San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

DEC 24 2014

Mr. Rolando Trevino
Pacific Gas and Electric Company
Attn: Air Permits, P O Box 7640
San Francisco, CA 94120

Re: Notice of Significant Title V Permit Modification
District Facility # C-904
Project # 1143204

Dear Mr. Trevino:

Enclosed for your review is the District's analysis of an application for significant Title V permit modification for the facility identified above. Pacific Gas and Electric Company is proposing a Title V significant permit modification to incorporate the recently issued Authorities to Construct (ATC's) C-904-27-7, '-28-7 and '-29-7 into the Title V operating permit (see enclosures). This project authorizes the modifications of three 58.14 MMBtu/hr natural gas fired turbines to change their Rule 4703 NOx alternate monitoring requirements to the use of an in-stack monitoring system, remove the monthly Draeger Tube ammonia measurement requirement and approve an alternative ammonia slip calculation methodology.

Enclosed are the current Title V permit, recently issued ATC's C-904-27-7, '-28-7 and '-29-7, proposed modified Title V permit, engineering evaluation, and application. 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.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

www.valleyair.org www.healthyairliving.com

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,

Arnaud Marjollet
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 #: 1143204

Engineer: Dustin Brown
Date: December 23, 2014

Facility Number: C-904
Facility Name: PG&E – Kettleman Compressor Station
Mailing Address: P O Box 7640
San Francisco, CA 94120

Contact Name: Diana Furman
Phone: (925) 270-8209

Responsible Official: Rolando Trevino
Title: Vice President, Engineering & Design - Gas Operations

I. PROPOSAL

PG&E – Kettleman Compressor Station is proposing a Title V significant permit modification to incorporate recently issued Authorities to Construct (ATC's) C-904-27-7, '-28-7 and '-29-7 into the Title V operating permit. These ATC's authorized the modifications of three 58.14 MMBtu/hr natural gas fired turbines, each powering a natural gas pipeline compressor, to change their Rule 4703 NO_X alternate monitoring requirements and their ammonia slip monitoring requirements. The proposed changes are summarized below:

- Change existing NO_X alternate monitoring scheme from monthly portable analyzer readings to monitoring of the NO_X emission concentration at least once per day utilizing the existing in-stack NO_X monitoring system. The requested change is being made to make it easier for the facility to demonstrate ongoing compliance with the Rule 4703 monitoring requirements and to comply with the requirements of 40 CFR 64, Compliance Assurance Monitoring (CAM).

- Remove monthly Draeger Tube ammonia slip measurement requirement and replace the requirement to perform ammonia measurements with a District approved ammonia slip calculation methodology. This methodology is what has been previously approved for other facilities operating units equipped with Selective Catalytic Reduction (SCR) for NO_X emission control. Ammonia slip values will be calculated at least once per day, concurrently with the NO_X measurements taken by the in-stack monitoring system.

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

PG&E – Kettleman Compressor Station is located at 34453 Plymouth Avenue in Avenal, CA.

III. EQUIPMENT DESCRIPTION

Current Permit Equipment Descriptions:

C-904-27-6: 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-1) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, NOX AND O2 ANALYZERS, DRIVING A NATURAL GAS PIPELINE COMPRESSOR

C-904-28-6: 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-2) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, NOX AND O2 ANALYZERS, DRIVING A NATURAL GAS PIPELINE COMPRESSOR

C-904-29-6: 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-3) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, NOX AND O2 ANALYZERS, DRIVING A NATURAL GAS PIPELINE COMPRESSOR

ATC Equipment Descriptions:

C-904-27-7: MODIFICATION OF 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-1) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND NOX AND O2 ANALYZERS, ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR: MODIFY NOX ALTERNATE MONITORING REQUIREMENTS FROM MONTHLY PORTABLE ANALYZER READINGS TO DAILY READINGS USING THE EXISTING IN-STACK MONITORING SYSTEM AND MODIFY AMMONIA SLIP MONITORING REQUIREMENTS FROM MONTHLY DRAEGER TUBE MEASUREMENTS TO DETERMINING VALUES AT LEAST ONCE PER DAY USING APPROVED CALCULATION METHODOLOGY

C-904-28-7: MODIFICATION OF 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-2) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND NOX AND O2 ANALYZERS; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR: MODIFY NOX ALTERNATE MONITORING REQUIREMENTS FROM MONTHLY PORTABLE ANALYZER READINGS TO DAILY READINGS USING THE EXISTING IN-STACK MONITORING SYSTEM AND MODIFY AMMONIA SLIP MONITORING REQUIREMENTS FROM MONTHLY DRAEGER TUBE MEASUREMENTS TO DETERMINING VALUES AT LEAST ONCE PER DAY USING APPROVED CALCULATION METHODOLOGY

C-904-29-7: MODIFICATION OF 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-3) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND NOX AND O2 ANALYZERS; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR: MODIFY NOX ALTERNATE MONITORING REQUIREMENTS FROM MONTHLY PORTABLE ANALYZER READINGS TO DAILY READINGS USING THE EXISTING IN-STACK MONITORING SYSTEM AND MODIFY AMMONIA SLIP MONITORING REQUIREMENTS FROM MONTHLY DRAEGER TUBE MEASUREMENTS TO DETERMINING VALUES AT LEAST ONCE PER DAY USING APPROVED CALCULATION METHODOLOGY

Post Project Equipment Descriptions:

C-904-27-8: 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-1) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND A IN-STACK NOX AND O_2 MONITORING SYSTEM; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR

C-904-28-8: 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-2) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND A IN-STACK NOX AND O_2 MONITORING SYSTEM; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR

C-904-29-8: 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-3) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND A IN-STACK NOX AND O_2 MONITORING SYSTEM; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR

IV. SCOPE OF EPA AND PUBLIC REVIEW

This change to a Title V permit is considered to be a significant modification because the applicant did not originally apply for a Certificate of Conformity (COC) with the original New Source Review (NSR) Authorities to Construct (ATCs). 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

PG&E – Kettleman Compressor Station is proposing to modify three 58.14 MMBtu/hr natural gas fired turbines powering natural gas pipeline compressors by changing their NO_X and ammonia slip monitoring requirements. There will be no other changes to the methods of operation of these turbines or the facility operations as a part of this project.

There are no emission increases associated with the proposed changes to these turbines. The three turbine permits and ATC's are identical; therefore, the following discussion for the condition changes associated with this Title V permit modification will be applicable for all three turbines.

Existing PTO Changes:

Existing PTO condition 7 was revised in accordance with the startup and shutdown requirements of District Rule 4703. The revised requirements have been included as conditions 7 and 8 of this revised permit.

Existing PTO condition 10 was revised in accordance with the proposed changes to PG&E's ammonia slip calculation methodology and now requires each turbine to source test the NO_X concentration at the inlet to the SCR system. By testing at this location, the facility will be able to validate one of the parameters that is used in their ammonia slip calculation throughout the entire year. The revised requirement has been included as condition 12 of this revised permit.

Existing PTO conditions 15, 16, 17 and 18 was updated in accordance with the source test method requirements of District Rule 4703 and combined in to one condition. The revised requirement has been included as condition 16 of this revised permit.

Existing PTO condition 19 was removed and will not be included as a part of the requirements of this revised permit. This condition specified the appropriate source test methodology to be used for PM_{10} emissions. These natural gas fired turbines are not required to perform source testing for PM_{10} emissions. Therefore, this condition is not necessary.

Existing PTO condition 20 was removed and will not be included as a part of the requirements of this revised permit. This condition specified the appropriate source test methodology to be used for units showing compliance with Rule 4703 using percent efficiency. These natural gas fired turbines are not complying with the requirements of Rule 4703 by demonstrating a NO_X percent efficiency. Therefore, this condition is not necessary.

Existing PTO condition 25 was revised in accordance with PG&E's proposed ammonia slip calculation methodology that satisfies option 2. The revised condition now only lists the specific approved calculation to be used by the facility for ammonia slip calculations. The revised requirement has been included as condition 26 of this revised permit.

Existing PTO condition 26 was revised in accordance with PG&E's proposal to take NO_X emission measurements using their in-stack monitoring system and to remove the monthly Draeger Tube ammonia monitoring requirement. Therefore, the NO_X and NH3 monitoring requirements of this condition were removed and included as separate conditions. The revised requirement has been included as condition 23 of this revised permit.

Existing PTO condition 27 was revised in accordance with PG&E's proposal to utilize their existing in-stack NO_X emission monitoring system to take NO_X and O_2 measurements at least once per day. The NO_X and O_2 requirements were removed and included as a separate condition. The revised requirement has been included as condition 27 of this revised permit.

Existing PTO conditions 28 and 29 were revised in accordance with the recordkeeping requirements of District Rule 4703. The revised requirements have been included as conditions 31 and 32 of this revised permit.

New PTO Conditions:

Conditions 20, 21 and 22 of the requirements for this revised permit were added in accordance with the proposal to use the in-stack monitoring system to measure NO_X and O_2 concentrations at least once per day. These conditions assure ongoing compliance with the requirements of Rule 4703 and 40 CFR 64, Compliance Assurance Monitoring (CAM).

Conditions 24 and 25 of the requirements for this revised permit were added to assure ongoing compliance with the procedures for performing NO_X and CO emission measurements with the in-stack monitoring system or portable emission analyzer. These requirements were included in accordance with Rule 4703 and 40 CFR 64, CAM.

Conditions 28, 29 and 30 of the requirements for this revised permit were added to assure ongoing compliance with the CAM requirements of 40 CFR 64.

Condition 34 of the requirements for this revised permit were added to assure the facility maintains accurate records of all of their NO_X, CO and O_2 measurements taken by the in-stack monitoring system and/or portable analyzer. This requirement was included in accordance with Rule 4703 and 40 CFR 64, CAM.

ATC Condition Changes:

ATC condition 1 has been removed and not included in the requirements for this revised permit as PG&E has submitted the appropriate Title V significant modification application to incorporate this ATC in to their Title V operating permit.

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 C-904-27-8, '-28-8, and '-29-8
B. Authorities to Construct C-904-27-7, '-28-7 and '-29-7
C. Previous Title V Operating Permits C-904-27-6, '-28-6 and '-29-6
D. Application

ATTACHMENT A

Proposed Modified Title V Operating Permits
C-904-27-8, '-28-8 and '-29-8

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-904-27-8 **EXPIRATION DATE:** 11/30/2016

EQUIPMENT DESCRIPTION:
58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-1) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND A IN-STACK NOX AND O2 MONITORING SYSTEM; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
4. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
7. The total duration of startup and shutdown shall not exceed two hours per day. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
8. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
9. Start-up shall be 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 shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
11. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. To ensure accuracy of the ammonia slip calculation specified within this permit, the NOx emission concentration at the SCR inlet shall be determined at the facility's typical operating load during annual compliance testing by measuring NOx emissions for a minimum of 10 minutes or until NOx concentration has stabilized. [District Rules 2201, 4102, and 4703, and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit

13. Source testing shall be District witnessed, or authorized, and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

14. 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit

15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit

16. 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; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20, or CARB Method 100. Alternative test methods may also be used to satisfy the source testing requirements of this permit if approved by the District and EPA. [District Rules 1081 and 4703 and 40 CFR 60.335] Federally Enforceable Through Title V Permit

17. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit

18. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

19. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx and O2 at least once per day with the in-stack monitoring system. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. [District Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

21. The permittee shall perform NOx and O2 accuracy drift checks of the in-stack monitoring system at least once per day in accordance with the requirements of 40 CFR Part 60, Appendices B and F. [District Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

22. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NOx and O2 concentration readings. The permittee shall maintain records of the portable analyzer readings and include the date(s) and reasons the in-stack monitoring system was not operational. [District Rules 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of CO and O2 at least once per week with a District approved portable analyzer. If compliance with the CO emissions concentration is demonstrated for eight (8) consecutive weeks, then the monitoring frequency may be reduced to monthly. If excess emissions are observed during monthly monitoring, monitoring shall revert to weekly until 8 consecutive weeks show no excess emissions. 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 five (5) days of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last week if on a weekly monitoring schedule. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. If the monitored NOx concentrations, as measured by the in-stack monitoring system, or the monitored CO concentrations, as measured by the portable analyzer, exceed the permitted emission limits, the permittee shall return the NOx or CO concentrations to the permitted emission limits as soon as possible but no longer than one (1) operating hour after detection. If the permittee's analyzer readings continue to exceed the permitted emissions limits after one (1) operating hour, 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 the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that 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 Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

25. All in-stack monitoring system and portable analyzer 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 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

26. Compliance with the ammonia slip emission limit shall be demonstrated at least once per day, concurrently with the in-stack analyzer NOx concentration readings, utilizing the following calculation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

27. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, and fuel consumption. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

28. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64.7] Federally Enforceable Through Title V Permit

29. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8] Federally Enforceable Through Title V Permit

30. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64.9] Federally Enforceable Through Title V Permit

31. The facility shall maintain the following records on a daily basis: the start time, stop time, length and reason for reduced load periods, and total hours of operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

32. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: type and quantity of fuel used (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) the calculated ammonia slip values and each parameter used to perform the calculation. [District Rules 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

35. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

36. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-904-28-8 **EXPIRATION DATE:** 11/30/2016

EQUIPMENT DESCRIPTION:
58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-2) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND A IN-STACK NOX AND O2 MONITORING SYSTEM; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
4. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
7. The total duration of startup and shutdown shall not exceed two hours per day. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
8. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
9. Start-up shall be 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 shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
11. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

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

12. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. To ensure accuracy of the ammonia slip calculation specified within this permit, the NOx emission concentration at the SCR inlet shall be determined at the facility's typical operating load during annual compliance testing by measuring NOx emissions for a minimum of 10 minutes or until NOx concentration has stabilized. [District Rules 2201, 4102, and 4703, and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
13. Source testing shall be District witnessed, or authorized, and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit
14. 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit
15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit
16. 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; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20, or CARB Method 100. Alternative test methods may also be used to satisfy the source testing requirements of this permit if approved by the District and EPA. [District Rules 1081 and 4703 and 40 CFR 60.335] Federally Enforceable Through Title V Permit
17. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit
18. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
19. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NOx and O2 at least once per day with the in-stack monitoring system. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. [District Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
21. The permittee shall perform NOx and O2 accuracy drift checks of the in-stack monitoring system at least once per day in accordance with the requirements of 40 CFR Part 60, Appendices B and F. [District Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
22. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NOx and O2 concentration readings. The permittee shall maintain records of the portable analyzer readings and include the date(s) and reasons the in-stack monitoring system was not operational. [District Rules 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of CO and O2 at least once per week with a District approved portable analyzer. If compliance with the CO emissions concentration is demonstrated for eight (8) consecutive weeks, then the monitoring frequency may be reduced to monthly. If excess emissions are observed during monthly monitoring, monitoring shall revert to weekly until 8 consecutive weeks show no excess emissions. 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 five (5) days of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last week if on a weekly monitoring schedule. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. If the monitored NOx concentrations, as measured by the in-stack monitoring system, or the monitored CO concentrations, as measured by the portable analyzer, exceed the permitted emission limits, the permittee shall return the NOx or CO concentrations to the permitted emission limits as soon as possible but no longer than one (1) operating hour after detection. If the permittee's analyzer readings continue to exceed the permitted emissions limits after one (1) operating hour, 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 the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that 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 Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

25. All in-stack monitoring system and portable analyzer 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 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

26. Compliance with the ammonia slip emission limit shall be demonstrated at least once per day, concurrently with the in-stack analyzer NOx concentration readings, utilizing the following calculation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

27. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, and fuel consumption. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

28. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64.7] Federally Enforceable Through Title V Permit

29. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8] Federally Enforceable Through Title V Permit

30. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64.9] Federally Enforceable Through Title V Permit

31. The facility shall maintain the following records on a daily basis: the start time, stop time, length and reason for reduced load periods, and total hours of operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

32. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: type and quantity of fuel used (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) the calculated ammonia slip values and each parameter used to perform the calculation. [District Rules 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

35. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

36. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-904-29-8 **EXPIRATION DATE:** 11/30/2016

EQUIPMENT DESCRIPTION:
58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-3) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND A IN-STACK NOX AND O2 MONITORING SYSTEM; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
4. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
7. The total duration of startup and shutdown shall not exceed two hours per day. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
8. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
9. Start-up shall be 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 shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
11. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

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

12. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. To ensure accuracy of the ammonia slip calculation specified within this permit, the NOx emission concentration at the SCR inlet shall be determined at the facility's typical operating load during annual compliance testing by measuring NOx emissions for a minimum of 10 minutes or until NOx concentration has stabilized. [District Rules 2201, 4102, and 4703, and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit

13. Source testing shall be District witnessed, or authorized, and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

14. 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit

15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit

16. 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; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20, or CARB Method 100. Alternative test methods may also be used to satisfy the source testing requirements of this permit if approved by the District and EPA. [District Rules 1081 and 4703 and 40 CFR 60.335] Federally Enforceable Through Title V Permit

17. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit

18. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

19. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx and O2 at least once per day with the in-stack monitoring system. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. [District Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

21. The permittee shall perform NOx and O2 accuracy drift checks of the in-stack monitoring system at least once per day in accordance with the requirements of 40 CFR Part 60, Appendices B and F. [District Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

22. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NOx and O2 concentration readings. The permittee shall maintain records of the portable analyzer readings and include the date(s) and reasons the in-stack monitoring system was not operational. [District Rules 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of CO and O2 at least once per week with a District approved portable analyzer. If compliance with the CO emissions concentration is demonstrated for eight (8) consecutive weeks, then the monitoring frequency may be reduced to monthly. If excess emissions are observed during monthly monitoring, monitoring shall revert to weekly until 8 consecutive weeks show no excess emissions. 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 five (5) days of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last week if on a weekly monitoring schedule. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. If the monitored NOx concentrations, as measured by the in-stack monitoring system, or the monitored CO concentrations, as measured by the portable analyzer, exceed the permitted emission limits, the permittee shall return the NOx or CO concentrations to the permitted emission limits as soon as possible but no longer than one (1) operating hour after detection. If the permittee's analyzer readings continue to exceed the permitted emissions limits after one (1) operating hour, 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 the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that 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 Rules 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

25. All in-stack monitoring system and portable analyzer 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 2201 and 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

26. Compliance with the ammonia slip emission limit shall be demonstrated at least once per day, concurrently with the in-stack analyzer NOx concentration readings, utilizing the following calculation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

27. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, and fuel consumption. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

28. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64.7] Federally Enforceable Through Title V Permit

29. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8] Federally Enforceable Through Title V Permit

30. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64.9] Federally Enforceable Through Title V Permit

31. The facility shall maintain the following records on a daily basis: the start time, stop time, length and reason for reduced load periods, and total hours of operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

32. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: type and quantity of fuel used (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) the calculated ammonia slip values and each parameter used to perform the calculation. [District Rules 4703 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

35. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

36. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

ATTACHMENT B

Authorities to Construct
C-904-27-7, '-28-7 and '-29-7

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: C-904-27-7 **ISSUANCE DATE:** 11/03/2014

LEGAL OWNER OR OPERATOR: PG & E CO -KETTLEMAN COMPRESSOR STATION
MAILING ADDRESS: ATTN: AIR QUALITY PERMITS
P O BOX 7640
SAN FRANCISCO, CA 94120

LOCATION: 34453 PLYMOUTH AVE
AVENAL, CA 93204

EQUIPMENT DESCRIPTION:
MODIFICATION OF 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-1) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND NOX AND O2 ANALYZERS, ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR: MODIFY NOX ALTERNATE MONITORING REQUIREMENTS FROM MONTHLY PORTABLE ANALYZER READINGS TO DAILY READINGS USING THE EXISTING IN-STACK MONITORING SYSTEM AND MODIFY AMMONIA SLIP MONITORING REQUIREMENTS FROM MONTHLY DRAEGER TUBE MEASUREMENTS TO DETERMINING VALUES AT LEAST ONCE PER DAY USING APPROVED CALCULATION METHODOLOGY

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
5. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This Is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

for Arnaud Marjollet, Director of Permit Services

C-904-27-7 : Nov 3 2014 12:49PM -- BROWND : Joint Inspection NOT Required

6. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

8. The total duration of startup and shutdown shall not exceed two hours per day. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

9. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

10. Start-up shall be 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 shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703]

11. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

12. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. To ensure accuracy of the ammonia slip calculation specified within this permit, the NOx emission concentration at the SCR inlet shall be determined at the facility's typical operating load during annual compliance testing by measuring NOx emissions for a minimum of 10 minutes or until NOx concentration has stabilized. [District Rules 2201, 4102, and 4703, and 40 CFR 60.335(b)]

14. Source testing shall be District witnessed, or authorized, and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit

16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit

17. 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; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20, or CARB Method 100. Alternative test methods may also be used to satisfy the source testing requirements of this permit if approved by the District and EPA. [District Rules 1081 and 4703 and 40 CFR 60.335]

18. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit

19. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

20. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx and O2 at least once per day with the in-stack monitoring system. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. [District Rules 2201 and 4703 and 40 CFR Part 64]

CONDITIONS CONTINUE ON NEXT PAGE

22. The permittee shall perform NOx and O2 accuracy drift checks of the in-stack monitoring system at least once per day in accordance with the requirements of 40 CFR Part 60, Appendices B and F. [District Rules 2201 and 4703 and 40 CFR Part 64]

23. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NOx and O2 concentration readings. The permittee shall maintain records of the portable analyzer readings and include the date(s) and reasons the in-stack monitoring system was not operational. [District Rules 4703 and 40 CFR Part 64]

24. The permittee shall monitor and record the stack concentration of CO and O2 at least once per week with a District approved portable analyzer. If compliance with the CO emissions concentration is demonstrated for eight (8) consecutive weeks, then the monitoring frequency may be reduced to monthly. If excess emissions are observed during monthly monitoring, monitoring shall revert to weekly until 8 consecutive weeks show no excess emissions. 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 five (5) days of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last week if on a weekly monitoring schedule. [District Rules 2201 and 4703]

25. If the monitored NOx concentrations, as measured by the in-stack monitoring system, or the monitored CO concentrations, as measured by the portable analyzer, exceed the permitted emission limits, the permittee shall return the NOx or CO concentrations to the permitted emission limits as soon as possible but no longer than one (1) operating hour after detection. If the permittee's analyzer readings continue to exceed the permitted emissions limits after one (1) operating hour, 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 the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that 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 Rules 2201 and 4703 and 40 CFR Part 64]

26. All in-stack monitoring system and portable analyzer 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 2201 and 4703 and 40 CFR Part 64]

27. Compliance with the ammonia slip emission limit shall be demonstrated at least once per day, concurrently with the in-stack analyzer NOx concentration readings, utilizing the following calculation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rules 2201 and 4102]

28. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, and fuel consumption. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64.7]

30. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8]

31. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64.9]

CONDITIONS CONTINUE ON NEXT PAGE

32. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) the calculated ammonia slip values and each parameter used to perform the calculation. [District Rules 4703 and 40 CFR Part 64]

35. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

36. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: C-904-28-7 **ISSUANCE DATE:** 11/03/2014

LEGAL OWNER OR OPERATOR: PG & E CO -KETTLEMAN COMPRESSOR STATION
MAILING ADDRESS: ATTN: AIR QUALITY PERMITS
P O BOX 7640
SAN FRANCISCO, CA 94120

LOCATION: 34453 PLYMOUTH AVE
AVENAL, CA 93204

EQUIPMENT DESCRIPTION:
MODIFICATION OF 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-2) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND NOX AND O2 ANALYZERS; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR: MODIFY NOX ALTERNATE MONITORING REQUIREMENTS FROM MONTHLY PORTABLE ANALYZER READINGS TO DAILY READINGS USING THE EXISTING IN-STACK MONITORING SYSTEM AND MODIFY AMMONIA SLIP MONITORING REQUIREMENTS FROM MONTHLY DRAEGER TUBE MEASUREMENTS TO DETERMINING VALUES AT LEAST ONCE PER DAY USING APPROVED CALCULATION METHODOLOGY

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
5. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
C-904-28-7 : Nov 3 2014 12:49PM – BROWND : Joint Inspection NOT Required.

6. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

8. The total duration of startup and shutdown shall not exceed two hours per day. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

9. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

10. Start-up shall be 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 shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703]

11. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

12. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. To ensure accuracy of the ammonia slip calculation specified within this permit, the NOx emission concentration at the SCR inlet shall be determined at the facility's typical operating load during annual compliance testing by measuring NOx emissions for a minimum of 10 minutes or until NOx concentration has stabilized. [District Rules 2201, 4102, and 4703, and 40 CFR 60.335(b)]

14. Source testing shall be District witnessed, or authorized, and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit

16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit

17. 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; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20, or CARB Method 100. Alternative test methods may also be used to satisfy the source testing requirements of this permit if approved by the District and EPA. [District Rules 1081 and 4703 and 40 CFR 60.335]

18. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit

19. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

20. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx and O2 at least once per day with the in-stack monitoring system. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. [District Rules 2201 and 4703 and 40 CFR Part 64]

CONDITIONS CONTINUE ON NEXT PAGE

22. The permittee shall perform NOx and O2 accuracy drift checks of the in-stack monitoring system at least once per day in accordance with the requirements of 40 CFR Part 60, Appendices B and F. [District Rules 2201 and 4703 and 40 CFR Part 64]

23. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NOx and O2 concentration readings. The permittee shall maintain records of the portable analyzer readings and include the date(s) and reasons the in-stack monitoring system was not operational. [District Rules 4703 and 40 CFR Part 64]

24. The permittee shall monitor and record the stack concentration of CO and O2 at least once per week with a District approved portable analyzer. If compliance with the CO emissions concentration is demonstrated for eight (8) consecutive weeks, then the monitoring frequency may be reduced to monthly. If excess emissions are observed during monthly monitoring, monitoring shall revert to weekly until 8 consecutive weeks show no excess emissions. 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 five (5) days of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last week if on a weekly monitoring schedule. [District Rules 2201 and 4703]

25. If the monitored NOx concentrations, as measured by the in-stack monitoring system, or the monitored CO concentrations, as measured by the portable analyzer, exceed the permitted emission limits, the permittee shall return the NOx or CO concentrations to the permitted emission limits as soon as possible but no longer than one (1) operating hour after detection. If the permittee's analyzer readings continue to exceed the permitted emissions limits after one (1) operating hour, 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 the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that 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 Rules 2201 and 4703 and 40 CFR Part 64]

26. All in-stack monitoring system and portable analyzer 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 2201 and 4703 and 40 CFR Part 64]

27. Compliance with the ammonia slip emission limit shall be demonstrated at least once per day, concurrently with the in-stack analyzer NOx concentration readings, utilizing the following calculation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rules 2201 and 4102]

28. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, and fuel consumption. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64.7]

30. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8]

31. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64.9]

CONDITIONS CONTINUE ON NEXT PAGE

32. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) the calculated ammonia slip values and each parameter used to perform the calculation. [District Rules 4703 and 40 CFR Part 64]

35. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

36. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: C-904-29-7 **ISSUANCE DATE:** 11/03/2014

LEGAL OWNER OR OPERATOR: PG & E CO -KETTLEMAN COMPRESSOR STATION
MAILING ADDRESS: ATTN: AIR QUALITY PERMITS
P O BOX 7640
SAN FRANCISCO, CA 94120

LOCATION: 34453 PLYMOUTH AVE
AVENAL, CA 93204

EQUIPMENT DESCRIPTION:
MODIFICATION OF 58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-3) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, AND NOX AND O2 ANALYZERS; ALL DRIVING A NATURAL GAS PIPELINE COMPRESSOR: MODIFY NOX ALTERNATE MONITORING REQUIREMENTS FROM MONTHLY PORTABLE ANALYZER READINGS TO DAILY READINGS USING THE EXISTING IN-STACK MONITORING SYSTEM AND MODIFY AMMONIA SLIP MONITORING REQUIREMENTS FROM MONTHLY DRAEGER TUBE MEASUREMENTS TO DETERMINING VALUES AT LEAST ONCE PER DAY USING APPROVED CALCULATION METHODOLOGY

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
5. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an Inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

for Arnaud Marjollet, Director of Permit Services

C-904-29-7 : Nov 3 2014 12:49PM – BROWND : Joint Inspection NOT Required

6. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

8. The total duration of startup and shutdown shall not exceed two hours per day. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

9. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]

10. Start-up shall be 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 shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703]

11. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

12. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. To ensure accuracy of the ammonia slip calculation specified within this permit, the NOx emission concentration at the SCR inlet shall be determined at the facility's typical operating load during annual compliance testing by measuring NOx emissions for a minimum of 10 minutes or until NOx concentration has stabilized. [District Rules 2201, 4102, and 4703, and 40 CFR 60.335(b)]

14. Source testing shall be District witnessed, or authorized, and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit

16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit

17. 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; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20, or CARB Method 100. Alternative test methods may also be used to satisfy the source testing requirements of this permit if approved by the District and EPA. [District Rules 1081 and 4703 and 40 CFR 60.335]

18. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit

19. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

20. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx and O2 at least once per day with the in-stack monitoring system. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. [District Rules 2201 and 4703 and 40 CFR Part 64]

CONDITIONS CONTINUE ON NEXT PAGE

22. The permittee shall perform NOx and O2 accuracy drift checks of the in-stack monitoring system at least once per day in accordance with the requirements of 40 CFR Part 60, Appendices B and F. [District Rules 2201 and 4703 and 40 CFR Part 64]

23. During times when the in-stack monitoring system is down for maintenance or repairs, the permittee shall use a District approved portable analyzer to record daily NOx and O2 concentration readings. The permittee shall maintain records of the portable analyzer readings and include the date(s) and reasons the in-stack monitoring system was not operational. [District Rules 4703 and 40 CFR Part 64]

24. The permittee shall monitor and record the stack concentration of CO and O2 at least once per week with a District approved portable analyzer. If compliance with the CO emissions concentration is demonstrated for eight (8) consecutive weeks, then the monitoring frequency may be reduced to monthly. If excess emissions are observed during monthly monitoring, monitoring shall revert to weekly until 8 consecutive weeks show no excess emissions. 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 five (5) days of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last week if on a weekly monitoring schedule. [District Rules 2201 and 4703]

25. If the monitored NOx concentrations, as measured by the in-stack monitoring system, or the monitored CO concentrations, as measured by the portable analyzer, exceed the permitted emission limits, the permittee shall return the NOx or CO concentrations to the permitted emission limits as soon as possible but no longer than one (1) operating hour after detection. If the permittee's analyzer readings continue to exceed the permitted emissions limits after one (1) operating hour, 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 the permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate that 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 Rules 2201 and 4703 and 40 CFR Part 64]

26. All in-stack monitoring system and portable analyzer 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 2201 and 4703 and 40 CFR Part 64]

27. Compliance with the ammonia slip emission limit shall be demonstrated at least once per day, concurrently with the in-stack analyzer NOx concentration readings, utilizing the following calculation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rules 2201 and 4102]

28. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, and fuel consumption. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

29. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64.7]

30. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64.8]

31. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64.9]

CONDITIONS CONTINUE ON NEXT PAGE

32. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

33. The permittee shall maintain the following records: fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 15% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) the calculated ammonia slip values and each parameter used to perform the calculation. [District Rules 4703 and 40 CFR Part 64]

35. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

36. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

ATTACHMENT C

Previous Title V Operating Permits
C-904-27-6, '-28-6 and '-29-6

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-904-27-6 **EXPIRATION DATE:** 11/30/2016

EQUIPMENT DESCRIPTION:
58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-1) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, NOX AND O2 ANALYZERS, DRIVING A NATURAL GAS PIPELINE COMPRESSOR

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Start-up shall be defined as the period of time during which a unit is brought from a shutdown status to the unit's emission control systems to reach full operation. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
4. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
6. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Total duration of startup and shutdown shall not exceed two hours per day. During startup, the emissions control system shall be in operations and emissions shall be minimized insofar as technologically feasible. [District Rules 2201, and 4703] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
9. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
11. Source testing shall be by District witnessed, or authorized, sample collection by a CARB certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit
14. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit
15. NOx emissions (ppmv) shall be determined by EPA Methods 7E or 20, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
16. CO emissions (ppmv) shall be determined by EPA Methods 10 or 10B, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
17. Oxygen content of exhaust gas shall be determined by EPA Methods 3, 3A or 20, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
18. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081] Federally Enforceable Through Title V Permit
19. PM10 emissions shall be determined by EPA Methods 201A and 202 when PM10 is required by the District. Alternate test methods that are more suitable for the exhaust stack temperature may be used if such methods are approved by the District [District Rule 2201] Federally Enforceable Through Title V Permit
20. Demonstrated percent efficiency shall be determined using the procedures contained in District Rule 4703, Section 6.4.6. [District Rule 4703, Section 6.4.6] Federally Enforceable Through Title V Permit
21. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
23. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
24. The facility shall maintain the following records on a daily basis: the start time, stop time, length and reason for reduced load periods, and total hours of operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
25. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, ammonia (NH3), and O2 weekly. If compliance with the NOx emissions is demonstrated for eight (8) consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until 8 consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. NOx, CO and O2 monitoring shall be conducted utilizing a portable analyzer that meets District specifications. Ammonia monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall be performed within one (1) day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

27. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, the fuel consumption, and the exhaust gas NOx and O2 concentrations. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

28. The permittee shall maintain the following records: fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). The calculations used to determine ammonia slip and the NOx mass emission rates shall be derived during the initial source test. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

29. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing; evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201, and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

30. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

31. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-904-28-6 **EXPIRATION DATE:** 11/30/2016

EQUIPMENT DESCRIPTION:
58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-2) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, NOX AND O2 ANALYZERS, DRIVING A NATURAL GAS PIPELINE COMPRESSOR

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Start-up shall be defined as the period of time during which a unit is brought from a shutdown status to the unit's emission control systems to reach full operation. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
4. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.00280 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
6. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Total duration of startup and shutdown shall not exceed two hours per day. During startup, the emissions control system shall be in operations and emissions shall be minimized insofar as technologically feasible. [District Rules 2201, and 4703] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
9. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
11. Source testing shall be by District witnessed, or authorized, sample collection by a CARB certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit
14. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit
15. NOx emissions (ppmv) shall be determined by EPA Methods 7E or 20, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
16. CO emissions (ppmv) shall be determined by EPA Methods 10 or 10B, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
17. Oxygen content of exhaust gas shall be determined by EPA Methods 3, 3A or 20, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
18. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081] Federally Enforceable Through Title V Permit
19. PM10 emissions shall be determined by EPA Methods 201A and 202 when PM10 is required by the District. Alternate test methods that are more suitable for the exhaust stack temperature may be used if such methods are approved by the District [District Rule 2201] Federally Enforceable Through Title V Permit
20. Demonstrated percent efficiency shall be determined using the procedures contained in District Rule 4703, Section 6.4.6. [District Rule 4703, Section 6.4.6] Federally Enforceable Through Title V Permit
21. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
23. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
24. The facility shall maintain the following records on a daily basis: the start time, stop time, length and reason for reduced load periods, and total hours of operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
25. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, ammonia (NH3), and O2 weekly. If compliance with the NOx emissions is demonstrated for eight (8) consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until 8 consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. NOx, CO and O2 monitoring shall be conducted utilizing a portable analyzer that meets District specifications. Ammonia monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall be performed within one (1) day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

27. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, the fuel consumption, and the exhaust gas NOx and O2 concentrations. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

28. The permittee shall maintain the following records: fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). The calculations used to determine ammonia slip and the NOx mass emission rates shall be derived during the initial source test. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

29. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing; evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201, and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

30. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

31. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-904-29-6 **EXPIRATION DATE:** 11/30/2016

EQUIPMENT DESCRIPTION:
58.14 MMBTU/HR (7,170 HP) SOLAR SOLONOX TAURUS 60-7032S GAS TURBINE ENGINE (K-3) SERVED BY A SOLONOX DRY LOW-NOX COMBUSTION SYSTEM, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION, NOX AND O2 ANALYZERS, DRIVING A NATURAL GAS PIPELINE COMPRESSOR

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Start-up shall be defined as the period of time during which a unit is brought from a shutdown status to the unit's emission control systems to reach full operation. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rule 4703] Federally Enforceable Through Title V Permit
4. During startup and shutdown, emissions from the gas turbine shall not exceed 171 ppmvd NOx @ 15% O2 or 0.6203 lb-NOx/MMBtu. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Except during periods of startup, shutdown, reduced load, bypass transition, or primary re-ignition, emission rates shall not exceed any of the following emission limits: 8 ppmv NOx (as NO2) @ 15% O2, 0.0028 lb SOx/MMBtu, 0.3 lb PM10/hr, 50 ppmv CO @ 15% O2, 25 ppmv VOC @ 15% O2. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
6. Maximum emissions from the gas turbine, including both steady state and non-steady state periods, shall not exceed any of the following limits: 109.9 lb-NOx/day, 3.9 lb-SOx/day, 7.3 lb-PM10/day, 156.4 lb-CO/day, or 44.7 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Total duration of startup and shutdown shall not exceed two hours per day. During startup, the emissions control system shall be in operations and emissions shall be minimized insofar as technologically feasible. [District Rules 2201, and 4703] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed either of the following NSPS Subpart GG limits (one hour standard): 171 ppmvd NOx (as NO2) @ 15% O2, or 150 ppmvd SOx (as SO2) @ 15% O2. [40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
9. The ammonia slip (NH3) emissions shall not exceed either of the following limits: 0.79 lb/hr or 10 ppmvd @15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Source testing to determine compliance with the NOx, CO, and ammonia (NH3) steady state emission rates (in both lb/hr and ppmvd @ 15% O2) shall be conducted at least once every 12 months. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
11. Source testing shall be by District witnessed, or authorized, sample collection by a CARB certified testing laboratory. [District Rule 1081, Section 7.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. 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, Sections 5.0, 6.0 and 7.1] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, Section 7.3] Federally Enforceable Through Title V Permit
14. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703 and 40 CFR 60.332(a),(b)] Federally Enforceable Through Title V Permit
15. NOx emissions (ppmv) shall be determined by EPA Methods 7E or 20, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
16. CO emissions (ppmv) shall be determined by EPA Methods 10 or 10B, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
17. Oxygen content of exhaust gas shall be determined by EPA Methods 3, 3A or 20, or CARB Method 100. [District Rule 4703 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
18. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081] Federally Enforceable Through Title V Permit
19. PM10 emissions shall be determined by EPA Methods 201A and 202 when PM10 is required by the District. Alternate test methods that are more suitable for the exhaust stack temperature may be used if such methods are approved by the District [District Rule 2201] Federally Enforceable Through Title V Permit
20. Demonstrated percent efficiency shall be determined using the procedures contained in District Rule 4703, Section 6.4.6. [District Rule 4703, Section 6.4.6] Federally Enforceable Through Title V Permit
21. Unit shall be fired exclusively on PUC-quality natural gas, with a maximum sulfur content of 1.0 gr/100 scf. [District Rules 2201, 4801 and 40 CFR 60.333] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall either be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days of the end of the source test and weekly thereafter. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six-month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
23. Fuel sulfur content shall be determined using the following methods: ASTM D 1072, D 3031, D 4084, or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
24. The facility shall maintain the following records on a daily basis: the start time, stop time, length and reason for reduced load periods, and total hours of operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
25. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

26. The permittee shall monitor and record the stack concentration of NOx (as NO2), CO, ammonia (NH3), and O2 weekly. If compliance with the NOx emissions is demonstrated for eight (8) consecutive weeks, then the monitoring frequency will be reduced to monthly. If deviations are observed in two consecutive months, monitoring shall revert to weekly until 8 consecutive weeks show no deviations. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. NOx, CO and O2 monitoring shall be conducted utilizing a portable analyzer that meets District specifications. Ammonia monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall be performed within one (1) day of restarting the unit unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the week if on a weekly monitoring schedule. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

27. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: emissions control system operating parameters, elapsed time of operation of the gas turbine, the fuel consumption, and the exhaust gas NOx and O2 concentrations. [District Rule 4703 and 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

28. The permittee shall maintain the following records: fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitoring measurements, calculated ammonia slip (lb/hr or ppmvd @ 15% O2), and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). The calculations used to determine ammonia slip and the NOx mass emission rates shall be derived during the initial source test. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

29. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing; evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 1080, 2201, and 4703 and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

30. All records of required monitoring data and support information shall be maintained and retained on-site for a period of at least (5) five years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703] Federally Enforceable Through Title V Permit

31. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Kings County Rule 404, District Rule 4801 and Kings County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, Section 13.2] Federally Enforceable Through Title V Permit

ATTACHMENT D

Application

San Joaquin Valley Air Pollution Control District

www.valleyair.org

RECEIVED
DEC 17 2014
AIR
Permits Services
SJVAPCD

Permit Application For:

[ ] ADMINISTRATIVE AMENDMENT [ ] MINOR MODIFICATION [X] SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO:
Pacific Gas & Electric Company

2. MAILING ADDRESS:

STREET/P.O. BOX: ATTN: Air Permits; PO Box 7640

CITY: San Francisco STATE: CA 9-DIGIT ZIP CODE: 94120

3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:

STREET: Kettleman Compressor Station CITY: Avenal

____ ¼ SECTION ____ TOWNSHIP ____ RANGE ____

INSTALLATION DATE:
TBD

4. GENERAL NATURE OF BUSINESS: Natural Gas Transmission

5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE
(include Permit #'s if known, and use additional sheets if necessary)

Incorporate into the existing Title V permit the modified conditions per C-904-27-7, C-904-28-7, C-904-29-7.

6. TYPE OR PRINT NAME OF APPLICANT:
Rolando I. Trevino

TITLE OF APPLICANT:
Vice President, Engineering & Design, Gas Operations

7. SIGNATURE OF APPLICANT: Rolando I. Trevino DATE: 12/12/2014

PHONE: (925) 328-5933
FAX: ( )
EMAIL: RIT4@pge.com

For APCD Use Only:

DATE STAMP	*FILING FEE RECEIVED:* $ ____ *CHECK#:* ____
	DATE PAID: ____
	PROJECT NO: C-1143204 *FACILITY ID:* C-904

San Joaquin Valley
Unified Air Pollution Control District

HEALTHY AIR LIVING

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: Pacific Gas & Electric Company	FACILITY ID: C – 904
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: Pacific Gas & Electric Company	
3. Agent to the Owner: Diana MW Furman	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

(RLT) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

(RLT) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

(RLT) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(RLT) Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Rolando I. Trevino — 12/12/2014

Signature of Responsible Official — Date

Rolando I. Trevino

Name of Responsible Official (please print)

Vice President, Engineering & Design, Gas Operations

Title of Responsible Official (please print)