San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAR 0 4 2014

Mr. Jason Donchin
Chevron USA Inc.
P O Box 1392
Bakersfield, CA 93302

Re: Notice of Significant Title V Permit Modification
District Facility # S-1127
Project # S-1120204

Dear Mr. Donchin:

Enclosed for your review is the District's analysis of an application for significant Title V permit modification for the facility identified above. Chevron USA Inc. (Chevron) is proposing a Title V significant permit modification to incorporate Chevron's comments made after their Title V permit was renewed on January 18, 2012 under project S-1054422 (see enclosures). The proposed modifications consist of incorporating applicable permit shields and sulfur emissions requirements on steam generator permits, minor corrections of cogen permits for consistency, and incorporating Rule 4401 requirements on thermally enhanced oil recovery permits.

Enclosed are the current Title V permit, proposed modified Title V permit, engineering evaluation, and the proposed modifications (included as Attachment C with the engineering evaluation). The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the modified Title V operating permit. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice.

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Executive Director/Air Pollution Control Dfficer

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Modesto, CA 95356-8718
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Central Region (Main Office)
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Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Sincerely,

David Warner
Director of Permit Services

Enclosures

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

TITLE V APPLICATION REVIEW

Significant Modification
Project #: S-1120204

Engineer: Sajjad Ahmad
Date: December 9, 2013

Facility Number: S-1127
Facility Name: Chevron USA Inc.
Mailing Address: P O Box 1392
Bakersfield, CA 93302

Contact Name: Daniel Beck
Phone: (661) 654-7141

Responsible Official: Jason Donchin
Title: HES Manager

I. PROPOSAL

Chevron USA Inc. (Chevron) is proposing a Title V significant permit modification to incorporate their comments made after the Title V permit was renewed on January 18, 2012 under project S-1054422. The modifications consist of incorporating applicable permit shields and sulfur emissions requirements on steam generator permits, minor corrections of cogen permits for consistency, and incorporating Rule 4401 requirements on thermally enhanced oil recovery permits. See Attachment C for a complete discussion of Chevron's comments and Districts response.

The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with the applicable requirements and to provide the legal and factual basis for the proposed revisions.

II. FACILITY LOCATION

Chevron USA, Inc. is located at Chevron's Heavy Oil Western Source in Kern County.

III. EQUIPMENT DESCRIPTION

See equipment descriptions on the proposed modified Title V operating permits in Attachment A.

IV. SCOPE OF EPA AND PUBLIC REVIEW

Chevron originally submitted the requested modifications as Title V permit minor modifications. The District sent the Title V minor modification prelim notice for EPA review on May 15, 2013.

As part of the modifications, Chevron had requested to reinstate permit shields for parts of Rules 4305 and 4351 for steam generator permits (permit units S-1127-22, -25, -28, -29, -30, -31, -34, -35, -36, -38, -39, -42, -55, -57, -66, -69, -70, -71, -73, and -112). These permit shields were previously included on the steam generator permits and the District removed these permit shields during the Title V renewal project S-1054422 based on the fact that the steam generators are subject to more stringent requirements of District Rule 4306.

However, EPA submitted comments on August 20, 2013 (see Appendix E) in which it was indicated that the Title V program forbids granting of a permit shield as part of a minor modification permit action, pursuant to 40 CFR Part 70.7 (e)(2)(vi). EPA asked to change the project type to a Title V significant permit modification and notify the project again for a public review.

Therefore, this change to a Title V permit is considered to be a significant modification. As such, this project requires public review.

V. APPLICABLE REQUIREMENTS

District Rule 2520, Federally Mandated Operating Permits (Adopted June 21, 2001)

VI. DESCRIPTION OF PROPOSED MODIFICATIONS

See Attachment C for a complete discussion of Chevron's requested modifications and District's responses.

VII. COMPLIANCE

District Rule 2520, Section 6.0 describes the source's ability to make changes including significant permit modification. This modification does not meet the minor permit modification criteria pursuant to Section 3.20 described as follows.

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include;
    a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
    b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of Section 11.3 by including;

1. The identification of the source, the name and address of the permit holder, the activities and emissions change involved in the permit action;
2. The name and address of the District, the name and telephone number of District staff to contact for additional information;
3. The availability, upon request, of a statement that sets forth the legal and factual basis for the proposed permit conditions;
4. The location where the public may inspect the complete application, the District analysis, the proposed permit, and all relevant supporting materials;

5. A statement that the public may submit written comments regarding the proposed decision within at least 30 days from the date of publication and a brief description of commenting procedures, and
6. A statement that members of the public may request the APCO or his designee to preside over a public hearing for the purpose of receiving oral public comment, if a hearing has not already been scheduled. The APCO shall provide notice of any public hearing scheduled to address the proposed decision at least 30 days prior to such hearing;

VIII. ATTACHMENTS

A. Proposed Modified Title V Operating Permits
B. Current Title V Operating Permits
C. Chevron's Requested Modifications and District's Responses
D. Rules 4305 and 4351 Permit Shields Analysis
E. EPA Comments and District's Responses

ATTACHMENT A

Proposed Modified Title V Operating Permits

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-22-31 **EXPIRATION DATE:** 02/29/2016

SECTION: SW3 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (34-3, DIS #43006-74) WITH NORTH AMERICAN MODEL GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit
7. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

10. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

12. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

16. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

17. 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, and 4306] Federally Enforceable Through Title V Permit

18. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. 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, and 4306] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

22. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

24. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

27. 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, and 4306] Federally Enforceable Through Title V Permit

28. 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, and 4306] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

32. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

36. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

37. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. The permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted, for a period of 5 years, and shall make records available for inspection upon request. [District NSR Rule and District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

42. 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, 4306, and 4320] Federally Enforceable Through Title V Permit

43. 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

44. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-25-31 **EXPIRATION DATE:** 02/29/2016

SECTION: 32 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH LOW PRESSURE FUEL INDUCED RECIRCULATION (CUSA ID# 40-32, DIS# 43001-75)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

16. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rules 2201, 4305, and 4351] Federally Enforceable Through Title V Permit

18. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rule 1081, 7.2 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

19. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. 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 Rules 1081 and 2520. 9.3.2] Federally Enforceable Through Title V Permit

22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rules 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

24. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

26. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

27. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

28. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

29. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

30. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

31. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

33. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

34. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

35. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

36. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

37. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture content - EPA Method 4, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

40. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520, 6.4.2] Federally Enforceable Through Title V Permit

41. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-28-31 **EXPIRATION DATE:** 02/29/2016

SECTION: NW09 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (43-9, DIS# 43010-75) WITH NORTH AMERICAN MODEL #GLE LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4351, 4306 and 4320] Federally Enforceable Through Title V Permit
7. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

11. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

13. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

16. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

19. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. 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, and 4306] Federally Enforceable Through Title V Permit

21. 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, and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

23. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

24. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

29. 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, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

32. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

38. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rules 4306, 6.1 and 4320] Federally Enforceable Through Title V Permit

39. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

44. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

45. 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, 4306, 6.1, and 4320] Federally Enforceable Through Title V Permit

46. 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

47. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-29-27 **EXPIRATION DATE:** 02/29/2016

SECTION: NW09 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR 44-9, DIS #43007-75) WITH NORTH AMERICAN MODEL GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Flue gas recirculation shall be utilized, as needed, in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits. [District NSR Rule]
2. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
3. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit
6. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

11. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

13. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

17. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] 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, and 4306] 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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, and 4306] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

22. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

23. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

25. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

28. 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, and 4306] Federally Enforceable Through Title V Permit

29. 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, and 4306] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted, for a period of 5 years, and shall make records available for inspection upon request. [District NSR Rule and District Rules 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

43. 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, 4306 and 4320] Federally Enforceable Through Title V Permit

44. 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

45. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-30-29 **EXPIRATION DATE:** 02/29/2016

SECTION: 9 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (45-9, DIS #43008-75) WITH NORTH AMERICAN MODEL GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Flue gas recirculation shall be utilized, as needed, in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
3. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520] Federally Enforceable Through Title V Permit
4. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
6. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit
7. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
8. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

12. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

19. 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, and 4306] Federally Enforceable Through Title V Permit

20. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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, and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

23. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

24. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

29. 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, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

32. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

33. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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42. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. The permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted, for a period of 5 years, and shall make records available for inspection upon request. [District NSR Rule and District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

44. 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, 4306 and 4320] Federally Enforceable Through Title V Permit

45. 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

46. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-31-29 **EXPIRATION DATE:** 02/29/2016

SECTION: 9 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (46-9, DIS #43009-75) WITH NORTH AMERICAN MODEL GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520] Federally Enforceable Through Title V Permit
3. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
6. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

11. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

13. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

17. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] 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, and 4306] 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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, and 4306] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

22. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

23. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

25. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

28. 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, and 4306] Federally Enforceable Through Title V Permit

29. 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, and 4306] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted, for a period of 5 years, and shall make records available for inspection upon request. [District NSR Rule and District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

43. 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, 4306 and 4320] Federally Enforceable Through Title V Permit

44. 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

45. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-34-26 **EXPIRATION DATE:** 02/29/2016

SECTION: 05 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (49-5, DIS# 43003-76) WITH NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

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PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, and 4351] Federally Enforceable Through Title V Permit
7. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

9. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520, 6.4.2] Federally Enforceable Through Title V Permit

10. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

13. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

15. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

19. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

20. 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, and 4306] Federally Enforceable Through Title V Permit

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21. 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, and 4306] Federally Enforceable Through Title V Permit

22. 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, and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

24. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

25. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

27. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

31. 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, and 4306] Federally Enforceable Through Title V Permit

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32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

38. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

44. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

45. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

46. 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

47. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-35-28 **EXPIRATION DATE:** 02/29/2016

SECTION: 5 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (50-5, DIS# 4005-76) WITH NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

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PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4320, and 4351] Federally Enforceable Through Title V Permit
7. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081, 7.2 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

9. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520, 6.4.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

12. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

19. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. 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, and 4306] Federally Enforceable Through Title V Permit

21. 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, and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

23. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

24. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

29. 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, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

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31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

32. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

44. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

45. 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

46. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-36-27 **EXPIRATION DATE:** 02/29/2016

SECTION: 05 **TOWNSHIP:** 29S **RANGE:** 28

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (51-5, DIS #43004-76) WITH NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

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PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520] Federally Enforceable Through Title V Permit
3. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
6. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

11. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

13. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

16. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

17. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] 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, and 4306] 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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, and 4306] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

22. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

23. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

25. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

28. 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, and 4306] Federally Enforceable Through Title V Permit

29. 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, and 4306] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted, for a period of 5 years, and shall make records available for inspection upon request. [District NSR Rule and District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

43. 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, 4306, and 4320] Federally Enforceable Through Title V Permit

44. 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

45. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-38-29 **EXPIRATION DATE:** 02/29/2016

SECTION: SW03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (35-3, DIS# 43007-74) A NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4351, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

9. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

12. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

14. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

19. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. 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, and 4306] Federally Enforceable Through Title V Permit

21. 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, and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

23. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

24. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

29. 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, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

32. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

39. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. 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, 4306, and 4320] Federally Enforceable Through Title V Permit

44. 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

45. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-39-30 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH LOW PRESSURE FUEL INDUCED RECIRCULATION (CUSA ID #36-3, DIS# 43008-74)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B or 6C; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

16. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rules 2201, 4305, and 4351] Federally Enforceable Through Title V Permit

18. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rule 1081, 7.2 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. 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 Rules 1081 and 2520. 9.3.2] Federally Enforceable Through Title V Permit

22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rules 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

24. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

26. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

27. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

28. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

29. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

30. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

31. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

33. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

34. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

35. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

36. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

37. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture content - EPA Method 4, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

40. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520, 6.4.2] Federally Enforceable Through Title V Permit

41. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

42. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-42-29 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH LOW PRESSURE FUEL INDUCED RECIRCULATION (CUSA ID# 42-3, DIS# 43003-75)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. {1400} The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

16. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rules 2201, 4305, and 4351] Federally Enforceable Through Title V Permit

18. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rule 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. If the NOx or CO concentrations, as measured by the portable analyzer, exceed the permitted emission limits, the permittee or third party shall notify the District and return the NOx and CO concentrations to the permitted emission limits as soon as possible but no longer than one (1) hour after detection. If the portable analyzer readings continue to exceed the permitted emission limits after (1) hour, the permittee shall conduct a source test within 60 days, of the first exceedance to demonstrate compliance with the permitted emission limits. [District Rule 4305] Federally Enforceable Through Title V Permit

20. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

21. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

22. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

23. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

24. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. 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 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall keep daily records of the sulfur content of the natural gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted and shall make records available for inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

30. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

32. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

33. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

34. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

35. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

37. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

38. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B 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, and 4351] Federally Enforceable Through Title V Permit

40. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

42. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520, 6.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

44. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

46. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

47. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-55-29 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH LOW PRESSURE FUEL INDUCED RECIRCULATION (CUSA ID# 65-3, DIS# 43006-80)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B or 6C; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. {1400} The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

16. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rules 2201, 4305, and 4351] Federally Enforceable Through Title V Permit

18. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rule 1081, 7.2 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

19. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

21. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

22. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. 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 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. The permittee shall keep records of the following: sulfur content of the vapor recovery gas on an annual basis; amount of natural gas and amount of vapor recovery gas combusted on a daily basis; and percentage O2, NOx concentration, and CO concentration on a monthly basis. [District Rules 1070, 4305, and 2520, 9.5.1] Federally Enforceable Through Title V Permit

26. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

28. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

29. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

30. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

32. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

33. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

35. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B 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, and 4351] Federally Enforceable Through Title V Permit

38. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

40. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520, 6.4.2] Federally Enforceable Through Title V Permit

41. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-57-28 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (67-3, DIS# 43008-80) WITH NORTH AMERICAN GLE 1 LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320]
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4351, and Rule 4306] Federally Enforceable Through Title V Permit
7. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

8. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

9. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

12. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520] Federally Enforceable Through Title V Permit

13. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

15. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

19. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

20. 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, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. 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, and 4306] Federally Enforceable Through Title V Permit

22. 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, and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

24. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

25. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

27. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

31. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

38. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

44. 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, 4306, 6.1, and 4320] Federally Enforceable Through Title V Permit

45. 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

46. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-66-32 **EXPIRATION DATE:** 02/29/2016

SECTION: 09 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (64-9, DIS# 43005-80) WITH NORTH AMERICAN GLE LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) SYSTEM

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PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4351, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rule 1081 and 2520] Federally Enforceable Through Title V Permit
8. The permittee shall keep records of the following: sulfur content of the vapor recovery gas on an annual basis; amount of natural gas and amount of vapor recovery gas combusted on a daily basis; and percentage O2, NOx concentration, and CO concentration on a monthly basis. [District Rules 1070, 4305, and 2520] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

10. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

13. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

15. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

19. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

20. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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, and 4306] Federally Enforceable Through Title V Permit

22. 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, and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

24. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

25. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

27. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

31. 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, and 4306] Federally Enforceable Through Title V Permit

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32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

38. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

44. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070] Federally Enforceable Through Title V Permit

45. 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, 4306, 6.1, and 4320] Federally Enforceable Through Title V Permit

46. 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

47. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-69-32 **EXPIRATION DATE:** 02/29/2016

SECTION: 04 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (81-4, DIS# 43013-82) WITH NORTH AMERICAN GLE LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

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PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, and 4351] Federally Enforceable Through Title V Permit
7. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by a District-approved independent laboratory on an annual basis. Sample collection for such determination shall be District-witnessed or approved. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit
8. Permittee shall keep weekly records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rule 1070 and 2520] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit

10. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

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

13. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

15. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

18. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

19. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

20. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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, and 4306] Federally Enforceable Through Title V Permit

22. 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, and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

24. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

25. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

27. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

30. 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, and 4306] Federally Enforceable Through Title V Permit

31. 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, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

35. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

38. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

40. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

41. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

42. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

43. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

44. 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, 4306, and 4320] Federally Enforceable Through Title V Permit

45. 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

46. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-70-32 **EXPIRATION DATE:** 02/29/2016

SECTION: NW 3 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (80-4, DIS #43010-82) WITH NORTH AMERICAN GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

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PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the engine shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District RuleS 2520 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit
5. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit
7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
8. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201 and 4306] Federally Enforceable Through Title V Permit

11. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

15. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

16. 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, and 4306] Federally Enforceable Through Title V Permit

17. 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, and 4306] Federally Enforceable Through Title V Permit

18. 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, and 4306] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

21. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

23. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

26. 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, and 4306] Federally Enforceable Through Title V Permit

27. 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, and 4306] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

29. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

36. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

37. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. The permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted, for a period of 5 years, and shall make records available for inspection upon request. [District NSR Rule and District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

41. 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, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

42. 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

43. 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 4320] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-71-29 **EXPIRATION DATE:** 02/29/2016

SECTION: 04 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (CUSA ID# 79-4, DIS# 43009-82)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected or prevented from entering this unit. [District NSR Rule and District Rule 2080] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B or 6C; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. {1400} The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

16. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

17. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

18. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

19. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

21. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, and CO: 0.021 lb/MMBtu. [District NSR Rule and District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

23. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081, 7.2 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

25. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of startup, and not less than once every 12 months, except as provided below. [District Rules 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

26. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

27. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 6.3.1 and 4351, 6.3] Federally Enforceable Through Title V Permit

28. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

29. NOx and CO emissions shall be measured with annual source testing conducted by an independent testing laboratory and shall be witnessed or authorized by the District [District Rules 1081 and 2520, 9.3.2] 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 Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The permittee shall keep records of the following: sulfur content of the vapor recovery gas on an annual basis; amount of natural gas and amount of vapor recovery gas combusted on a daily basis; and percentage O2, NOx concentration, and CO concentration on a monthly basis. [District Rules 1070, 4305, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. This mean shall be multiplied by the appropriate factor. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

36. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

37. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

41. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B 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, and 4351] Federally Enforceable Through Title V Permit

42. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

44. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rules 4305, 4351]

45. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-73-29 **EXPIRATION DATE:** 02/29/2016

SECTION: 32 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH LOW PRESSURE FUEL INDUCED RECIRCULATION (CUSA ID# 53-32, DIS# 43012-78)

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PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B or 6C; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. {1400} The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

16. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rules 2201, 4305, and 4351] Federally Enforceable Through Title V Permit

18. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081, 7.2 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rule 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

21. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

22. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

23. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

24. NOx and CO emissions shall be measured with annual source testing conducted by an independent testing laboratory and shall be witnessed or authorized by the District. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. 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

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall keep records of the following: sulfur content of the vapor recovery gas on an annual basis; amount of natural gas and amount of vapor recovery gas combusted on a daily basis. [District Rule 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

28. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

30. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

32. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

33. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

34. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

35. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

37. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture content - EPA Method 4, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

40. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

41. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

42. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

43. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-112-26 **EXPIRATION DATE:** 02/29/2016

SECTION: 32 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH LOW PRESSURE FUEL INDUCED RECIRCULATION (CUSA ID# 77-32, DIS# 43011-82)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B or 6C; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084 or a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. {1400} The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

15. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

16. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

17. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

18. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992), 4301 (Last Amended December 17, 1992), 4305 sections 4.2, 5.1, 5.4.1, 5.4.2, 6.1.1, 6.2 (except 6.2.3), 6.3.1, 6.3.2, and 8.1 (Last Amended August 21, 2003), and 4351, sections 4.2, 5.2.2, 6.1.2, 6.2, and 8.1 (Last Amended August 21, 2003). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

20. {1669} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rules 2201, 4305, and 4351] Federally Enforceable Through Title V Permit

22. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rules 1081, 7.2, and 2520, 9.5.1] Federally Enforceable Through Title V Permit

23. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. NOx and CO emissions shall be measured with annual source testing conducted by an independent testing laboratory and shall be witnessed or authorized by the District [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. 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 Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall keep records of the following: sulfur content of the vapor recovery gas on an annual basis; amount of natural gas and amount of vapor recovery gas combusted on a daily basis. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. This mean shall be multiplied by the appropriate factor. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

31. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

33. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

34. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

35. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture content - EPA Method 4, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

38. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520 section 6.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-148-18 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
22.3 MW NOMINAL RATING COMBINED CYCLE COGENERATION UNIT A, DIS# 47003-88, INCLUDING GAS-FIRED GE LM-2500-PE TURBINE WITH NOMINAL RATING INPUT OF 240 MMBTU/HR AND SCR FOR NOX CONTROL

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PERMIT UNIT REQUIREMENTS

1. Operation shall include GE LM-2500-PE gas fired 240 MMBtu/hr (nominal rating) gas turbine engine, 22.3 MW electrical generator, inlet air evaporative cooler, turbine combustor water injectors, gas-fired Coen duct burner rated at 70 MM Btu/hr (nominal rating), Nooter heat recovery steam generator, CO oxidizing catalyst, ammonia injection grid, selective catalytic reduction (SCR) bed, and in-stack continuous emissions monitors (CEMs) for NOx, CO, and O2. [District Rule 2010] Federally Enforceable Through Title V Permit
2. {719} Unit shall be fired exclusively on PUC-quality natural gas which has a sulfur content of less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b); 60.332(a); Rule 404 (Madera), 406 (Fresno) and 407 (6 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
3. {720} Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Rule 402 (Madera) and 404 (all 7 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
4. {724} Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [Rule 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), Rule 110 (Madera), and Rule 108 (Kings); District Rule 1081] Federally Enforceable Through Title V Permit
5. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246 or grab bag analysis by GC-FPD/TCD performed in the laboratory. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
6. {726} If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
7. The HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit
8. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

10. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera); District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

11. {802} Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera); District Rule 1080, 7.3 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

12. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334(a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

14. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

15. Operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the exhaust gas NOx and O2 concentration . [40 CFR 60.334(a),(b)] Federally Enforceable Through Title V Permit

16. {808} The continuous NOx monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [Rule 108 (Kings, Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 6.7] Federally Enforceable Through Title V Permit

17. {748} A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

18. {809} The APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

19. {810} Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. Sulfur content of gas burned shall not exceed 1.0 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rules 1070 and 4703] Federally Enforceable Through Title V Permit

22. Daily emissions shall not exceed any of the following: PM10: 89.3 lb/day, SOx (as SO2): 29.8 lb/day, NOx (as NO2): 133.9 lb/day, VOC: 245.5 lb/day, or CO: 223.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 4102 and District NSR Rule] Federally Enforceable Through Title V Permit

24. Ammonia slip shall be calculated as: slip = (a-bxc/1,000,000) x 1,000,000/b, where a=ammonia injection rate(lb/hr)/17(lb/lb.mol), and b=dry exhaust gas flow rate (lb/hr)/29(lb/lb.mol); and c=change in measured NOx concentration in ppmvd at the actual stack oxygen (O2) concentration or by another method approved by the District. [District Rule 4102 and District NSR Rule] Federally Enforceable Through Title V Permit

25. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4001] Federally Enforceable Through Title V Permit

26. Transitional operation period shall be defined as the start up or shut down time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

27. Except during periods of gas turbine engine startup/shutdown, and transitional operation period, emission rates (three-hour average) shall not exceed any of the following: PM10: 0.012 lb/MMBtu, SOx (as SO2): 0.004 lb/MMBtu; or VOC: 0.033 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 105 ppmv dry @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

29. Except during periods of gas turbine engine startup/shutdown, and transitional operation period, emission rates (based on three-hour rolling average) shall not exceed either of the following: NOx (as NO2): 5 ppmv dry @ 15% oxygen (O2); or CO: 13.5 ppmv @ 15% oxygen (O2). [District Rule 4703, 5.1.2, 5.2 and District NSR Rule] Federally Enforceable Through Title V Permit

30. Permittee shall report the following emission exceedences to the District: NOx emission rate on a three-hour average, NSPS NOx emission rate on one hour average, and DEL of NOx during days of gas turbine engine startup/shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

31. The three-hour average will be compiled from the three most recent one-hour periods, with each one-hour period commencing on the hour. [District Rule 1081] Federally Enforceable Through Title V Permit

32. On days of gas turbine engine startup/shutdown, permittee shall demonstrate compliance with NOx daily emission limitation by records of calculations using CEM data, fuel rate data, and daily hours of operation data. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

34. Continuous emissions monitoring system shall conform to Rule 1080 specifications. [District Rule 1080] Federally Enforceable Through Title V Permit

35. Continuous emission monitoring systems shall be calibrated and operated according to EPA guidelines as specified in CFR, Part 60, Appendix B. CEM ppm and lb/hr shall be calculated as a three-hour and a 1 hour average. [District Rules 4001 and 4703] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. Annual relative accuracy audits of CEM's shall be conducted by independent laboratory in accordance with EPA guidelines. The District shall be notified of the audit in advance and reports shall be submitted to the District within 60 days of each test. [District Rule 4001] Federally Enforceable Through Title V Permit

37. Permittee shall keep accurate records of turbine daily NOx (as NO2) and oxygen (O2) monitors output for a period of five years, and shall make such records readily available for District inspection upon request. [District Rules 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

38. Compliance source testing for NOx, CO, and O2 shall be conducted at least once every 12 months under conditions representative of normal operation. [District NSR Rule and District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit

39. Compliance source testing shall be witnessed or authorized by the District. Sample collection shall be done by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

40. Source test protocol shall be submitted for District approval at least 15 days prior to test date. [District Rule 1081] Federally Enforceable Through Title V Permit

41. 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

42. The following test methods shall be used: NOx - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 (front half and back half) or 201A and 202 or CARB Method 5 (front and back half); ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or CARB Method 100. [40 CFR 60.335(a) and District Rules 2520 and 4703] Federally Enforceable Through Title V Permit

43. Exhaust stack following last economizer shall be of circular cross-section and shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods, including flow straighteners, if necessary, to minimize turbulence. [District Rule 1081] Federally Enforceable Through Title V Permit

44. Permittee shall maintain records of all fuel sulfur content testing performed. [District NSR Rule] Federally Enforceable Through Title V Permit

45. Permittee shall maintain daily records of the following: time of start-up(s) and shutdown(s), length and reason for reduced load periods, total hours of operation, and source(s) of and quantity of fuel used. [District Rules 1070 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

46. 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, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-149-18 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
22.3 MW NOMINAL RATING COMBINED CYCLE COGENERATION UNIT B, DIS# 47004-88, INCLUDING GAS-FIRED GE LM-2500-PE TURBINE WITH NOMINAL RATING INPUT OF 240 MMBTU/HR AND SCR FOR NOX CONTROL

PERMIT UNIT REQUIREMENTS

1. Operation shall include GE LM-2500-PE gas fired 240 MMBtu/hr (nominal rating) gas turbine engine, 22.3 MW electrical generator, inlet air evaporative cooler, turbine combustor water injectors, gas-fired Coen duct burner rated at 70 MM Btu/hr (nominal rating), Nooter heat recovery steam generator, CO oxidizing catalyst, ammonia injection grid, selective catalytic reduction (SCR) bed, and in-stack continuous emissions monitors (CEMs) for NOx, CO, and O2. [District Rule 2010] Federally Enforceable Through Title V Permit
2. {719} Unit shall be fired exclusively on PUC-quality natural gas which has a sulfur content of less than or equal to 0.017% by weight. [40 CFR 60.333(a) & (b); 60.332(a); Rule 404 (Madera), 406 (Fresno) and 407 (6 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
3. {720} Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Rule 402 (Madera) and 404 (all 7 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
4. {724} Operator shall be required to conform to the compliance testing procedures described in District Rule 1081. [Rule 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), Rule 110 (Madera), and Rule 108 (Kings); District Rule 1081] Federally Enforceable Through Title V Permit
5. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246 or grab bag analysis by GC-FPD/TCD performed in the laboratory. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
6. {726} If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
7. The HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit
8. The operator shall provide source test information annually regarding the exhaust gas NOx concentration corrected to 15% O2 (dry). [40 CFR 60.332(a),(b) and District Rule 4703, 5.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

9. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the duct burner in operation and not in operation. An annual demonstration of compliance with the duct burner in operation is not required in any year in which the duct burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the duct burner. An annual demonstration of compliance with the duct burner not in operation is not required in any year in which the duct burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the duct burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

10. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera); District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

11. {802} Records shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of any CEM's that have been installed pursuant to District Rule 1080, and emission measurements. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera); District Rule 1080, 7.3 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

12. If the turbine is fired on PUC-regulated natural gas, then the operator shall maintain a log describing the source of natural gas and the quantity used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Results of continuous emission monitoring must be averaged in accordance with the requirements of 40 CFR 60.13. [40 CFR 60.334(a),(b),(c) and District Rule 4703, 5.0] Federally Enforceable Through Title V Permit

14. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

15. {807} Operator shall install, operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the exhaust gas NOx and O2 concentration . [40 CFR 60.334(a),(b)] Federally Enforceable Through Title V Permit

16. {808} The continuous NOx monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [Rule 108 (Kings, Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 6.7] Federally Enforceable Through Title V Permit

17. {748} A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

18. {809} The APCO shall be notified no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

19. {810} Operators of CEM's installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include: A. time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; B. averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; C. applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; D. a negative declaration when no excess emissions occurred. [Rule 108 (Kings, Fresno, Merced San Joaquin, Tulare, Kern, and Stanislaus) and Rule 109 (Madera) and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. Sulfur content of gas burned shall not exceed 1.0 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rules 1070 and 4703] Federally Enforceable Through Title V Permit

22. Daily emissions shall not exceed any of the following: PM10: 89.3 lb/day, SOx (as SO2): 29.8 lb/day, NOx (as NO2): 133.9 lb/day, VOC: 245.5 lb/day, or CO: 223.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Ammonia (NH3) emissions shall not exceed 21 ppmvd @ 15% O2 over a 24-hour average period. [District Rule 4102 and District NSR Rule] Federally Enforceable Through Title V Permit

24. Ammonia slip shall be calculated as: slip = (a-bxc/1,000,000) x 1,000,000/b, where a=ammonia injection rate(lb/hr)/17(lb/lb.mol), and b=dry exhaust gas flow rate (lb/hr)/29(lb/lb.mol); and c=change in measured NOx concentration in ppmvd at the actual stack oxygen (O2) concentration or by another method approved by the District. [District Rule 4102 and District NSR Rule] Federally Enforceable Through Title V Permit

25. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4001] Federally Enforceable Through Title V Permit

26. Transitional operation period shall be defined as the start up or shut down time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

27. Except during periods of gas turbine engine startup/shutdown, and transitional operation period, emission rates (three-hour average) shall not exceed any of the following: PM10: 0.012 lb/MMBtu, SOx (as SO2): 0.004 lb/MMBtu; or VOC: 0.033 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 105 ppmv dry @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

29. Except during periods of gas turbine engine startup/shutdown, and transitional operation period, emission rates (based on three-hour rolling average) shall not exceed either of the following: NOx (as NO2): 5 ppmv dry @ 15% oxygen (O2); or CO: 13.5 ppmv @ 15% oxygen (O2). [District Rule 4703, 5.1.2, 5.2 and District NSR Rule] Federally Enforceable Through Title V Permit

30. Permittee shall report the following emission exceedences to the District: NOx emission rate on a three-hour average, NSPS NOx emission rate on one hour average, and DEL of NOx during days of gas turbine engine startup/shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

31. The three-hour average will be compiled from the three most recent one-hour periods, with each one-hour period commencing on the hour. [District Rule 1081] Federally Enforceable Through Title V Permit

32. On days of gas turbine engine startup/shutdown, permittee shall demonstrate compliance with NOx daily emission limitation by records of calculations using CEM data, fuel rate data, and daily hours of operation data. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

34. Continuous emissions monitoring system shall conform to Rule 1080 specifications. [District Rule 1080] Federally Enforceable Through Title V Permit

35. Continuous emission monitoring systems shall be calibrated and operated according to EPA guidelines as specified in CFR, Part 60, Appendix B. CEM ppm and lb/hr shall be calculated as a three-hour and a 1 hour average. [District Rules 4001 and 4703] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. Annual relative accuracy audits of CEM's shall be conducted by independent laboratory in accordance with EPA guidelines. The District shall be notified of the audit in advance and reports shall be submitted to the District within 60 days of each test. [District Rule 4001] Federally Enforceable Through Title V Permit

37. Permittee shall keep accurate records of turbine daily NOx (as NO2) and oxygen (O2) monitors output for a period of five years, and shall make such records readily available for District inspection upon request. [District Rules 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

38. Compliance source testing for NOx, CO, and O2 shall be conducted at least once every 12 months under conditions representative of normal operation. [District NSR Rule and District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit

39. Compliance source testing shall be witnessed or authorized by the District. Sample collection shall be done by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

40. Source test protocol shall be submitted for District approval at least 15 days prior to test date. [District Rule 1081] Federally Enforceable Through Title V Permit

41. 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

42. The following test methods shall be used: NOx - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 (front half and back half) or 201A and 202 or CARB Method 5 (front and back half); ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or CARB Method 100. [40 CFR 60.335(a) and District Rules 2520 and 4703] Federally Enforceable Through Title V Permit

43. Exhaust stack following last economizer shall be of circular cross-section and shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods, including flow straighteners, if necessary, to minimize turbulence. [District Rule 1081] Federally Enforceable Through Title V Permit

44. Permittee shall maintain records of all fuel sulfur content testing performed. [District NSR Rule] Federally Enforceable Through Title V Permit

45. Permittee shall maintain daily records of the following: time of start-up(s) and shutdown(s), length and reason for reduced load periods, total hours of operation, and source(s) of and quantity of fuel used. [District Rules 1070 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

46. 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, 9.5.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-159-12 **EXPIRATION DATE:** 02/29/2016

SECTION: 32 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 56 STEAM ENHANCED WELLS - PERMANENTLY CLOSED WELL CASING VENTS, ROUTE PRODUCTION TO VAPOR CONTROLLED TANKS AND EXEMPT EQUIPMENT (MONTE CRISTO 2 CC-5-32)

PERMIT UNIT REQUIREMENTS

1. Fluids produced from these steam-enhanced wells with closed well casing vents and cyclic wells with closed casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. VOC emission rate shall not exceed 96.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
5. Permittee shall maintain a current roster of all wells connected to this system, and shall make such roster available for District inspection upon request. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. {4272} 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
7. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
8. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
9. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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 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

11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

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20. 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

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

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. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

32. 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

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33. 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

34. 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

35. 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

36. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

37. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

38. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

39. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

40. {4309} 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

41. {4310} 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

42. {4311} Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3] Federally Enforceable Through Title V Permit

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43. 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

44. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

45. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

46. 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

47. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-160-17 **EXPIRATION DATE:** 02/29/2016

SECTION: 09 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 50 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. 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 4401] Federally Enforceable Through Title V Permit
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to front line production equipment vented to a District-approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to gauge tanks as defined by Rule 4401 Section 3.17. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain a current listing of all steam-enhanced wells in the central Kern County fields heavy oil production stationary source with closed casing vents that direct fluids to uncontrolled storage tanks and a current listing of all permit numbers of front-line equipment receiving produced fluids from the wells; shall update the list whenever a well or front-line equipment is added, replaced or deleted; and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by Authority to Construct or APCO approval of application for transfer of ownership of Permit to Operate. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
6. VOC emission rate shall not exceed 109.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
10. Permittee shall maintain a current roster of wells connected to this system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. {4272} 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

13. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

21. 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

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22. 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

23. 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

24. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. 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

35. 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

36. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

37. 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

38. 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

39. 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

40. 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

41. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

42. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

43. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

44. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

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45. {4309} 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

46. {4310} 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

47. {4311} 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

48. 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

49. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

50. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

51. 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

52. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-161-23 **EXPIRATION DATE:** 02/29/2016

SECTION: 09 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 96 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. 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 4401] Federally Enforceable Through Title V Permit
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to front line production equipment vented to a District-approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to gauge tanks as defined by Rule 4401 Section 3.17. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain a current listing of all steam-enhanced wells in the central Kern County fields heavy oil production stationary source with closed casing vents that direct fluids to uncontrolled storage tanks and a current listing of all permit numbers of front-line equipment receiving produced fluids from the wells; shall update the list whenever a well or front-line equipment is added, replaced or deleted; and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by Authority to Construct or APCO approval of application for transfer of ownership of Permit to Operate. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
6. VOC emission rate shall not exceed 210.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Permittee shall maintain a current roster of wells connected to this system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. {4272} 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
11. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

21. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. 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

23. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

33. 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

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34. 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

35. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

36. 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

37. 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

38. 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

39. 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

40. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

41. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

42. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

43. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

44. {4309} 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. {4310} 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

46. {4311} 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

47. 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

48. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

49. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

50. 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

51. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-162-17 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 38 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401] 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 or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020, Section 6.6. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
3. Volatile organic compound (VOC) emission rate shall not exceed 89.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

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11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-164-20 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 49 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

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PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401] 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 or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020, Section 6.6. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
3. Volatile organic compound (VOC) emission rate shall not exceed 114.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. Collected vapor shall be piped to authorized continuously operating disposal/incineration devices. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
10. Permittee shall maintain with the Permit to Operate a current roster of disposal/incineration device(s) connected to the casing collection system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
11. {4272} 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

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12. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

13. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

21. 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

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22. 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

23. 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

24. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. 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

35. 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

36. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

37. 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

38. 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

39. 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

40. 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

41. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

42. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

43. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

44. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

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45. {4309} 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

46. {4310} 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

47. {4311} 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

48. 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

49. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

50. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

51. 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

52. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-165-15 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 39 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401] 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 or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020, Section 6.6. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
3. Volatile organic compound (VOC) emission rate shall not exceed 91.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-166-18 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 92 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401] 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 or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020, Section 6.6. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
3. Volatile organic compound (VOC) emission rate shall not exceed 215.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-167-20 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 150 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

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PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401] 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 or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020, Section 6.6. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
3. Volatile organic compound (VOC) emission rate shall not exceed 351.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. Collected vapor shall be piped to authorized continuously operating disposal/incineration devices. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
10. Permittee shall maintain with the Permit to Operate a current roster of disposal/incineration device(s) connected to the casing collection system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
11. {4272} 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

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12. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

13. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

21. 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

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22. 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

23. 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

24. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. 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

35. 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

36. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

37. 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

38. 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

39. 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

40. 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

41. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

42. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

43. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

44. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

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45. {4309} 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

46. {4310} 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

47. {4311} 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

48. 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

49. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

50. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

51. 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

52. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-168-19 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 38 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

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PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401] 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 or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020, Section 6.6. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
3. Volatile organic compound (VOC) emission rate shall not exceed 89.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. Collected vapor shall be piped to authorized continuously operating disposal/incineration devices. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
10. Permittee shall maintain with the Permit to Operate a current roster of disposal/incineration device(s) connected to the casing collection system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
11. {4272} 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

13. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

21. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. 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

23. 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

24. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. 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

35. 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

36. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

37. 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

38. 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

39. 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

40. 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

41. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

42. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

43. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

44. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

45. {4309} 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

46. {4310} 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

47. {4311} 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

48. 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

49. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

50. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

51. 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

52. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-169-17 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 73 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401] 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 or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020, Section 6.6. [District NSR Rule and 4401] Federally Enforceable Through Title V Permit
3. Volatile organic compound (VOC) emission rate shall not exceed 171.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
5. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-171-20 **EXPIRATION DATE:** 02/29/2016

SECTION: 05 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 220 STEAM ENHANCED WELLS- PERMANENTLY CLOSED WELL CASING VENTS, ROUTE PRODUCTION TO VAPOR CONTROLLED TANKS AND EXEMPT EQUIPMENT (MONTE CRISTO 1 CC-1-5)

PERMIT UNIT REQUIREMENTS

1. Fluids produced from these steam-enhanced wells with closed casing vents and cyclic wells with closed casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. VOC emission rate shall not exceed 378.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
5. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. {4272} 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
8. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
9. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

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19. 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

20. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. 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

32. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

33. 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

34. 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

35. 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

36. 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

37. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

38. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

39. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

40. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

41. {4309} 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

42. {4310} 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

43. {4311} 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

44. 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

45. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

46. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

47. 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

48. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-173-16 **EXPIRATION DATE:** 02/29/2016

SECTION: 05 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 26 STEAM ENHANCED WELLS - PERMANENTLY CLOSED WELL CASING VENTS, ROUTE PRODUCTION TO VAPOR CONTROLLED TANKS AND EXEMPT EQUIPMENT (MONTE CRISTO 1 CC-3-5)

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PERMIT UNIT REQUIREMENTS

1. Fluids produced from these steam-enhanced wells with closed well casing vents and cyclic wells with closed casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Collected vapor shall be piped to authorized continuously operating disposal/incineration devices. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the Permit to Operate a current roster of disposal/incineration device(s) connected to the casing collection system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
4. VOC emission rate shall not exceed 44.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of wells connected to the casing collection system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-174-19 **EXPIRATION DATE:** 02/29/2016

SECTION: 05 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 91 STEAM ENHANCED WELLS - PERMANENTLY CLOSED WELL CASING VENTS, ROUTE PRODUCTION TO VAPOR CONTROLLED TANKS AND EXEMPT EQUIPMENT (MONTE CRISTO 1 CC-2-5)

PERMIT UNIT REQUIREMENTS

1. Fluids produced from these steam-enhanced wells with closed well casing vents and cyclic wells with closed well casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. VOC emission rate shall not exceed 156.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
5. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. {4272} 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
8. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
9. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

19. 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

20. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

31. 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

32. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

33. 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

34. 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

35. 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

36. 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

37. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

38. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

39. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

40. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

41. {4309} 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

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42. {4310} 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

43. {4311} 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

44. 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

45. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

46. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

47. 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

48. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-176-18 **EXPIRATION DATE:** 02/29/2016

SECTION: 04 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 96 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. 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 4401] Federally Enforceable Through Title V Permit
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to front line production equipment vented to a District-approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to gauge tanks as defined by Rule 4401 Section 3.17. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain a current listing of all steam-enhanced wells in the central Kern County fields heavy oil production stationary source with closed casing vents that direct fluids to uncontrolled storage tanks and a current listing of all permit numbers of front-line equipment receiving produced fluids from the wells; shall update the list whenever a well or front-line equipment is added, replaced or deleted; and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by Authority to Construct or APCO approval of application for transfer of ownership of Permit to Operate. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
6. Volatile organic compound (VOC) emission rate shall not exceed 224.9 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
10. {4272} 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

12. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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21. 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

22. 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

23. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

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32. 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

33. 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

34. 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

35. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

36. 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

37. 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

38. 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

39. 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

40. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

41. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

42. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

43. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

44. {4309} 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

45. {4310} 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

46. {4311} 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

47. 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

48. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

49. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

50. 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

51. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-177-17 **EXPIRATION DATE:** 02/29/2016

SECTION: 04 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 160 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. 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 4401] Federally Enforceable Through Title V Permit
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to front line production equipment vented to a District-approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to gauge tanks as defined by Rule 4401 Section 3.17. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain a current listing of all steam-enhanced wells in the central Kern County fields heavy oil production stationary source with closed casing vents that direct fluids to uncontrolled storage tanks and a current listing of all permit numbers of front-line equipment receiving produced fluids from the wells; shall update the list whenever a well or front-line equipment is added, replaced or deleted; and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by Authority to Construct or APCO approval of application for transfer of ownership of Permit to Operate. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
6. Volatile organic compound (VOC) emission rate shall not exceed 336.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-178-18 **EXPIRATION DATE:** 02/29/2016

SECTION: 09 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH 26 STEAM ENHANCED WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. 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 4401] Federally Enforceable Through Title V Permit
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to front line production equipment vented to a District-approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to gauge tanks as defined by Rule 4401 Section 3.17. [District Rule 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain a current listing of all steam-enhanced wells in the central Kern County fields heavy oil production stationary source with closed casing vents that direct fluids to uncontrolled storage tanks and a current listing of all permit numbers of front-line equipment receiving produced fluids from the wells; shall update the list whenever a well or front-line equipment is added, replaced or deleted; and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Any increase to the maximum number of steam enhanced oil production wells with closed casing vents shall require prior authorization by Authority to Construct or APCO approval of application for transfer of ownership of Permit to Operate. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
6. VOC emission rate shall not exceed 57.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. {1309} Compliance with permit conditions in the Title V permit shall be deemed 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
10. Permittee shall maintain a current roster of wells connected to this system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. {4272} 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

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12. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

13. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

21. 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

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22. 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

23. 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

24. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. 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

35. 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

36. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

37. 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

38. 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

39. 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

40. 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

41. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

42. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

43. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

44. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

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45. {4309} 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

46. {4310} 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

47. {4311} 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

48. 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

49. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

50. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

51. 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

52. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-179-19 **EXPIRATION DATE:** 02/29/2016

SECTION: 31 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 130 STEAM ENHANCED WELLS - CLOSED WELL CASING VENTS, ROUTE PRODUCTION TO VAPOR CONTROLLED TANKS AND EXEMPT EQUIPMENT (AMERICAN NAPTHA CC-3-31)

PERMIT UNIT REQUIREMENTS

1. Fluids produced from these steam-enhanced wells with closed well casing casing vents and cyclic wells with closed casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Collected vapor shall be piped to authorized continuously operating disposal/incineration devices. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
3. Permittee shall maintain with the Permit to Operate a current roster of disposal/incineration device(s) connected to the casing collection system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
4. VOC emission rate shall not exceed 223.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of wells connected to the casing collection system, and such roster shall be made readily available for District inspection upon request. [District NSR Rule and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-180-16 **EXPIRATION DATE:** 02/29/2016

SECTION: 31 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 26 STEAM ENHANCED WELLS - CLOSED WELL CASING VENTS, ROUTE PRODUCTION TO VAPOR CONTROLLED TANKS AND EXEMPT EQUIPMENT (AMERICAN NAPTHA CC-2-31)

PERMIT UNIT REQUIREMENTS

1. Fluids produced from these steam-enhanced wells with closed well casing vents and cyclic wells with closed casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. VOC emission rate shall not exceed 44.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
5. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. {4272} 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
8. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
9. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

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19. 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

20. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

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31. 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

32. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

33. 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

34. 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

35. 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

36. 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

37. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

38. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

39. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

40. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

41. {4309} 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

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42. {4310} 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

43. {4311} 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

44. 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

45. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

46. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

47. 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

48. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-185-16 **EXPIRATION DATE:** 02/29/2016

SECTION: 32 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 49 STEAM ENHANCED WELLS - PERMANENTLY CLOSED WELL CASING VENTS, ROUTE PRODUCTION TO VAPOR CONTROLLED TANKS AND EXEMPT EQUIPMENT (MONTE CRISTO 2 CC-4-32)

PERMIT UNIT REQUIREMENTS

1. Fluids from these steam-enhanced wells with closed well casing vents and cyclic wells with closed well casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. VOC emission rate shall not exceed 84.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
5. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. A listing of all steam enhanced wells connected to this system shall be submitted to the District at least 60 days prior to the permit anniversary date. [District NSR Rule] Federally Enforceable Through Title V Permit
7. {4272} 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
8. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
9. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

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19. 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

20. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

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31. 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

32. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

33. 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

34. 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

35. 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

36. 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

37. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

38. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

39. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

40. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

41. {4309} 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

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42. {4310} 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

43. {4311} 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

44. 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

45. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

46. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

47. 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

48. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-187-16 **EXPIRATION DATE:** 02/29/2016

SECTION: 03 **TOWNSHIP:** 09S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY WELL VENT VAPOR CONTROL SYS CC-1-3, WITH 44 STEAM ENHANCED WELLS, HEAT EXCHANGER, GAS/ LIQUID SEPARATORS, CONDENSATE HIGH EFFICIENCY MIST ELIMINATOR, COMPRESSED VAPOR PIPING TO AUTHORIZED DISPOSAL/INCINERATION DEVICES

PERMIT UNIT REQUIREMENTS

1. Well casing vents shall remain closed at all times except during periods of actual service or repair. [District NSR Rule and 4401]
2. Fluids produced from these steam-enhanced wells with closed well casing vents shall be introduced only to tanks or vessels vented to a District approved vapor collection and control system that has a VOC destruction or removal efficiency of at least 99%, or to permit exempt storage equipment as defined by District rule 2020. [District NSR Rule and 4401]
3. Volatile organic compound (VOC) emission rate shall not exceed 103.1 lb/day. [District NSR Rule]
4. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]
5. All records of required monitoring data and support information required by this permit shall be retained for a period of at least five years and shall be made available for District inspection upon request. [District Rules 2520, 9.4.2, and 4401, 6.1] Federally Enforceable Through Title V Permit
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
7. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a current roster of all wells connected to this system and shall make such roster available for District inspection upon request. [District NSR Rule and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. {4272} 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
10. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. 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

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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

22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. 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

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33. 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

34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

35. 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

36. 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

37. 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

38. 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

39. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

40. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

41. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

43. {4309} 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

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44. {4310} 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

45. {4311} 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

46. 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

47. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

48. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

49. 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

50. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-201-10 **EXPIRATION DATE:** 02/29/2016

SECTION: 32 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH UP TO 66 STEAM ENHANCED OIL PRODUCTION WELLS WITH CLOSED CASING VENTS (MONTE CRISTO 2)

PERMIT UNIT REQUIREMENTS

1. Fluids produced from these steam-enhanced wells with closed well casing vents and cyclic wells with closed casing vents shall be introduced only to tanks S-1131-598, '-629, '-630, '-638, '-641, '-650, '-651, and '-1097 that are vented to an approved operational vapor collection and control system achieving 99% control, or to permit exempt storage equipment as defined by District Rule 2020. [District NSR Rule] Federally Enforceable Through Title V Permit
2. VOC emission rate shall not exceed 113.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
5. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
6. A listing of all steam enhanced wells connected to this system shall be submitted to the District at least 60 days prior to the permit anniversary date. [District NSR Rule] Federally Enforceable Through Title V Permit
7. {4272} 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
8. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
9. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
10. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids 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

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11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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

20. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

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21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. 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

30. 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

31. 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

32. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

33. 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

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34. 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

35. 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

36. 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

37. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

38. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

39. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

40. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

41. {4309} 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

42. {4310} 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

43. {4311} Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3] Federally Enforceable Through Title V Permit

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44. 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

45. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

46. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

47. 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

48. 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

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-420-7 **EXPIRATION DATE:** 02/29/2016

SECTION: 09 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
1 THERMALLY ENHANCED STEAM DRIVE OIL WELL WITH CLOSED CASING VENT

PERMIT UNIT REQUIREMENTS

1. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
2. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
3. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
4. Permittee shall maintain a current listing of all steam enhanced wells with closed-casing vents, and shall make such records available for District inspection upon request. [District Rules 4401 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. VOC emission rate shall not exceed 2.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
6. {4272} 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
7. 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. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
8. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
9. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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 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

11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

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20. 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

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

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. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

32. 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

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33. 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

34. 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

35. 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

36. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

37. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

38. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

39. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

40. {4309} 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

41. {4310} 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

42. {4311} Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3] Federally Enforceable Through Title V Permit

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43. 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

44. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

45. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

46. 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

47. 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-427-10 **EXPIRATION DATE:** 02/29/2016

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EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH UP TO 248 STEAM ENHANCED OIL PRODUCTION WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
2. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended June 16, 2011), 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
3. {1311} The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
4. {4272} 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 emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
6. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
7. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids 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
8. 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

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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 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

10. 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

11. 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

12. 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

13. 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

14. 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

15. 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

16. 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

17. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit

18. 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

19. 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

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20. 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

21. 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

22. 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

23. 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

24. 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

25. 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

26. 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

27. 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

28. 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

29. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit

30. 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

31. 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

32. 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

33. 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

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34. {4304} An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

35. 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 following requirements: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines - Phase 2); 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

36. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit

37. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

38. {4309} 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

39. {4310} 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

40. {4311} 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

41. 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

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42. {4313} Operator shall maintain an inspection log in which an operator records, 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 6.4] Federally Enforceable Through Title V Permit

43. Operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

44. 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

45. 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

ATTACHMENT B

Current Title V Operating Permits

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-22-27 **EXPIRATION DATE:** 02/29/2016

SECTION: SW3 **TOWNSHIP:** 29S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (34-3, DIS #43006-74) WITH NORTH AMERICAN MODEL GLE LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
2. If the steam generator is fired on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, D 6228, double GC for H2S and mercaptans, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
6. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel source, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit
7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992) and 4301 (Last Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
8. The requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit
9. Emissions shall not exceed any of the following limits: PM10: 0.014 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

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10. Except during start-up and shutdown periods, emissions shall not exceed any of the following limits: NOx as NO2: 15 ppmvd @ 3% O2 or 0.0182 lb-NOx/MMBtu, or CO: 29 ppmvd @ 3% O2 or 0.021 lb-CO/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

11. During start-up and shutdown periods, emissions shall not exceed: NOx as NO2: 0.1 lb/MMBtu, or CO: 0.084 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: NOx as NO2: 54.0 lb/day, or CO: 31.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods exceeding 2 hours. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

15. The combined sulfur content of all fuels supplied to this steam generator shall not exceed 5 grains S/100 scf. [District Rule 4320] Federally Enforceable Through Title V Permit

16. 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, and 4306] Federally Enforceable Through Title V Permit

17. 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, and 4306] Federally Enforceable Through Title V Permit

18. 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, and 4306] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

20. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

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21. 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 Rules 1081 and 2520] Federally Enforceable Through Title V Permit

22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit

23. Source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel. [District Rule 1081] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx 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] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

26. 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, and 4306] Federally Enforceable Through Title V Permit

27. 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, and 4306] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, and stack gas velocities - EPA Method 2. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

29. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

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32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

36. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

37. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

38. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

39. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

40. The permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted, for a period of 5 years, and shall make records available for inspection upon request. [District NSR Rule and District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

41. 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, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

42. 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

43. 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 4320] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1127-25-25 **EXPIRATION DATE:** 02/29/2016

SECTION: 32 **TOWNSHIP:** 28S **RANGE:** 28E

EQUIPMENT DESCRIPTION:
NON-COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH LOW PRESSURE FUEL INDUCED RECIRCULATION (CUSA ID# 40-32, DIS# 43001-75)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
5. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content test fails to show compliance, weekly testing shall resume until compliance is demonstrated for 8 consecutive weeks. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6 or 6B; or Method 8 or ARB Method 1-100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2; County Rules 404 (Madera), 406 (Fresno), and 407 (Kern, Kings, Merced, San Joaquin, Stanislaus, and Tulare)] Federally Enforceable Through Title V Permit

14. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Last Amended December 17, 1992) and 4301 (Last Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit

16. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.094 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rules 2201, 4305, and 4351] Federally Enforceable Through Title V Permit

18. Vapor recovery gas sulfur analysis and heating value determination shall be conducted by District-witnessed, or approved sample collection by an independent laboratory on an annual basis. [District Rule 1081, 7.2 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

19. If the NOx and CO concentrations, as measured by the portable analyzer, exceed the allowable emission rate, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the portable analyzer readings continue to exceed the allowable emission rate, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emission limits. [District Rules 4305 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

20. NOx, and CO emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. 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 Rules 1081 and 2520. 9.3.2] Federally Enforceable Through Title V Permit

22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall keep daily records of the sulfur content of the vapor recovery gas, amount of natural gas combusted, and the amount of vapor recovery gas combusted. [District Rules 1070 and 2520, 9.5.1] Federally Enforceable Through Title V Permit

24. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NOx and CO. [District Rules 1081 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003) shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

26. The Regional Administrator shall be notified in writing within (15) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003). This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of the initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under Section VIII of Federal Permit SJ 80-14 (as amended August 15, 2003), and the methods utilized to restore normal operations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

27. The Regional Administrator, the head of the State Air Pollution Control Agency, the head of the responsible local air pollution control agency, and/or their authorized representatives, upon the presentation of credentials, shall be permitted: A) to enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and B) at reasonable times to have access to and copy any records required to be kept under the terms and conditions of Federal Permit SJ 80-14 (as amended August 15, 2003); and C) to inspect any equipment, operation, or method required in Federal Permit SJ 80-14 (as amended August 15, 2003); and D) to sample emissions from the source. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

28. In the event of any changes in control or ownership of facilities, Federal Permit SJ 80-14 (as amended August 15, 2003) shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of Federal Permit SJ 80-14 (as amended August 15, 2003) and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator and the State and local Air Pollution Control Agency. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

29. The provisions of Federal Permit SJ 80-14 (as amended August 15, 2003) are severable, and, if any provision of amended Federal Permit SJ 80-14 is held invalid, the remainder of amended Federal Permit SJ 80-14 shall not be affected thereby. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

30. The owner and operator of the proposed project shall construct and operate the proposed stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable Federal, State and local regulations. [PSD SJ 80-14] Federally Enforceable Through Title V Permit

31. The stack concentration of NOx (as NO2), CO, and O2 shall be measured at least on a monthly basis using District approved portable analyzers in any calendar month in which the unit operates. [District Rules 4305, 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. The permittee shall maintain records of the date and time of NOx, CO, and O2 measurements, the measured NO2 and CO concentrations corrected to 3% O2, and the O2 concentration. The records shall also include a description of any corrective action taken to maintain the emissions in the acceptable range and shall identify any unit that did not operate at any time during the calendar month. These records shall be retained at the facility for a period of no less than 5 years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4351] Federally Enforceable Through Title V Permit

33. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

34. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

35. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

36. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

37. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas velocities - EPA Method 2, stack gas moisture content - EPA Method 4, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of fuel hhv and cumulative annual fuel use for a period of 5 years and shall make such records readily available for District inspection upon request. [District Rule 4351] Federally Enforceable Through Title V Permit

40. Steam generator may be operated with ring or perforated type burner diffuser plate. Changes between ring or perforated type burner diffuser plates shall be recorded in a contemporaneous log. [District Rule 2520, 6.4.2] Federally Enforceable Through Title V Permit

41. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

42. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

44. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

45. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit