



FEB 01 2012

Kenneth Bork
Plains Exploration & Production Co.
1200 Discovery Drive, Suite 500
Bakersfield, CA 93309

**Re: Notice of Final Action - Minor Title V Permit Modification
District Facility # S-1372
Project # S-1103915**

Dear Mr. Bork:

The Air Pollution Control Officer has modified the Title V permit for Plains Exploration & Production Co. by incorporating S-1372-2-16, '-187-12, '-187-13, '-188-12, and '-188-13. ATC S-1372-2 modifies this unit for Rule 4306 compliance with the installation of a new burner and ATCs '-187 through '-188 designate these units dormant first, then compliant with Rule 4703 by installation of SCR and new burners.

Enclosed is the modified Title V permit. The application and proposal were sent to US EPA Region IX on September 30, 2010. No comments were received following the District's preliminary decision on this project.

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

Sincerely,



David Warner
Director of Permit Services

DW:ktr

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
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FEB 01 2012

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

**Re: Notice of Final Action - Minor Title V Permit Modification
District Facility # S-1372
Project # S-1103915**

Dear Mr. Rios:

The Air Pollution Control Officer has modified the Title V permit for Plains Exploration & Production Co. by incorporating S-1372-2-16, '-187-12, '-187-13, '-188-12, and '-188-13. ATC S-1372-2 modifies this unit for Rule 4306 compliance with the installation of a new burner and ATCs '-187 through '-188 designate these units dormant first, then compliant with Rule 4703 by installation of SCR and new burners.

Enclosed is the modified Title V permit. The application and proposal were sent to US EPA Region IX on September 30, 2010. No comments were received following the District's preliminary decision on this project.

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-2-27

EXPIRATION DATE: 05/31/2016

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

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

1. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This equipment is approved to be operated at the following locations: Sec. 06, T30S/R22E, Sec.'s 23 & 24, T31S/R22E; and Sec. 10, T31S/R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.939 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 111 ppmvd CO @ 3% O2 or 0.081 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.939 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 111 ppmvd CO @ 3% O2 or 0.081 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup 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 startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Flare S-1372-100 shall only be used to incinerate TEOR vapors when one or more of steam generators S-1372-1, '2 or '4 are not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317, and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur content of TEOR gas and fuel gas shall be demonstrated quarterly by detection tube sampling or other District approved methods. [District Rule 1081] Federally Enforceable Through Title V Permit
11. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-100 so that at least 95% by weight of the sulfur is removed. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
13. The SO_x emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO₂, inlet" is equal to the concentration of SO_x (expressed as SO₂) at the inlet side of the SO_x emission control system (in lb/dscf) and "CSO₂, outlet" is equal to the concentration of SO_x (expressed as SO₂) at the outlet side of the SO_x emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
14. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] 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 Rule 1081] Federally Enforceable Through Title V Permit
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. 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
24. 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. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. 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, 4306, and 4320] Federally Enforceable Through Title V Permit
26. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] 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 demonstrate compliance with NO_x and CO limits 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 NO_x or CO emissions 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, 4306, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x 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 4305, 6.3.2, 4306, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit 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 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

36. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits 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 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The number of representative units source tested to demonstrate compliance for NO_x and CO limits 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 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. 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 quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; 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
40. If the unit is fired on noncertified gaseous fuel and compliance with SO_x 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 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. 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, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
42. Copies of all fuel invoices, 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, 9.4.2] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. 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. [District Rule 4406]
45. 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 Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. 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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-187-14

EXPIRATION DATE: 05/31/2016

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

EQUIPMENT DESCRIPTION:

3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine shall be equipped with water injection system. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner fuel gas supply shall be equipped with an operational injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Gas turbine engine shall not be operated when water or ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Cogeneration unit shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NO_x concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] Federally Enforceable Through Title V Permit
8. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit
9. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Ammonia emissions shall not exceed 20 ppmv @ 15% O₂. [District Rule 4102]
11. Heat input to gas turbine engine/duct burner system shall not exceed 74.81 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SO_x/MMBtu, 0.0066 lb-PM₁₀/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during transitional periods, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NO_x (as NO₂) @ 15% O₂ (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703, 5.1.3 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. Transitional period emissions shall not exceed: 35 ppmv NO_x (as NO₂) @ 15% O₂ (0.1289 lb/MMBtu), 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] 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. [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
16. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
17. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
18. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each transitional operation period. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
19. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
20. 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. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
21. 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
22. Source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted annually. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
23. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
24. Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20. [District Rule 4703, 6.4.1] Federally Enforceable Through Title V Permit
25. Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B. [District Rule 4703, 6.4.2] Federally Enforceable Through Title V Permit
26. Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20. [District Rule 4703, 6.4.3] Federally Enforceable Through Title V Permit
27. The HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
28. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
29. The District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling. [District Rules 1081, 7.1 and 4703, 6.3] Federally Enforceable Through Title V Permit
30. Source testing shall be witnessed or authorized by District personnel, and the source test results shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.2 and 4703, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

31. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ 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 Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
32. If the NO_x, CO, and/or O₂ concentrations, as measured by the permittee with a portable analyzer or the NH₃ concentration exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must 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 performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
33. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
34. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
35. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit
36. Any one-hour period during which the average water-to-fuel ratio, as measured by the predictive monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit
37. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used (liquid/gas). [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit
39. The operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
40. Permittee shall keep accurate daily records of the quantity and heating value (btu/scf) of the fuel gas supplied to the gas turbine engine/duct burner system. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The ammonia injection rate in (lb/hour) shall be recorded daily. [40 CFR 64.3] Federally Enforceable Through Title V Permit
42. The owner or operator shall maintain all records for a period of five years from the date of data entry and shall make such records available to the APCO upon request. [District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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43. The concentration of sulfur compounds in the exhaust from combustion equipment 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 Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. A cogeneration facility which commenced construction prior to November 15, 1990, and was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale, is not an affected unit subject to the requirements of the Acid Rain Program. Therefore, the requirements of 40 CFR 72 do not apply to this source. A permit shield is granted from this requirement. [40 CFR 72.6(b)(4)(i) and District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-188-14

EXPIRATION DATE: 05/31/2016

SECTION: NW 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine shall be equipped with water injection system. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner fuel gas supply shall be equipped with an operational injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Gas turbine engine shall not be operated when water or ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Cogeneration unit shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334] Federally Enforceable Through Title V Permit
8. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit
9. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Ammonia emissions shall not exceed 20 ppmv @ 15% O2. [District Rule 4102]
11. Heat input to gas turbine engine/duct burner system shall not exceed 74.81 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SOx/MMBtu, 0.0066 lb-PM10/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during transitional periods, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NOx (as NO2) @ 15% O2 (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O2 (0.4484 lb/MMBtu). [District Rules 2201 and 4703, 5.1.3 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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14. Transitional period emissions shall not exceed: 35 ppmv NO_x (as NO₂) @ 15% O₂ (0.1289 lb/MMBtu), 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] 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. [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
16. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
17. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
18. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each transitional operation period. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
19. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
20. 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. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
21. 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
22. Source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted annually. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
23. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
24. Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20. [District Rule 4703, 6.4.1] Federally Enforceable Through Title V Permit
25. Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B. [District Rule 4703, 6.4.2] Federally Enforceable Through Title V Permit
26. Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20. [District Rule 4703, 6.4.3] Federally Enforceable Through Title V Permit
27. The HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
28. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
29. The District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling. [District Rules 1081, 7.1 and 4703, 6.3] Federally Enforceable Through Title V Permit
30. Source testing shall be witnessed or authorized by District personnel, and the source test results shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.2 and 4703, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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31. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ 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 Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
32. If the NO_x, CO, and/or O₂ concentrations, as measured by the permittee with a portable analyzer or the NH₃ concentration exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must 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 performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
33. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
34. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
35. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit
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