



MAR 08 2011

Kelly S. Lucas  
Sunrise Power Company  
P.O. Box 81617  
Bakersfield, CA 93380

**Re: Notice of Minor Title V Permit Modification  
District Facility # S-3746  
Project # S-1103318**

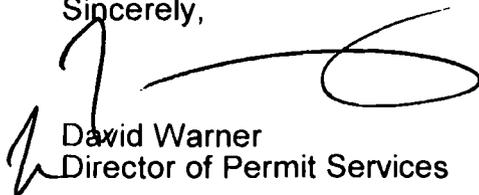
Dear Mr. Lucas:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to modify Permit(s) to Operate S-3746-1-7 and -2-7 of the current Title V operating permit. The existing Title V permits will be modified with the updated conditions to comply with the current SIP approved District Rule 4703.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V PTO(s) S-3746-1-8 and -2-8, application, and previous Title V permit. This project will be finalized after the 45-day EPA comment period.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Gurpreet Brar, Permit Services

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95358-8718  
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**  
34948 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



MAR 08 2011

Gerardo C. Rios, Chief  
Permits Office  
Air Division  
U.S. EPA - Region IX  
75 Hawthorne St  
San Francisco, CA 94105

Re: **Notice of Minor Title V Permit Modification**  
**District Facility # S-3746**  
**Project # S-1103318**

Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. Sunrise Power Company is proposing a Title V minor permit modification to modify Permit(s) to Operate (PTOs) S-3746-1-7 and -2-7 of the facility's current Title V operating permit. The existing Title V permits will be modified with the updated conditions to comply with the current SIP approved District Rule 4703.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V PTO(s) S-3746-1-8 and -2-8, application, and previous Title V permit. Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Gurpreet Brar, Permit Services

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# **TITLE V APPLICATION REVIEW**

Minor Modification  
Project #: S-1103318

Engineer: Gurpreet Brar  
Date: January 19, 2011

Facility Number: S-3746  
Facility Name: Sunrise Power Company  
Mailing Address: P.O. Box 81617  
Bakersfield, CA 93380

Contact Name: Kelly S. Lucas  
Phone: (661) 615-4630

Responsible Official: Kelly S. Lucas  
Title: Executive Director

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## **I. PROPOSAL**

Sunrise Power Company is proposing a Title V minor permit modification to modify Permit(s) to Operate (PTOs) S-3746-1-7 and -2-7 of the facility's current Title V operating permit. The existing Title V permits will be modified with the updated conditions to comply with the current SIP approved District Rule 4703.

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**

Sunrise Power Company is located at 12857 Sunrise Power Road Fellows, CA.

SW ¼ Sec 23, T31S, R22E – MDB&M

### III. EQUIPMENT DESCRIPTION

**S-3746-1-8:** 160 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF GENERAL ELECTRIC FRAME 7FA, NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH DRY LOW-NOX COMBUSTORS, HEAT RECOVERY STEAM GENERATOR WITH DUCT FIRING, SCR, AND OXIDATION CATALYSTS (585 MW TOTAL PLANT NOMINAL RATING)

**S-3746-2-8:** 160 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF GENERAL ELECTRIC FRAME 7FA, NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH DRY LOW-NOX COMBUSTORS, HEAT RECOVERY STEAM GENERATOR WITH DUCT FIRING, SCR, AND OXIDATION CATALYSTS (585 MW TOTAL PLANT NOMINAL RATING)

### IV. SCOPE OF EPA AND PUBLIC REVIEW

This change to a Title V permit is considered to be a minor modification and, as such, requires no public review.

### V. APPLICABLE REQUIREMENTS

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

### VI. DESCRIPTION OF PROPOSED MODIFICATIONS

Sunrise Power Company is proposing to modify Permit to Operate S-3746-1-7 & S-3746-2-7 by updating conditions required to comply with current SIP approved District Rule 4703 (09/20/07).

S-3746-1-8 & -2-8:

Permit condition 23 on the current Permit to Operate was replaced by permit condition 25 on the proposed Permit to Operate. This condition requires an owner or operator of any gas turbine with an intermittently operated auxiliary burner to demonstrate compliance with the burner both on and off.

Permit conditions 20 and 26 were removed from the current Permit to Operate. These permit conditions are not required by current SIP approved District Rule 4703 and as such no longer applicable. These conditions referred "Thermal Stabilization Period" which was removed from the latest version of Rule 4703.

Permit condition 21 was added to the proposed Permit to Operate to define the reduced load period as given in District Rule 4703.

Permit condition 22 was added to the proposed Permit to Operate that requires emission control system in operation during startup and shutdown.

Permit condition 23 was added to the proposed Permit to Operate that requires the owner or operator to submit information that must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly.

Permit condition 45 was added to the proposed Permit to Operate to specify the recordkeeping requirements as given in District Rule 4703.

## **VII. COMPLIANCE**

In accordance with Rule 2520, 3.20, these modifications:

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 11.4 by including;

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
2. The source's suggested draft permit; and
3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used.

## **VIII. ATTACHMENTS**

- A. Proposed Modified Title V Operating Permit No. S-3746-1-8 & -2-8
- B. Emissions Increases
- C. Application
- D. Previous Title V Operating Permit No.'s S-3746-1-7 & -2-7

# **ATTACHMENT A**

**Proposed Modified Title V Operating Permit No.  
(S-3746-1-8 & -2-8)**

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3746-1-8

EXPIRATION DATE: 06/30/2013

SECTION: SW23 TOWNSHIP: 31S RANGE: 22E

## EQUIPMENT DESCRIPTION:

160 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF GENERAL ELECTRIC FRAME 7FA, NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH DRY LOW-NOX COMBUSTORS, HEAT RECOVERY STEAM GENERATOR WITH DUCT FIRING, SCR, AND OXIDATION CATALYSTS (585 MW TOTAL PLANT NOMINAL RATING)

## PERMIT UNIT REQUIREMENTS

1. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators to maintain visible emissions from lube oil vents no greater than 5% opacity, except for three minutes in any hour. [District NSR Rule] Federally Enforceable Through Title V Permit
2. CTG shall be equipped with continuously recording fuel gas flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
3. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NO<sub>x</sub>, CO, and O<sub>2</sub>. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rule 1080, 6.5, District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
4. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NO<sub>x</sub> concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours). The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The facility shall maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
7. {2255} The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: SUNRISE POWER COMPANY

Location: 12857 SUNRISE POWER ROAD, FELLOWS, CA 93244

S-3746-1-8: Jan 19 2011 11:38AM - BRARG

8. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
9. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
11. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
13. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA (Attn: AIR-5). The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred; And reports on opacity monitors giving the number of three minute periods during which the average opacity exceeded the standard for each hour of operation. The averaged may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced instantaneous opacity measurements per minute. Any time exempted shall be considered before determining the excess averages of opacity. [District Rule 1080, 8.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
14. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District NSR Rule] Federally Enforceable Through Title V Permit
16. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
17. CTG shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.25 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District NSR Rule, PSD SJ 01-01] Federally Enforceable Through Title V Permit
18. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 0.25 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2]

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

19. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); County Rule 407 (Kern)] Federally Enforceable Through Title V Permit
20. Startup is defined as the period beginning with turbine initial firing. Shutdown is defined by the period beginning with initiation of turbine shutdown sequence and ending with cessation of firing of the gas turbine engine. Startup and shutdown durations shall not exceed 60 minutes for a hot startup, 128 minutes for a warm startup, and 230 minutes for a cold startup, and one hour for a shutdown, per-occurrence. [District NSR Rule, District Rules 4001 & 4703, 5.3.3; and PSD SJ 01-01] Federally Enforceable Through Title V Permit
21. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703, 3.23 & 5.3.1.4] Federally Enforceable Through Title V Permit
22. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
23. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit
24. {2277} The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a) and (b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. An owner or operator of any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
26. Ammonia shall be injected when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F. Permittee shall monitor and record catalyst temperature during periods of startup. [District NSR Rule] Federally Enforceable Through Title V Permit
27. During startup or shutdown of any gas turbine engine(s), combined emissions from both gas turbine engines (S-3746-1 and -2) heat recovery steam generator exhausts shall not exceed any of the following: NOx (as NO2) - 700 lb and CO - 1,580 lb, in any one hour. If any CTG is in either startup or shutdown mode during any portion of a clock hour, the facility will be subject to the aforementioned limits during that clock hour. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Emission rates from each CTG, except during startup and/or shutdown, shall not exceed any of the following: PM10 - 17.8 lb/hr, SOx (as SO2) - 1.55 lb/hr, NOx (as NO2) - 15.96 lb/hr and 2.0 ppmvd @ 15% O2, VOC - 5.51 lb/hr and 2.0 ppmvd @ 15% O2, CO - 19.22 lb/hr and 4 ppmvd @ 15% O2, ammonia - 10 ppmvd @ 15%O2. NOx (as NO2) ppmv and lb/hr limits are a one-hour rolling average. Ammonia emission limit is a twenty-four hour rolling average. All other ppmvd and lb/hr limits are three-hour rolling averages. If a CTG is in either startup or shutdown mode during any portion of a clock hour, that unit will not be subject to the aforementioned limits during that clock hour. [District NSR Rule, and District Rules 4001, 4703, 5.1.2 and 5.3; and PSD SJ 01-01] Federally Enforceable Through Title V Permit
29. Emission rates from each CTG shall not exceed any of the following: PM10 - 461.2 lb/day, SOx (as SO2) - 37.2 lb/day, NOx (as NO2) - 1,170.9 lb/day, VOC - 220.6 lb/day, and CO - 2,443.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Emission rates from both CTGs (S-3746-1 and -2) shall not exceed any of the following: PM10 - 922.3 lb/day, SOx (as SO2) - 74.4 lb/day, NOx (as NO2) - 2,341.8 lb/day, VOC - 441.2 lb/day, and CO - 4,886.8 lb/day. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
31. Annual emissions from both CTGs calculated on a twelve consecutive month rolling basis shall not exceed any of the following: PM10 - 269,651 lb/year, SOx (as SO2) - 24,259 lb/year, NOx (as NO2) - 311,337 lb/year, VOC - 87,674 lb/year, and CO - 507,978 lb/year. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. Each one-hour period in a one-hour rolling average will commence on the hour. Each one-hour period in a three-hour rolling average will commence on the hour. The three-hour average will be compiled from the three most recent one-hour periods. Each one-hour period in a twenty-four-hour average for ammonia slip will commence on the hour. The twenty-four-hour average will be calculated starting and ending at twelve-midnight. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
33. Daily emissions will be compiled for a twenty-four period starting and ending at twelve-midnight. Each calendar month in a twelve-consecutive-month rolling emissions will commence at the beginning of the first day of the month. The twelve-consecutive-month rolling emissions total to determine compliance with annual emissions will be compiled from the twelve most recent calendar months. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
34. Ammonia slip limit shall be measured using the following calculation procedure: ammonia slip ppmv @ 15% O<sub>2</sub> =  $((a-(b \times c / 1,000,000)) \times 1,000,000 / b) \times d$ , where a = ammonia injection rate(lb/hr)/17(lb/lb. mol), b = dry exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NO<sub>x</sub> concentration ppmv at 15% O<sub>2</sub> across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. Alternatively, permittee may utilize a continuous in-stack ammonia monitor, acceptable to the District, to monitor compliance. At least 60 days prior to using a NH<sub>3</sub> CEM, the permittee must submit a monitoring plan for District review and approval. [District Rule 4102] Federally Enforceable Through Title V Permit
35. Short term emission limits (lb/hr and ppmv @ 15% O<sub>2</sub>) shall be measured annually by District witnessed in-situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NO<sub>x</sub>: ppmvd @ 15% O<sub>2</sub> and lb/hr, CO: ppmvd @ 15% O<sub>2</sub> and lb/hr, VOC: ppmvd @ 15% O<sub>2</sub> and lb/hr, PM<sub>10</sub>: lb/hr, and ammonia: ppmvd @ 15% O<sub>2</sub>. Sample collection to demonstrate compliance with ammonia emission limit shall be based on three consecutive test runs of thirty minutes each. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
36. Startup NO<sub>x</sub>, CO, and VOC mass emission limits shall be measured for one of the CTGs (S-3746-1, or -2) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
37. The District and the EPA must be notified 30 days prior to any source test, and a source test plan must be submitted for approval 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
38. The following test methods shall be used PM<sub>10</sub>: EPA method 5 (front half and back half) or 201A, NO<sub>x</sub>: EPA Method 7E or 20, CO: EPA method 10 or 10B, O<sub>2</sub>: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246 or ASTM D6228. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081, 4001, 4703, 6.4 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
39. {2272} Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NO<sub>x</sub>, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O<sub>2</sub>, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit
40. The permittee shall maintain hourly records of NO<sub>x</sub>, CO, and ammonia emission concentrations (ppmv @ 15% O<sub>2</sub>), and hourly, daily, and twelve month rolling average records of NO<sub>x</sub> and CO emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
41. The permittee shall maintain records of SO<sub>x</sub> lb/hr, lb/day, and lb/twelve month rolling average emission. SO<sub>x</sub> emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District NSR Rule] Federally Enforceable Through Title V Permit
42. {2251} The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

43. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d), District NSR Rule, District Rule 1080, 7.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
44. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
45. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, the type and quantity of fuel used, and duration of each start-up and each shutdown time period. [District Rule 4703, 6.2.6 & 6.2.7] Federally Enforceable Through Title V Permit
46. All records required to be maintained by this permit shall be maintained for a period of five years and shall be made readily available for District inspection upon request. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
47. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75. [40 CFR Part 75] Federally Enforceable Through Title V Permit
48. The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR Part 75] Federally Enforceable Through Title V Permit
49. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR Part 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR Part 73] Federally Enforceable Through Title V Permit
50. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR Part 77] Federally Enforceable Through Title V Permit
51. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR Part 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
52. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR Part 72] Federally Enforceable Through Title V Permit
53. An allowance shall not be deducted in order to comply with the requirements under 40 CFR Part 73, prior to the calendar year for which the allowance was allocated. [40 CFR Part 73] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR Part 72.7 and Part 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR Part 72] Federally Enforceable Through Title V Permit
55. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR Part 72] Federally Enforceable Through Title V Permit
56. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR Part 72] 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.

57. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77. [40 CFR Part 77] Federally Enforceable Through Title V Permit
58. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR Part 77. [40 CFR Part 77] Federally Enforceable Through Title V Permit
59. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR Part 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR Part 72] Federally Enforceable Through Title V Permit
60. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR Part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
61. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 75 Subpart I. [40 CFR Part 75] Federally Enforceable Through Title V Permit
62. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Kern) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a), (a)(1), (a)(2), (b), and (f), 60.333 (a) and (b); 60.334(a), (b)(2), (c)(1), (c)(2), and (c)(3), and 60.335(b), (c)(2), (c)(3), and (d); District Rule 4703 (as amended 09/20/07), Sections 5.1.2, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
64. {2282} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

DRAFT

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3746-2-8

**EXPIRATION DATE:** 06/30/2013

**SECTION:** SW23 **TOWNSHIP:** 31S **RANGE:** 22E

## **EQUIPMENT DESCRIPTION:**

160 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF GENERAL ELECTRIC FRAME 7FA, NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH DRY LOW-NOX COMBUSTORS, HEAT RECOVERY STEAM GENERATOR WITH DUCT FIRING, SCR, AND OXIDATION CATALYSTS (585 MW TOTAL PLANT NOMINAL RATING)

## **PERMIT UNIT REQUIREMENTS**

1. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators to maintain visible emissions from lube oil vents no greater than 5% opacity, except for three minutes in any hour. [District NSR Rule] Federally Enforceable Through Title V Permit
2. CTG shall be equipped with continuously recording fuel gas flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
3. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NO<sub>x</sub>, CO, and O<sub>2</sub>. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rule 1080, 6.5, District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
4. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NO<sub>x</sub> concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours). The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The facility shall maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
7. {2255} The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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8. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
9. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
11. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
13. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA (Attn: AIR-5). The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred; And reports on opacity monitors giving the number of three minute periods during which the average opacity exceeded the standard for each hour of operation. The averaged may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced instantaneous opacity measurements per minute. Any time exempted shall be considered before determining the excess averages of opacity. [District Rule 1080, 8.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
14. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District NSR Rule] Federally Enforceable Through Title V Permit
16. {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
17. CTG shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.25 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District NSR Rule, PSD SJ 01-01] Federally Enforceable Through Title V Permit
18. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 0.25 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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19. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); County Rule 407 (Kern)] Federally Enforceable Through Title V Permit
20. Startup is defined as the period beginning with turbine initial firing. Shutdown is defined by the period beginning with initiation of turbine shutdown sequence and ending with cessation of firing of the gas turbine engine. Startup and shutdown durations shall not exceed 60 minutes for a hot startup, 128 minutes for a warm startup, and 230 minutes for a cold startup, and one hour for a shutdown, per occurrence. [District NSR Rule, District Rule 4001 & 4703, 5.3.3; and PSD SJ 01-01] Federally Enforceable Through Title V Permit
21. Reduced load period is defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. Each reduced load period shall not exceed one hour. [District Rule 4703, 3.23] Federally Enforceable Through Title V Permit
22. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
23. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit
24. {2277} The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a) and (b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. An owner or operator of any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
26. Ammonia shall be injected when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F. Permittee shall monitor and record catalyst temperature during periods of startup. [District NSR Rule] Federally Enforceable Through Title V Permit
27. During startup or shutdown of any gas turbine engine(s), combined emissions from both gas turbine engines (S-3746-1 and -2) heat recovery steam generator exhausts shall not exceed any of the following: NOx (as NO2) - 700 lb and CO - 1,580 lb, in any one hour. If any CTG is in either startup or shutdown mode during any portion of a clock hour, the facility will be subject to the aforementioned limits during that clock hour. [District NSR Rule] Federally Enforceable Through Title V Permit
28. Emission rates from each CTG, except during startup and/or shutdown, shall not exceed any of the following: PM10 - 17.8 lb/hr, SOx (as SO2) - 1.55 lb/hr, NOx (as NO2) - 15.96 lb/hr and 2.0 ppmvd @ 15% O2, VOC - 5.51 lb/hr and 2.0 ppmvd @ 15% O2, CO - 19.22 lb/hr and 4 ppmvd @ 15% O2, ammonia - 10 ppmvd @ 15%O2. NOx (as NO2) ppmv and lb/hr limits are a one-hour rolling average. Ammonia emission limit is a twenty-four hour rolling average. All other ppmvd and lb/hr limits are three-hour rolling averages. If a CTG is in either startup or shutdown mode during any portion of a clock hour, that unit will not be subject to the aforementioned limits during that clock hour. [District NSR Rule, and District Rules 4001, 4703, 5.1.2 and 5.3; and PSD SJ 01-01] Federally Enforceable Through Title V Permit
29. Emission rates from each CTG shall not exceed any of the following: PM10 - 461.2 lb/day, SOx (as SO2) - 37.2 lb/day, NOx (as NO2) - 1,170.9 lb/day, VOC - 220.6 lb/day, and CO - 2,443.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
30. Emission rates from both CTGs (S-3746-1 and -2) shall not exceed any of the following: PM10 - 922.3 lb/day, SOx (as SO2) - 74.4 lb/day, NOx (as NO2) - 2,341.8 lb/day, VOC - 441.2 lb/day, and CO - 4,886.8 lb/day. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
31. Annual emissions from both CTGs calculated on a twelve consecutive month rolling basis shall not exceed any of the following: PM10 - 269,651 lb/year, SOx (as SO2) - 24,259 lb/year, NOx (as NO2) - 311,337 lb/year, VOC - 87,674 lb/year, and CO - 507,978 lb/year. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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32. Each one-hour period in a one-hour rolling average will commence on the hour. Each one-hour period in a three-hour rolling average will commence on the hour. The three-hour average will be compiled from the three most recent one-hour periods. Each one-hour period in a twenty-four-hour average for ammonia slip will commence on the hour. The twenty-four-hour average will be calculated starting and ending at twelve-midnight. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
33. Daily emissions will be compiled for a twenty-four period starting and ending at twelve-midnight. Each calendar month in a twelve-consecutive-month rolling emissions will commence at the beginning of the first day of the month. The twelve-consecutive-month rolling emissions total to determine compliance with annual emissions will be compiled from the twelve most recent calendar months. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
34. Ammonia slip limit shall be measured using the following calculation procedure: ammonia slip ppmv @ 15% O<sub>2</sub> = ((a-(bxc/1,000,000)) x 1,000,000 / b) x d, where a = ammonia injection rate(lb/hr)/17(lb/lb. mol), b = dry exhaust gas flow rate (lb/hr)/(29(lb/lb. mol)), c = change in measured NO<sub>x</sub> concentration ppmv at 15% O<sub>2</sub> across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. Alternatively, permittee may utilize a continuous in-stack ammonia monitor, acceptable to the District, to monitor compliance. At least 60 days prior to using a NH<sub>3</sub> CEM, the permittee must submit a monitoring plan for District review and approval. [District Rule 4102] Federally Enforceable Through Title V Permit
35. Short term emission limits (lb/hr and ppmv @ 15% O<sub>2</sub>) shall be measured annually by District witnessed in-situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NO<sub>x</sub>: ppmvd @ 15% O<sub>2</sub> and lb/hr, CO: ppmvd @ 15% O<sub>2</sub> and lb/hr, VOC: ppmvd @ 15% O<sub>2</sub> and lb/hr, PM<sub>10</sub>: lb/hr, and ammonia: ppmvd @ 15% O<sub>2</sub>. Sample collection to demonstrate compliance with ammonia emission limit shall be based on three consecutive test runs of thirty minutes each. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
36. Startup NO<sub>x</sub>, CO, and VOC mass emission limits shall be measured for one of the CTGs (S-3746-1, or -2) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
37. The District and the EPA must be notified 30 days prior to any source test, and a source test plan must be submitted for approval 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
38. The following test methods shall be used PM<sub>10</sub>: EPA method 5 (front half and back half) or 201A, NO<sub>x</sub>: EPA Method 7E or 20, CO: EPA method 10 or 10B, O<sub>2</sub>: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246 or ASTM D6228. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081, 4001, 4703, 6.4 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
39. {2272} Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NO<sub>x</sub>, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O<sub>2</sub>, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit
40. The permittee shall maintain hourly records of NO<sub>x</sub>, CO, and ammonia emission concentrations (ppmv @ 15% O<sub>2</sub>), and hourly, daily, and twelve month rolling average records of NO<sub>x</sub> and CO emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
41. The permittee shall maintain records of SO<sub>x</sub> lb/hr, lb/day, and lb/twelve month rolling average emission. SO<sub>x</sub> emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District NSR Rule] Federally Enforceable Through Title V Permit
42. {2251} The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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43. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d), District NSR Rule, District Rule 1080, 7.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
44. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
45. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, the type and quantity of fuel used, and duration of each start-up and each shutdown time period. [District Rule 4703, 6.2.6 & 6.2.7] Federally Enforceable Through Title V Permit
46. All records required to be maintained by this permit shall be maintained for a period of five years and shall be made readily available for District inspection upon request. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
47. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75. [40 CFR Part 75] Federally Enforceable Through Title V Permit
48. The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR Part 75] Federally Enforceable Through Title V Permit
49. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR Part 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR Part 73] Federally Enforceable Through Title V Permit
50. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR Part 77] Federally Enforceable Through Title V Permit
51. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR Part 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
52. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR Part 72] Federally Enforceable Through Title V Permit
53. An allowance shall not be deducted in order to comply with the requirements under 40 CFR Part 73, prior to the calendar year for which the allowance was allocated. [40 CFR Part 73] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR Part 72.7 and Part 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR Part 72] Federally Enforceable Through Title V Permit
55. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR Part 72] Federally Enforceable Through Title V Permit
56. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR Part 72] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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57. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77. [40 CFR Part 77] Federally Enforceable Through Title V Permit
58. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR Part 77. [40 CFR Part 77] Federally Enforceable Through Title V Permit
59. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR Part 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR Part 72] Federally Enforceable Through Title V Permit
60. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR Part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
61. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 75 Subpart I. [40 CFR Part 75] Federally Enforceable Through Title V Permit
62. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Kern) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a), (a)(1), (a)(2), (b), and (f), 60.333 (a) and (b); 60.334(a), (b)(2), (c)(1), (c)(2), and (c)(3), and 60.335(b), (c)(2), (c)(3), and (d); District Rule 4703 (as amended 09/20/07), Sections 5.1.2, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
64. {2282} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# **ATTACHMENT B**

Application

# San Joaquin Valley Air Pollution Control District

www.valleyair.org

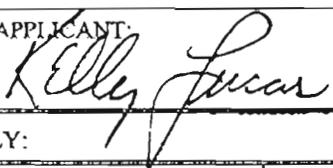
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JUN 21 2010

## Permit Application For:

Permits Srvc  
SJVAPCD

- AUTHORITY TO CONSTRUCT (ATC) - New Emission Unit
- AUTHORITY TO CONSTRUCT (ATC) - Modification Of Emission Unit With Valid PTO/Valid ATC
- AUTHORITY TO CONSTRUCT (ATC) - Renewal of Valid Authority to Construct
- PERMIT TO OPERATE (PTO) - Existing Emission Unit Now Requiring a Permit to Operate

1. PERMIT TO BE ISSUED TO: Sunrise Power Company, LLC.	
2. MAILING ADDRESS: STREET/P.O. BOX: <u>P.O. Box #1617</u> CITY: <u>Bakersfield</u> STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>93380-1617</u>	
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: <u>12857 Sunrise Power Road</u> CITY: <u>Fellows</u> <u>East</u> /4 SECTION <u>23</u> TOWNSHIP <u>11</u> RANGE <u>22</u>	WITHIN 1,000 FT OF A SCHOOL? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO S.I.C. CODE(S) OF FACILITY (If known): 4911
4. GENERAL NATURE OF BUSINESS: <u>Generation of electricity</u>	INSTALL DATE:
5. TITLE V PERMIT HOLDERS ONLY: Do you request a COC (EPA Review) prior to receiving your ATC (If yes, please complete and attach a Compliance Certification form (TVFORM-009)? <span style="float: right;"><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</span>	
6. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary) Sunrise is requesting to remove conditions #20 and #26 of PTO S-3746-1-7 to reflect the changes to Rule 4703 that no longer reference or specify a time period for thermal stabilization.	
7. PERMIT REVIEW PERIOD: Do you request a three- or ten-day period to review the draft Authority to Construct permit? Please note that checking "YES" will delay issuance of your final permit by a corresponding number of working days. See instructions for more information on this review process. <span style="float: right;"><input type="checkbox"/> 3-day review <input checked="" type="checkbox"/> 10-day review <input type="checkbox"/> No review requested</span>	
8. HAVE YOU EVER APPLIED FOR AN ATC OR PTO IN THE PAST? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If yes, ATC/PTO #: <u>S-3746</u>	<b>Optional Section</b> 11. DO YOU WANT TO RECEIVE INFORMATION ABOUT EITHER OF THE FOLLOWING VOLUNTARY PROGRAMS?  <input type="checkbox"/> "HEALTHY AIR LIVING (HAL) BUSINESS PARTNER"   <input type="checkbox"/> "INSPECT" 
9. IS THIS APPLICATION FOR THE CONSTRUCTION OF A NEW FACILITY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes" is checked, please complete the CEQA Information form)	
10. IS THIS APPLICATION SUBMITTED AS THE RESULT OF EITHER A NOTICE OF VIOLATION OR A NOTICE TO COMPLY? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If yes, NOV/NTC #: <u>5005037</u>	
12. TYPE OR PRINT NAME OF APPLICANT: <u>Kelly S. Lucas</u>	TITLE OF APPLICANT: <u>EXECUTIVE DIRECTOR</u>
13. SIGNATURE OF APPLICANT:  DATE: <u>6/21/2010</u>	PHONE #: (661 ) 615-4630 FAX #: (661 ) 615-4610 E-MAIL: <u>rwhiestand@sycamore.com</u>

FOR APCD USE ONLY:

DATE STAMP:	FILING FEE RECEIVED: <u>\$</u> CHECK #: _____
	DATE PAID: _____
	PROJECT # <u>S-1103318</u> FACILITY ID: <u>S-3746</u>

Received

JUN 23 2010

Permits Svc  
SJVAPCD

San Joaquin Valley  
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION
- MINOR PERMIT MODIFICATION
- ADMINISTRATIVE AMENDMENT

COMPANY NAME: Sunrise Power Company, LLC	FACILITY ID: <b>S</b> 3746
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input checked="" type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Sunrise Power Company, LLC	
3. Agent to the Owner: Kelly S. Lucas	

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

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

Kelly Lucas  
Signature of Responsible Official

6/21/2010  
Date

Kelly Lucas  
Name of Responsible Official (please print)

EXECUTIVE DIRECTOR  
Title of Responsible Official (please print)

# **ATTACHMENT C**

## **Emissions Increases**

	SSIPE (lb/yr)				
	NOx	VOC	CO	SOx	PM10
S-3746-1-8	0	0	0	0	0
S-3746-2-8	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

# **ATTACHMENT D**

**Previous Title V Operating Permit No.  
(S-3746-1-7 & -2-7)**

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3746-1-7

EXPIRATION DATE: 06/30/2013

SECTION: SW23 TOWNSHIP: 31S RANGE: 22E

## EQUIPMENT DESCRIPTION:

160 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF GENERAL ELECTRIC FRAME 7FA, NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH DRY LOW-NOX COMBUSTORS, HEAT RECOVERY STEAM GENERATOR WITH DUCT FIRING, SCR, AND OXIDATION CATALYSTS (585 MW TOTAL PLANT NOMINAL RATING)

## PERMIT UNIT REQUIREMENTS

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1. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators to maintain visible emissions from lube oil vents no greater than 5% opacity, except for three minutes in any hour. [District NSR Rule] Federally Enforceable Through Title V Permit
2. CTG shall be equipped with continuously recording fuel gas flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
3. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NO<sub>x</sub>, CO, and O<sub>2</sub>. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rule 1080, 6.5, District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
4. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NO<sub>x</sub> concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours). The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The facility shall maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
7. The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
9. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
11. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
13. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA (Attn: AIR-5). The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred; And reports on opacity monitors giving the number of three minute periods during which the average opacity exceeded the standard for each hour of operation. The averaged may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced instantaneous opacity measurements per minute. Any time exempted shall be considered before determining the excess averages of opacity. [District Rule 1080, 8.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
14. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
17. CTG shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.25 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District NSR Rule, PSD SJ 01-01] Federally Enforceable Through Title V Permit
18. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 0.25 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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19. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); County Rule 407 (Kern)] Federally Enforceable Through Title V Permit
20. Thermal Stabilization Period shall be defined as the start up or shut down time during which the exhaust gas is not within the normal operating range, not to exceed two hours. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit
21. Startup is defined as the period beginning with turbine initial firing. Shutdown is defined by the period beginning with initiation of turbine shutdown sequence and ending with cessation of firing of the gas turbine engine. Startup and shutdown durations shall not exceed 60 minutes for a hot startup, 128 minutes for a warm startup, and 230 minutes for a cold startup, and one hour for a shutdown, per occurrence. [District NSR Rule, District Rule 4001, PSD SJ 01-01] Federally Enforceable Through Title V Permit
22. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a) and (b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
23. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
24. Ammonia shall be injected when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F. Permittee shall monitor and record catalyst temperature during periods of startup. [District NSR Rule] Federally Enforceable Through Title V Permit
25. During startup or shutdown of any gas turbine engine(s), combined emissions from both gas turbine engines (S-3746-1 and -2) heat recovery steam generator exhausts shall not exceed any of the following: NOx (as NO2) - 700 lb and CO - 1,580 lb, in any one hour. If any CTG is in either startup or shutdown mode during any portion of a clock hour, the facility will be subject to the aforementioned limits during that clock hour. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Excluding periods of thermal stabilization, CTG exhaust emissions shall not exceed any of the following: NOx (as NO2) - 10.3 ppmv @ 15% O2 and CO - 25 ppmv @ 15% O2. Effective 4/30/04, CTG exhaust emissions shall not exceed any of the following: NOx (as NO2) - 5 ppmv @ 15% O2 and CO - 25 ppmv @ 15% O2. Compliance with the aforementioned limits will commence on the clock hour following the 120th minute after initial firing. These limits are three-hour rolling averages. [District Rule 4703] Federally Enforceable Through Title V Permit
27. Emission rates from each CTG, except during startup and/or shutdown, shall not exceed any of the following: PM10 - 17.8 lb/hr, SOx (as SO2) - 1.55 lb/hr, NOx (as NO2) - 15.96 lb/hr and 2.0 ppmvd @ 15% O2, VOC - 5.51 lb/hr and 2.0 ppmvd @ 15% O2, CO - 19.22 lb/hr and 4 ppmvd @ 15% O2, ammonia - 10 ppmvd @ 15%O2. NOx (as NO2) ppmv and lb/hr limits are a one-hour rolling average. Ammonia emission limit is a twenty-four hour rolling average. All other ppmvd and lb/hr limits are three-hour rolling averages. If a CTG is in either startup or shutdown mode during any portion of a clock hour, that unit will not be subject to the aforementioned limits during that clock hour. [District NSR Rule, and District Rules 4001, 4703, 5.1.2.1 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
28. Emission rates from each CTG shall not exceed any of the following: PM10 - 461.2 lb/day, SOx (as SO2) - 37.2 lb/day, NOx (as NO2) - 1,170.9 lb/day, VOC - 220.6 lb/day, and CO - 2,443.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Emission rates from both CTGs (S-3746-1 and -2) shall not exceed any of the following: PM10 - 922.3 lb/day, SOx (as SO2) - 74.4 lb/day, NOx (as NO2) - 2,341.8 lb/day, VOC - 441.2 lb/day, and CO - 4,886.8 lb/day. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
30. Annual emissions from both CTGs calculated on a twelve consecutive month rolling basis shall not exceed any of the following: PM10 - 269,651 lb/year, SOx (as SO2) - 24,259 lb/year, NOx (as NO2) - 311,337 lb/year, VOC - 87,674 lb/year, and CO - 507,978 lb/year. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

31. Each one-hour period in a one-hour rolling average will commence on the hour. Each one-hour period in a three-hour rolling average will commence on the hour. The three-hour average will be compiled from the three most recent one-hour periods. Each one-hour period in a twenty-four-hour average for ammonia slip will commence on the hour. The twenty-four-hour average will be calculated starting and ending at twelve-midnight. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
32. Daily emissions will be compiled for a twenty-four period starting and ending at twelve-midnight. Each calendar month in a twelve-consecutive-month rolling emissions will commence at the beginning of the first day of the month. The twelve-consecutive-month rolling emissions total to determine compliance with annual emissions will be compiled from the twelve most recent calendar months. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
33. Ammonia slip limit shall be measured using the following calculation procedure: ammonia slip ppmv @ 15% O<sub>2</sub> =  $((a-(bxc/1,000,000)) \times 1,000,000 / b) \times d$ , where a = ammonia injection rate(lb/hr)/17(lb/lb. mol), b = dry exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NO<sub>x</sub> concentration ppmv at 15% O<sub>2</sub> across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. Alternatively, permittee may utilize a continuous in-stack ammonia monitor, acceptable to the District, to monitor compliance. At least 60 days prior to using a NH<sub>3</sub> CEM, the permittee must submit a monitoring plan for District review and approval. [District Rule 4102] Federally Enforceable Through Title V Permit
34. Short term emission limits (lb/hr and ppmv @ 15% O<sub>2</sub>) shall be measured annually by District witnessed in-situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NO<sub>x</sub>: ppmvd @ 15% O<sub>2</sub> and lb/hr, CO: ppmvd @ 15% O<sub>2</sub> and lb/hr, VOC: ppmvd @ 15% O<sub>2</sub> and lb/hr, PM<sub>10</sub>: lb/hr, and ammonia: ppmvd @ 15% O<sub>2</sub>. Sample collection to demonstrate compliance with ammonia emission limit shall be based on three consecutive test runs of thirty minutes each. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
35. Startup NO<sub>x</sub>, CO, and VOC mass emission limits shall be measured for one of the CTGs (S-3746-1, or -2) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
36. The District and the EPA must be notified 30 days prior to any source test, and a source test plan must be submitted for approval 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
37. The following test methods shall be used PM<sub>10</sub>: EPA method 5 (front half and back half) or 201A, NO<sub>x</sub>: EPA Method 7E or 20, CO: EPA method 10 or 10B, O<sub>2</sub>: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246 or ASTM D6228. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081, 4001, 4703 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
38. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NO<sub>x</sub>, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O<sub>2</sub>, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit
39. The permittee shall maintain hourly records of NO<sub>x</sub>, CO, and ammonia emission concentrations (ppmv @ 15% O<sub>2</sub>), and hourly, daily, and twelve month rolling average records of NO<sub>x</sub> and CO emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
40. The permittee shall maintain records of SO<sub>x</sub> lb/hr, lb/day, and lb/twelve month rolling average emission. SO<sub>x</sub> emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District NSR Rule] Federally Enforceable Through Title V Permit
41. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

42. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d), District NSR Rule, District Rules 4703 and 1080, 7.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
43. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
44. All records required to be maintained by this permit shall be maintained for a period of five years and shall be made readily available for District inspection upon request. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
45. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75. [40 CFR Part 75] Federally Enforceable Through Title V Permit
46. The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR Part 75] Federally Enforceable Through Title V Permit
47. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR Part 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR Part 73] Federally Enforceable Through Title V Permit
48. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR Part 77] Federally Enforceable Through Title V Permit
49. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR Part 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
50. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR Part 72] Federally Enforceable Through Title V Permit
51. An allowance shall not be deducted in order to comply with the requirements under 40 CFR Part 73, prior to the calendar year for which the allowance was allocated. [40 CFR Part 73] Federally Enforceable Through Title V Permit
52. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR Part 72.7 and Part 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR Part 72] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR Part 72] Federally Enforceable Through Title V Permit
54. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR Part 72] Federally Enforceable Through Title V Permit
55. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77. [40 CFR Part 77] 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.

56. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR Part 77. [40 CFR Part 77] Federally Enforceable Through Title V Permit
57. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR Part 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR Part 72] Federally Enforceable Through Title V Permit
58. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR Part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
59. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 75 Subpart I. [40 CFR Part 75] Federally Enforceable Through Title V Permit
60. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Kern) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
61. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a), (a)(1), (a)(2), (b), and (f), 60.333 (a) and (b); 60.334(a), (b)(2), (c)(1), (c)(2), and (c)(3), and 60.335(b), (c)(2), (c)(3), and (d); District Rule 4703 (as amended 09/20/07), Sections 5.1.1, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
62. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** S-3746-2-7

**EXPIRATION DATE:** 06/30/2013

**SECTION:** SW23 **TOWNSHIP:** 31S **RANGE:** 22E

## **EQUIPMENT DESCRIPTION:**

160 MW NOMINALLY RATED COMBINED-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF GENERAL ELECTRIC FRAME 7FA, NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR WITH DRY LOW-NOX COMBUSTORS, HEAT RECOVERY STEAM GENERATOR WITH DUCT FIRING, SCR, AND OXIDATION CATALYSTS (585 MW TOTAL PLANT NOMINAL RATING)

## **PERMIT UNIT REQUIREMENTS**

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1. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators to maintain visible emissions from lube oil vents no greater than 5% opacity, except for three minutes in any hour. [District NSR Rule] Federally Enforceable Through Title V Permit
2. CTG shall be equipped with continuously recording fuel gas flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit
3. CTG exhaust after the SCR unit shall be equipped with continuously recording emissions monitors dedicated to this unit for NO<sub>x</sub>, CO, and O<sub>2</sub>. Continuous emissions monitors shall meet the requirements of 40 CFR Part 60, Appendices B and F, and 40 CFR Part 75, and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. If relative accuracy of CEM(s) cannot be demonstrated during startup conditions, CEM results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits. [District Rule 1080, 6.5, District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
4. CTG shall be equipped with a continuously recording emission monitor preceding the SCR module measuring NO<sub>x</sub> concentration for the purposes of calculating ammonia slip. Permittee shall check, record, and quantify the calibration drift (CD) at two concentration values at least once daily (approximately 24 hours). The calibration shall be adjusted whenever the daily zero or high-level CD exceeds 5%. If either the zero or high-level CD exceeds 5% for five consecutive daily periods, the analyzer shall be deemed out-of-control. If either the zero or high-level CD exceeds 10% during any CD check, analyzer shall be deemed out-of-control. If the analyzer is out-of-control, the permittee shall take appropriate corrective action and then repeat the CD check. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The facility shall maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
7. The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
9. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
10. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
11. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
13. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO and EPA (Attn: AIR-5). The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred; And reports on opacity monitors giving the number of three minute periods during which the average opacity exceeded the standard for each hour of operation. The averaged may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced instantaneous opacity measurements per minute. Any time exempted shall be considered before determining the excess averages of opacity. [District Rule 1080, 8.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
14. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
17. CTG shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.25 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District NSR Rule, PSD SJ 01-01] Federally Enforceable Through Title V Permit
18. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 0.25 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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19. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); County Rule 407 (Kern)] Federally Enforceable Through Title V Permit
20. Thermal Stabilization Period shall be defined as the start up or shut down time during which the exhaust gas is not within the normal operating range, not to exceed two hours. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit
21. Startup is defined as the period beginning with turbine initial firing. Shutdown is defined by the period beginning with initiation of turbine shutdown sequence and ending with cessation of firing of the gas turbine engine. Startup and shutdown durations shall not exceed 60 minutes for a hot startup, 128 minutes for a warm startup, and 230 minutes for a cold startup, and one hour for a shutdown, per occurrence. [District NSR Rule, District Rule 4001, PSD SJ 01-01] Federally Enforceable Through Title V Permit
22. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a) and (b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
23. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
24. Ammonia shall be injected when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F. Permittee shall monitor and record catalyst temperature during periods of startup. [District NSR Rule] Federally Enforceable Through Title V Permit
25. During startup or shutdown of any gas turbine engine(s), combined emissions from both gas turbine engines (S-3746-1 and -2) heat recovery steam generator exhausts shall not exceed any of the following: NOx (as NO<sub>2</sub>) - 700 lb and CO - 1,580 lb, in any one hour. If any CTG is in either startup or shutdown mode during any portion of a clock hour, the facility will be subject to the aforementioned limits during that clock hour. [District NSR Rule] Federally Enforceable Through Title V Permit
26. Excluding periods of thermal stabilization, CTG exhaust emissions shall not exceed any of the following: NOx (as NO<sub>2</sub>) - 10.3 ppmv @ 15% O<sub>2</sub> and CO - 25 ppmv @ 15% O<sub>2</sub>. Effective 4/30/04, CTG exhaust emissions shall not exceed any of the following: NOx (as NO<sub>2</sub>) - 5 ppmv @ 15% O<sub>2</sub> and CO - 25 ppmv @ 15% O<sub>2</sub>. Compliance with the aforementioned limits will commence on the clock hour following the 120th minute after initial firing. These limits are three-hour rolling averages. [District Rule 4703] Federally Enforceable Through Title V Permit
27. Emission rates from each CTG, except during startup and/or shutdown, shall not exceed any of the following: PM<sub>10</sub> - 17.8 lb/hr, SOx (as SO<sub>2</sub>) - 1.55 lb/hr, NOx (as NO<sub>2</sub>) - 15.96 lb/hr and 2.0 ppmvd @ 15% O<sub>2</sub>, VOC - 5.51 lb/hr and 2.0 ppmvd @ 15% O<sub>2</sub>, CO - 19.22 lb/hr and 4 ppmvd @ 15% O<sub>2</sub>, ammonia - 10 ppmvd @ 15% O<sub>2</sub>. NOx (as NO<sub>2</sub>) ppmv and lb/hr limits are a one-hour rolling average. Ammonia emission limit is a twenty-four hour rolling average. All other ppmvd and lb/hr limits are three-hour rolling averages. If a CTG is in either startup or shutdown mode during any portion of a clock hour, that unit will not be subject to the aforementioned limits during that clock hour. [District NSR Rule, and District Rules 4001, 4703, 5.1.2.1 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
28. Emission rates from each CTG shall not exceed any of the following: PM<sub>10</sub> - 461.2 lb/day, SOx (as SO<sub>2</sub>) - 37.2 lb/day, NOx (as NO<sub>2</sub>) - 1,170.9 lb/day, VOC - 220.6 lb/day, and CO - 2,443.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
29. Emission rates from both CTGs (S-3746-1 and -2) shall not exceed any of the following: PM<sub>10</sub> - 922.3 lb/day, SOx (as SO<sub>2</sub>) - 74.4 lb/day, NOx (as NO<sub>2</sub>) - 2,341.8 lb/day, VOC - 441.2 lb/day, and CO - 4,886.8 lb/day. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
30. Annual emissions from both CTGs calculated on a twelve consecutive month rolling basis shall not exceed any of the following: PM<sub>10</sub> - 269,651 lb/year, SOx (as SO<sub>2</sub>) - 24,259 lb/year, NOx (as NO<sub>2</sub>) - 311,337 lb/year, VOC - 87,674 lb/year, and CO - 507,978 lb/year. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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31. Each one-hour period in a one-hour rolling average will commence on the hour. Each one-hour period in a three-hour rolling average will commence on the hour. The three-hour average will be compiled from the three most recent one-hour periods. Each one-hour period in a twenty-four-hour average for ammonia slip will commence on the hour. The twenty-four-hour average will be calculated starting and ending at twelve-midnight. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
32. Daily emissions will be compiled for a twenty-four period starting and ending at twelve-midnight. Each calendar month in a twelve-consecutive-month rolling emissions will commence at the beginning of the first day of the month. The twelve-consecutive-month rolling emissions total to determine compliance with annual emissions will be compiled from the twelve most recent calendar months. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
33. Ammonia slip limit shall be measured using the following calculation procedure: ammonia slip ppmv @ 15% O<sub>2</sub> =  $((a-(bxc/1,000,000)) \times 1,000,000 / b) \times d$ , where a = ammonia injection rate(lb/hr)/17(lb/lb. mol), b = dry exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NO<sub>x</sub> concentration ppmv at 15% O<sub>2</sub> across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. Alternatively, permittee may utilize a continuous in-stack ammonia monitor, acceptable to the District, to monitor compliance. At least 60 days prior to using a NH<sub>3</sub> CEM, the permittee must submit a monitoring plan for District review and approval. [District Rule 4102] Federally Enforceable Through Title V Permit
34. Short term emission limits (lb/hr and ppmv @ 15% O<sub>2</sub>) shall be measured annually by District witnessed in-situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NO<sub>x</sub>: ppmvd @ 15% O<sub>2</sub> and lb/hr, CO: ppmvd @ 15% O<sub>2</sub> and lb/hr, VOC: ppmvd @ 15% O<sub>2</sub> and lb/hr, PM<sub>10</sub>: lb/hr, and ammonia: ppmvd @ 15% O<sub>2</sub>. Sample collection to demonstrate compliance with ammonia emission limit shall be based on three consecutive test runs of thirty minutes each. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
35. Startup NO<sub>x</sub>, CO, and VOC mass emission limits shall be measured for one of the CTGs (S-3746-1, or -2) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
36. The District and the EPA must be notified 30 days prior to any source test, and a source test plan must be submitted for approval 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
37. The following test methods shall be used PM<sub>10</sub>: EPA method 5 (front half and back half) or 201A, NO<sub>x</sub>: EPA Method 7E or 20, CO: EPA method 10 or 10B, O<sub>2</sub>: EPA Method 3, 3A, or 20, VOC: EPA method 18 or 25, ammonia: BAAQMD ST-1B, and fuel gas sulfur content: ASTM D3246 or ASTM D6228. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081, 4001, 4703 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
38. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either EPA Method 7E or EPA Method 20 for NO<sub>x</sub>, EPA Test Methods 10 or 10B for CO, or EPA Methods 3, 3A, or 20 for O<sub>2</sub>, or, if continuous emission monitors are used, all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit
39. The permittee shall maintain hourly records of NO<sub>x</sub>, CO, and ammonia emission concentrations (ppmv @ 15% O<sub>2</sub>), and hourly, daily, and twelve month rolling average records of NO<sub>x</sub> and CO emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
40. The permittee shall maintain records of SO<sub>x</sub> lb/hr, lb/day, and lb/twelve month rolling average emission. SO<sub>x</sub> emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District NSR Rule] Federally Enforceable Through Title V Permit
41. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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42. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.8(d), District NSR Rule, District Rules 4703 and 1080, 7.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
43. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0 and PSD SJ 01-01] Federally Enforceable Through Title V Permit
44. All records required to be maintained by this permit shall be maintained for a period of five years and shall be made readily available for District inspection upon request. [District NSR Rule and PSD SJ 01-01] Federally Enforceable Through Title V Permit
45. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75. [40 CFR Part 75] Federally Enforceable Through Title V Permit
46. The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR Part 75] Federally Enforceable Through Title V Permit
47. The owners and operators of each source and each affected unit at the source shall: (i) hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR Part 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR Part 73] Federally Enforceable Through Title V Permit
48. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR Part 77] Federally Enforceable Through Title V Permit
49. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR Part 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
50. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR Part 72] Federally Enforceable Through Title V Permit
51. An allowance shall not be deducted in order to comply with the requirements under 40 CFR Part 73, prior to the calendar year for which the allowance was allocated. [40 CFR Part 73] Federally Enforceable Through Title V Permit
52. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR Part 72.7 and Part 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR Part 72] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR Part 72] Federally Enforceable Through Title V Permit
54. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR Part 72] Federally Enforceable Through Title V Permit
55. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77. [40 CFR Part 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
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56. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) comply with the terms of an approved offset plan, as required by 40 CFR Part 77. [40 CFR Part 77] Federally Enforceable Through Title V Permit
57. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR Part 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR Part 72] Federally Enforceable Through Title V Permit
58. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR Part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR Part 72, 40 CFR Part 75] Federally Enforceable Through Title V Permit
59. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 75 Subpart I. [40 CFR Part 75] Federally Enforceable Through Title V Permit
60. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Kern) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
61. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a), (a)(1), (a)(2), (b), and (f), 60.333 (a) and (b); 60.334(a), (b)(2), (c)(1), (c)(2), and (c)(3), and 60.335(b), (c)(2), (c)(3), and (d); District Rule 4703 (as amended 9/20/07), Sections 5.1.1, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
62. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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