of Organic Liquids does not require vapor control on storage tanks storing liquids with a true vapor pressure of less than 0.5 psia. Due to the relatively low actual emissions from such tanks, vapor control is typically not a Rule 2201 best available control technology (BACT) requirement for most heavy crude oil storage tanks. Even though not required by District rules, facilities commonly install vapor control on storage tanks for safety and corrosion prevention purposes.
- As stated above, facilities commonly install vapor control on tanks even though there is not an requirement to do so. Vapor control has historically been installed on crude oil production well vents as well prior to the requirement to install such controls. In fact, the District has issued emission reduction credits for the installation of well vent vapor control systems.
- Vapors collected by tank and well vapor control systems are commonly burned in multiple existing units, e.g. steam generators, in which useful energy is recovered. Steam generators, are used in oil production to enhance oil recovery from production wells. The steam generators, wells and tanks (with their associated vapor control systems) are part of the overall process to thermally enhance oil production.

Such systems typically distribute the vapors to multiple steam generators (or other devices) for use as a fuel. The quantity of vapors from such vapor control systems combusted in a particular steam generator varies as the operational needs of the facility change. For example, vapors that are typically combusted in a given steam generator would be burned in a different approved steam generator instead if the first steam generator is taken out of service.

For all of the reasons stated above, we believe that tank and well vapor control systems are truly inherent to the oil production process. As such we believe that these systems meet the criteria for “inherent process systems”, and as such are not a control device for the purposes of CAM applicability. Therefore, we do not believe that the emission units that are served by such systems are subject to the requirements of CAM.

Notwithstanding the above, we agree to work cooperatively with EPA Region IX to address CAM applicability issues on a programmatic basis in the future.

Comment 2:

Both Permit # 7-13 Cond. 57 and Permit # 57-2 Cond. 38 contain the following condition:

If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311.

The condition states that if approved by EPA, ARB AND the APCO, a source need not comply with the requirements of Section 6.2, but it is not clear from which rule the Section 6.2 citation applies to. This must be clarified. In addition, it is not clear how a source would obtain the necessary approvals from each agency in order to waive the source test requirement. This should be specified in the permit. At a minimum, the source should be required to obtain written concurrence regarding the waiving of the annual source test requirement from each agency in writing. Please revise or add a condition to clarify this approval requirement.

Response:

The District agrees that this condition is ambiguous. As Rule 4401 currently states, approval is only needed from the APCO. As it stands, approval is currently given because the steam generators and flare at the facility are permitted and regulated by the District. The steam generators have VOC permit limits that ensure greater than the required control efficiency, and the flare is exempt from source testing due to its configuration.

The condition has been re-written in accordance with the current language in Rule 4401, and the words "Section 6.2.1 of Rule 4401" added for clarification as follows:

If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 of Rule 4401 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2]