San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JAN 28 2013

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

Re: Final - Authority to Construct / Certificate of Conformity (Minor Mod)
Project # 1124366

Dear Mr. Rios:

The Air Pollution Control Officer has issued Authorities to Construct (S-3412-1-18, '-2-19, '-3-19, and '-4-14) with Certificates of Conformity to La Paloma Generating Co LLC. The project authorizes installation of inlet air foggers for enhancement of air mass cooling.

Enclosed are copies of the Authorities to Construct. The application and proposal were sent to US EPA Region IX on January 9, 2013. No comments were received following the District's preliminary decision on this project.

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

Sincerely,

for David Warner
Director of Permit Services

Enclosures
rue

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JAN 28 2013

Mr. Jim Maiz
La Paloma Generating Co LLC
PO Box 175
McKittrick, CA 93251

Re: Final - Authority to Construct / Certificate of Conformity (Minor Mod)
Project # 1124366

Dear Mr. Maiz:

The Air Pollution Control Officer has issued Authorities to Construct (S-3412-1-18, '-2-19, '-3-19, and '-4-14) with Certificates of Conformity to La Paloma Generating Co LLC. The project authorizes installation of inlet air foggers for enhancement of air mass cooling.

Enclosed are the Authorities to Construct and invoice. The application and proposal were sent to US EPA Region IX on January 9, 2013. No comments were received following the District's preliminary decision on this project.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

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

Sincerely,

for David Warner
Director of Permit Services

Enclosures
rue

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: S-3412-1-18 **ISSUANCE DATE:** 01/24/2013

LEGAL OWNER OR OPERATOR: LA PALOMA GENERATING CO LLC
MAILING ADDRESS: PO BOX 175
MCKITTRICK, CA 93251

LOCATION: 1760 W SKYLINE ROAD
MCKITTRICK, CA 93251

SECTION: NE27 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF ABB GT-24 NATURAL GAS FIRED COMBINED CYCLE GAS TURBINE ENGINE/ELECTRICAL GENERATOR #1 WITH DRY LOW NOX COMBUSTORS, STEAM POWER AUGMENTATION, SELECTIVE CATALYTIC REDUCTION, STEAM TURBINE, AND ELECTRICAL GENERATOR (262 MW NOMINAL RATING):INSTALL AIR INLET FOGGER

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-3412-1-18 : Jan 24 2013 4:22PM -- EDGEHILR : Joint Inspection NOT Required

5. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NOx, CO and O2 downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit

6. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit

10. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

16. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

19. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit

20. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

22. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 4,790.0 lb/day, PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, VOC:139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM10: 96,360 lb/year, SOx (as SO2): 30,517 lb/year, NOx (as NO2): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O2 on a twenty four hour rolling average. [District Rule 4102]

26. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((a-(bxc/1,000,000)) x 1,0 00,000 / 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 NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]

27. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O2) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NOx: ppmvd @ 15% O2 and lb/hr, CO: ppmvd @ 15% O2 and lb/hr, VOC: ppmvd @ 15% O2 and lb/hr, PM10: lb/hr, and ammonia: ppmvd @ 15% O2. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Cold start NOx, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) 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

CONDITIONS CONTINUE ON NEXT PAGE

29. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit

30. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Title V Annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit

32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. 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] Federally Enforceable Through Title V Permit

33. The following test methods shall be used NOx: EPA Method 7E or 20, CO: EPA method 10 or 10B, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM10: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit

34. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]

35. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O2) [District Rule 4102]

36. The permittee shall maintain hourly records of NOx, and CO emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit

37. The permittee shall maintain records of SOx lb/hr, lb/day, and lb/twelve month rolling average emission. SOx emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

38. 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, 6.4] Federally Enforceable Through Title V Permit

39. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit

40. 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

CONDITIONS CONTINUE ON NEXT PAGE

41. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include 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. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

42. 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. Successive quarterly audits shall occur no closer than two months. 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, 6.2] 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] Federally Enforceable Through Title V Permit

44. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O2 (150 ppmv @ 15% O2) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit

45. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit

46. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

47. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NOx (as NO2) @ 15% O2 or 200 ppmv CO @ 15% O2. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit

48. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

49. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, 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), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

50. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

51. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NOx emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

52. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NOx concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

53. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

54. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O2, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit

55. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NOx daily limits may be exceeded during recommissioning periods: NOx (as NO2): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO2: 91.4 lb/day ,15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit

56. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit

57. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit

58. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit

59. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit

60. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit

61. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NOx per hr; 4,790.0 lbs-NOx per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NOx per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

62. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NOx and CO emitted; c. Total emissions of NOx and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit

63. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit

64. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NOx and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit

65. Performance Tests: Performance tests for the emissions of CO and NOx shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G] Federally Enforceable Through Title V Permit

66. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit

67. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit

68. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

69. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NOx, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit

70. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit

71. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit

72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

74. Compliance with permit conditions in the Title V permit for this unit 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

75. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

76. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

77. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer and shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]

78. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]

79. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]

80. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

81. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]

82. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]

83. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]

84. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]

85. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]

86. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: S-3412-2-19 **ISSUANCE DATE:** 01/24/2013

LEGAL OWNER OR OPERATOR: LA PALOMA GENERATING CO LLC
MAILING ADDRESS: PO BOX 175
MCKITTRICK, CA 93251

LOCATION: 1760 W SKYLINE ROAD
MCKITTRICK, CA 93251

SECTION: NE27 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF ABB GT-24 NATURAL GAS FIRED COMBINED CYCLE GAS TURBINE ENGINE/ELECTRICAL GENERATOR #2 WITH DRY LOW NOX COMBUSTORS, STEAM POWER AUGMENTATION, SELECTIVE CATALYTIC REDUCTION, STEAM TURBINE AND ELECTRICAL GENERATOR (262 MW NOMINAL RATING): INSTALL AIR INLET FOGGER

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-3412-2-19 : Jan 24 2013 4:22PM – EDGEHILR : Joint Inspection NOT Required

5. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NOx, CO and O2 downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit

6. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit

10. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

16. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

19. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit

20. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

22. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 4,790.0 lb/day, PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, VOC:139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM10: 96,360 lb/year, SOx (as SO2): 30,517 lb/year, NOx (as NO2): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O2 on a twenty four hour rolling average. [District Rule 4102]

26. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((a-(bxc/1,000,000)) x 1,0 00,000 / 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 NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]

27. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O2) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NOx: ppmvd @ 15% O2 and lb/hr, CO: ppmvd @ 15% O2 and lb/hr, VOC: ppmvd @ 15% O2 and lb/hr, PM10: lb/hr, and ammonia: ppmvd @ 15% O2. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Cold start NOx, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) 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

CONDITIONS CONTINUE ON NEXT PAGE

29. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit

30. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Tittle V annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit

32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. 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] Federally Enforceable Through Title V Permit

33. The following test methods shall be used NOx: EPA Method 7E or 20, CO: EPA method 10 or 10B, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM10: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit

34. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]

35. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O2) [District Rule 4102]

36. The permittee shall maintain hourly records of NOx, and CO emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit

37. The permittee shall maintain records of SOx lb/hr, lb/day, and lb/twelve month rolling average emission. SOx emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

38. 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, 6.4] Federally Enforceable Through Title V Permit

39. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit

40. 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

CONDITIONS CONTINUE ON NEXT PAGE

41. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include 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. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

42. 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. Successive quarterly audits shall occur no closer than two months. 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, 6.2] 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] Federally Enforceable Through Title V Permit

44. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O2 (150 ppmv @ 15% O2) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit

45. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit

46. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

47. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NOx (as NO2) @ 15% O2 or 200 ppmv CO @ 15% O2. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit

48. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

49. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, 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), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

50. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

51. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NOx emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

52. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NOx concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

53. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

54. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O2, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit

55. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NOx daily limits may be exceeded during recommissioning periods: NOx (as NO2): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO2: 91.4 lb/day ,15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit

56. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit

57. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit

58. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit

59. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit

60. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit

61. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NOx per hr; 4,790.0 lbs-NOx per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NOx per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

62. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NOx and CO emitted; c. Total emissions of NOx and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit

63. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit

64. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NOx and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit

65. Performance Tests: Performance tests for the emissions of CO and NOx shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G] Federally Enforceable Through Title V Permit

66. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit

67. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit

68. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

69. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NOx, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit

70. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit

71. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit

72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

74. Compliance with permit conditions in the Title V permit for this unit 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

75. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

76. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

77. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer and shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]

78. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]

79. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]

80. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

81. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]

82. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]

83. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]

84. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]

85. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]

86. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: S-3412-3-19 **ISSUANCE DATE:** 01/24/2013

LEGAL OWNER OR OPERATOR: LA PALOMA GENERATING CO LLC
MAILING ADDRESS: PO BOX 175
MCKITTRICK, CA 93251

LOCATION: 1760 W SKYLINE ROAD
MCKITTRICK, CA 93251

SECTION: NE27 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF ABB GT-24 NATURAL GAS FIRED COMBINED CYCLE GAS TURBINE ENGINE/ELECTRICAL GENERATOR #3 WITH DRY LOW NOX COMBUSTORS, STEAM POWER AUGMENTATION, SELECTIVE CATALYTIC REDUCTION, STEAM TURBINE, AND ELECTRICAL GENERATOR (262 MW NOMINAL RATING): INSTALL INLET FOGGER

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-3412-3-19 : Jan 24 2013 4:22PM -- EDGEHILR : Joint Inspection NOT Required

5. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NOx, CO and O2 downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit

6. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit

10. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

16. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

19. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit

20. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

22. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 4,790.0 lb/day, PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, VOC:139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM10: 96,360 lb/year, SOx (as SO2): 30,517 lb/year, NOx (as NO2): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O2 on a twenty four hour rolling average. [District Rule 4102]

26. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((a-(bxc/1,000,000)) x 1,0 00,000 / 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 NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]

27. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O2) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NOx: ppmvd @ 15% O2 and lb/hr, CO: ppmvd @ 15% O2 and lb/hr, VOC: ppmvd @ 15% O2 and lb/hr, PM10: lb/hr, and ammonia: ppmvd @ 15% O2. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Cold start NOx, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) 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

CONDITIONS CONTINUE ON NEXT PAGE

29. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit

30. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Tittle V annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit

32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. 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] Federally Enforceable Through Title V Permit

33. The following test methods shall be used NOx: EPA Method 7E or 20, CO: EPA method 10 or 10B, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM10: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit

34. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]

35. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O2) [District Rule 4102]

36. The permittee shall maintain hourly records of NOx, and CO emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit

37. The permittee shall maintain records of SOx lb/hr, lb/day, and lb/twelve month rolling average emission. SOx emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

38. 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, 6.4] Federally Enforceable Through Title V Permit

39. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit

40. 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

CONDITIONS CONTINUE ON NEXT PAGE

41. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include 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. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

42. 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. Successive quarterly audits shall occur no closer than two months. 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, 6.2] 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] Federally Enforceable Through Title V Permit

44. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O2 (150 ppmv @ 15% O2) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit

45. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit

46. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

47. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NOx (as NO2) @ 15% O2 or 200 ppmv CO @ 15% O2. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit

48. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

49. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, 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), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

50. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

51. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NOx emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

52. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NOx concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

53. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

54. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O2, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit

55. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NOx daily limits may be exceeded during recommissioning periods: NOx (as NO2): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO2: 91.4 lb/day ,15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit

56. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit

57. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit

58. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit

59. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit

60. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit

61. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NOx per hr; 4,790.0 lbs-NOx per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NOx per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

62. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NOx and CO emitted; c. Total emissions of NOx and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit

63. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit

64. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NOx and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit

65. Performance Tests: Performance tests for the emissions of CO and NOx shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G] Federally Enforceable Through Title V Permit

66. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit

67. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit

68. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

69. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NOx, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit

70. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit

71. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit

72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

74. Compliance with permit conditions in the Title V permit for this unit 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

75. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

76. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

77. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer and shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]

78. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]

79. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]

80. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

81. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]

82. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]

83. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]

84. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]

85. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]

86. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: S-3412-4-14 **ISSUANCE DATE:** 01/24/2013

LEGAL OWNER OR OPERATOR: LA PALOMA GENERATING CO LLC
MAILING ADDRESS: PO BOX 175
MCKITTRICK, CA 93251

LOCATION: 1760 W SKYLINE ROAD
MCKITTRICK, CA 93251

SECTION: NE27 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
MODIFICATION OF ABB GT-24 NATURAL GAS FIRED COMBINED CYCLE GAS TURBINE ENGINE/ELECTRICAL GENERATOR #4 WITH DRY LOW NOX COMBUSTORS, STEAM POWER AUGMENTATION, OXIDATION CATALYST, SELECTIVE CATALYTIC REDUCTION, STEAM TURBINE, AND ELECTRICAL GENERATOR (262 MW NOMINAL RATING): INSTALL AIR INLET FOGGER

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-3412-4-14 : Jan 24 2013 4:22PM -- EDGEHILR : Joint Inspection NOT Required

5. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NOx, CO and O2 downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit

6. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit

10. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

16. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

19. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit

20. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

22. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 4,790.0 lb/day, PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, VOC:139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM10: 96,360 lb/year, SOx (as SO2): 30,517 lb/year, NOx (as NO2): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O2 on a twenty four hour rolling average. [District Rule 4102]

26. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = ((a-(bxc/1,000,000)) x 1,0 00,000 / 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 NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]

27. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O2) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NOx: ppmvd @ 15% O2 and lb/hr, CO: ppmvd @ 15% O2 and lb/hr, VOC: ppmvd @ 15% O2 and lb/hr, PM10: lb/hr, and ammonia: ppmvd @ 15% O2. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Cold start NOx, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) 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

CONDITIONS CONTINUE ON NEXT PAGE

29. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit

30. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Tittle V annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit

32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. 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] Federally Enforceable Through Title V Permit

33. The following test methods shall be used NOx: EPA Method 7E or 20, CO: EPA method 10 or 10B, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM10: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit

34. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]

35. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O2) [District Rule 4102]

36. The permittee shall maintain hourly records of NOx, and CO emission concentrations (ppmv @ 15% O2), and hourly, daily, and twelve month rolling average records of NOx and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit

37. The permittee shall maintain records of SOx lb/hr, lb/day, and lb/twelve month rolling average emission. SOx emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

38. 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, 6.4] Federally Enforceable Through Title V Permit

39. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit

40. 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

CONDITIONS CONTINUE ON NEXT PAGE

41. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include 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. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

42. 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. Successive quarterly audits shall occur no closer than two months. 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, 6.2] 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] Federally Enforceable Through Title V Permit

44. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O2 (150 ppmv @ 15% O2) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit

45. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit

46. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit

47. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NOx (as NO2) @ 15% O2 or 200 ppmv CO @ 15% O2. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit

48. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

49. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, 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), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit

50. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

51. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NOx emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

52. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NOx concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

53. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit

54. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O2, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit

55. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NOx daily limits may be exceeded during recommissioning periods: NOx (as NO2): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO2: 91.4 lb/day ,15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit

56. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit

57. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit

58. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit

59. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit

60. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit

61. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NOx per hr; 4,790.0 lbs-NOx per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NOx per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

62. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NOx and CO emitted; c. Total emissions of NOx and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit

63. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit

64. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NOx and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit

65. Performance Tests: Performance tests for the emissions of CO and NOx shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G] Federally Enforceable Through Title V Permit

66. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit

67. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit

68. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

69. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NOx, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit

70. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit

71. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit

72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

74. Compliance with permit conditions in the Title V permit for this unit 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 from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

75. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

76. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

77. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer and shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]

78. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]

79. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]

80. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

81. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]

82. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]

83. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]

84. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]

85. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]

86. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]