San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUN 20 2014

Mr. Michael DeBortoli
Northern California Power Agency
P. O. Box 1478
Lodi, CA 95241-1478

Re: Notice of Minor Title V Permit Modification
District Facility # N-2697
Project # N-1141038

Dear Mr. DeBortoli:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to modify Permit(s) to Operate (PTOs) N-2697-5-2 of the facility's current Title V operating permit. The proposed modification is to establish startup time for each type of startup mode (i.e., hot start, warm start, or cold start). The startup time is required to be established within 15-month of the end of the commissioning period by one of the requirements in the Authority to Construct permit N-2697-5-0.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V PTO(s) N-2697-5-3, application, and previous Title V permit. This project will be finalized after the 45-day EPA comment period.

If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

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Executive Director/Air Pollution Control Officer

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Title V APPLICATION REVIEW
Minor Modification

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Responsible Official:	Michael DeBortoli
Title:	Plant Manager, Lodi Energy Center
Processing Staff:	Jag Kahlon
Project Number:	N-1141038
Date:	June 18, 2014

I. PROPOSAL

Northern California Power Agency (NCPA) was issued an Authority to Construct N-2697-5-0 in January 2010 to install a 294 MW combined-cycle electric generation plant consisting of a Siemens "Flex Plant 30" natural gas turbine with fast-startup technology. This permit required the company to establish startup time for each type of startup (i.e., hot, cold or warm) based on the actual data during the first 12-month of operation after the end of the commissioning period.

NCPA has collected, analyzed, and submitted data of each startup that took place during the calendar year of 2013. Based on this data set, NCPA has proposed to establish startup time of 100 minutes for each type of startup. The existing permit allows the District to administratively establish the proposed startup time. This change is being incorporated into the Title V permit via Minor Modification. This document details the changes to the permit conditions that would result due to this project.

II. FACILITY LOCATION

This facility is located at 12745 N Thornton Road, Lodi, California.

III. EQUIPMENT DESCRIPTION

294 MW (NOMINAL) COMBINED-CYCLE ELECTRIC GENERATION PLANT CONSISTING OF A SIEMENS INDUSTRIAL FRAME "FLEX PLANT 30" STG6-5000F NATURAL GAS-FIRED TURBINE ENGINE WITH DRY LOW-NOX COMBUSTORS, AN UNFIRED HEAT RECOVERY STEAM GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION WITH AMMONIA

INJECTION AND AN OXIDIZATION CATALYST AND A STEAM TURBINE GENERATOR

IV. SCOPE OF EPA AND PUBLIC REVIEW

The proposed project is a Minor Modification under Rule 2520. Therefore, public review is not required.

V. APPLICABLE REQUIREMENTS

Rule 2520 Federally Mandated Operating Permits (6/21/01)

VI. DESCRIPTION OF PROPOSED MODIFICATIONS

The proposed project will affect condition 6 through 11 of permit N-2697-5-2.

Conditions 6 to 11 in PTO N-2697-5-2

6. The duration of startup or shutdown period shall not exceed 3.0 hours per event for any type of startup event (hot, warm, or cold). [District Rules 2201 and 4703]

7. The combined startup and shutdown duration for all events shall not exceed 6.0 hours during any one day. [District Rule 2201]

8. The owner/operator shall maintain records of the date, start-up time, downtime for gas turbine and the steam turbine prior to startup, startup type, minute-by-minute turbine load (MW), and NOx and CO concentrations (ppmvd @ 15% O2) measurement using CEMS, for each startup event in the first 12 months of operation following the end of the commissioning period. [District Rule 2201]

9. Within 15 months of the end of the commissioning period, the owner/operator shall submit to the District, the CARB and the EPA proposed new time limits for each type of startup that reflect the effect of "Flex Plant 30" fast start-up technology. The proposed time limits shall be based on the required data collected in the first 12 months of operation following the end of the commissioning period. The submittal must include all CEMS data. [District Rule 2201]

10. A margin of compliance of 60 minutes (or less) may be added to the longest startup to establish a startup limit for each type of startup event (hot, warm, or cold). The established startup limit shall not exceed 3.0 hours. [District Rule 2201]

11. The District shall administratively establish appropriate startup times for each startup mode (hot, warm, or cold), and associated recordkeeping requirements. [District Rule 2201]

The following table summarizes turbine startup data for each type of startup mode during calendar year 2013. Successful startups were included in the data set.

Category	Start-up Time (T, min)					
	Hot Start (Downtime < 16 hr)*		Warm Start (16 hr ≤Downtime ≤ 64 hr)*		Cold Start (Downtime > 64 hr)*	
	**ET_{NOx}	***ET_{CO}	**ET_{NOx}	***ET_{CO}	**ET_{NOx}	***ET_{CO}
# of Startups	144	144	23	23	10	10
T_{Min} (min)	19	16	33	17	38	22
$T_{Average}$ (min)	24	19	37	22	41	25
T_{Max} (min)	39	**42**	**42**	27	**45**	35

*Defined by CA ISO for LEC, **ET = Elapsed time to achieve 2.0 ppmvd NOx @ 15% O_2, ***ET_{CO} = Elapsed time to achieve 2.0 ppmvd CO @ 15% O_2

Per condition #10 a margin of compliance of 60 minutes (or less) may be added to the longest startup time to establish a startup limit for each type of event. Therefore, a startup time varies from 102 minutes to 105 minutes. However, NCPA has proposed to establish 100 minutes for each startup mode. Therefore, the above conditions will be replaced with the following:

- The start-up time shall not exceed 100 minutes for each event during any startup mode (i.e., hot start < 16 hour downtime, warm start – 16 to 64 hour downtime, or cold start > 64 hour downtime). [District Rules 2201 and 4703]

The permit already contains the following recordkeeping condition:

- The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, total hours of operation, the type and quantity of fuel used, mode of start-up (cold, warm, or hot), duration of each start-up, duration of each shutdown, and duration of each combustor tuning event. [District Rule 2201 and 4703, 6.26, 6.28, 6.2.11]

VII. COMPLIANCE

In accordance with Rule 2520, 3.20, the proposed project:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;

2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;

3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;

4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include;

   a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and

   b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act;

5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and

6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including;

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs (Appendix IV) ;

2. The source's suggested draft permit (Appendix I); and

3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used (Appendix III).

Compliance is expected with this Rule.

APPENDICES

Appendix I: Proposed Title V Operating Permit No. N-2697-5-3
Appendix II: Existing Permit to Operate N-2697-5-2
Appendix III: Permit Application
Appendix IV: Emissions Change

Appendix I
Proposed Title V Operating Permit No. N-2697-5-3

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-2697-5-3 **EXPIRATION DATE:** 05/31/2019

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EQUIPMENT DESCRIPTION:
MODIFICATION OF 294 MW (NOMINAL) COMBINED-CYCLE ELECTRIC GENERATION PLANT CONSISTING OF A SIEMENS INDUSTRIAL FRAME "FLEX PLANT 30" STG6-5000F NATURAL GAS-FIRED TURBINE ENGINE WITH DRY LOW-NOX COMBUSTORS, AN UNFIRED HEAT RECOVERY STEAM GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION AND AN OXIDIZATION CATALYST AND A STEAM TURBINE GENERATOR: ESTABLISH STARTUP TIME FOR EACH TYPE OF STARTUP

PERMIT UNIT REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100]
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100]
3. Particulate matter emissions from the gas turbine system shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
5. Commissioning period shall commence when all mechanical, electrical, and control systems are installed and individual system startup has been completed, or when a gas turbine is first fired, whichever occurs first. The commissioning period shall terminate when the plant has completed initial source testing, completed final plant tuning, and is available for commercial operation. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The start-up time shall not exceed 100 minutes for each event during any startup mode (i.e., hot start < 16 hour downtime, warm start - 16 to 64 hour downtime, or cold start > 64 hour downtime). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
7. During all types of operation, including startup (cold, warm and hot), shutdown, and combustor tuning periods, ammonia injection into the SCR system shall occur once the minimum temperature of 406°F at the catalyst face has been reached to ensure NOx emission reductions can occur with a reasonable level of ammonia slip. The District may administratively modify the temperature as necessary following any replacement of the SCR catalyst material. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The oxidation catalyst shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the inlet face of the oxidation catalyst. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

10. The oxidation catalyst shall be maintained between 450°F and 1,350°F except during startup, shutdown, and combustor tuning periods. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. The District may administratively re-establish temperature range as necessary following any replacement of the oxidation catalyst material. [40 CFR Part 64] Federally Enforceable Through Title V Permit
11. The owner or operator shall measure and record temperature at the inlet face of the oxidation catalyst during each source test while measuring VOC emissions. [40 CFR Part 64] Federally Enforceable Through Title V Permit
12. During start-up, and shutdown and combustor tuning periods, the emissions shall not exceed any of the following limits: NOx (as NO2) - 160.00 lb/hr; CO - 1,500.00 lb/hr; VOC (as methane) - 16.00 lb/hr; PM10 - 9.00 lb/hr; SOx (as SO2) - 6.10 lb/hr; or NH3 - 28.76 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. . [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
14. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status ending when the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
15. Combustor tuning periods are any periods, not to exceed 8 hours in any calendar day or 40 hours in any calendar year, when combustor tuning activities are taking place. Combustor tuning activities are defined as any testing, adjustment, tuning, and calibration activities recommended by the gas turbine manufacturer to ensure safe and reliable steady-state operation of the gas turbine following replacement of the combustor components, during seasonal tuning events, or at other times when recommended by the turbine manufacturer or necessary to maintain low emissions performance. This includes, but is not limited to, adjusting the amount of fuel distributed between the combustion turbine's staged fuel systems to simultaneously minimize NOx and CO production while minimizing combustor dynamics and ensuring combustor stability. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup, shutdown and combustor tuning periods. [District Rules 2201 and 4703, 5.3.2] Federally Enforceable Through Title V Permit
17. Except during startup, shutdown and combustor tuning periods, emissions from the gas turbine system shall not exceed any of the following limits: NOx (as NO2) - 15.54 lb/hr and 2.0 ppmvd @ 15% O2; CO - 9.46 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 3.79 lb/hr and 1.4 ppmvd @ 15% O2; PM10 - 9.0 lb/hr; or SOx (as SO2) - 6.10 lb/hr. NOx (as NO2) emission limits are based on 1-hour rolling average period. All other emission limits are based on 3-hour rolling average period. [District Rules 2201, 4001 and 4703] Federally Enforceable Through Title V Permit
18. NH3 emissions shall not exceed any of the following limits: 10.0 ppmvd @ 15% O2 over a 24-hour rolling average period and 28.76 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Each 3-hour rolling average period will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour rolling average for ammonia slip will commence on the hour. The twenty-four hour rolling average shall be calculated using the most recent twenty-four one-hour periods. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Emissions from the gas turbine system, on days when startup, shutdown and/or combustor tuning activities occur, shall not exceed the following limits: NOx (as NO2) - 879.7 lb/day; CO - 5,570.3 lb/day; VOC - 164.2 lb/day; PM10 - 216.0 lb/day; SOx (as SO2) - 146.4 lb/day, or NH3 - 690.3 lb/day. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Emissions from the gas turbine system, on days when startup, shutdown and/or combustor tuning activities do not occur, shall not exceed the following: NOx (as NO2) - 373.0 lb/day; CO - 227.0 lb/day; VOC - 91.0 lb/day; PM10 - 216.0 lb/day; SOx (as SO2) - 146.4 lb/day, or NH3 - 690.3 lb/day. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

22. Gas turbine system shall be fired on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dscf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit

23. NOx (as NO2) emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 38,038 lb; 2nd quarter: 38,411 lb; 3rd quarter: 37,126 lb; 4th quarter: 37,840 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

24. CO emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 142,312 lb; 2nd quarter: 142,539 lb; 3rd quarter: 86,374 lb; 4th quarter: 113,660 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

25. VOC emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 8,086 lb; 2nd quarter: 8,177 lb; 3rd quarter: 8,417 lb; 4th quarter: 8,323 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

26. NH3 emissions from the SCR system shall not exceed any of the following: 1st quarter: 62,122 lb; 2nd quarter: 62,812 lb; 3rd quarter: 63,502 lb; 4th quarter: 63,502 lb. [District Rule] Federally Enforceable Through Title V Permit

27. PM10 emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 19,440 lb; 2nd quarter: 19,656 lb; 3rd quarter: 19,872 lb; 4th quarter: 19,872 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

28. SOx (as SO2) emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 13,176 lb; 2nd quarter: 13,322 lb; 3rd quarter: 13,469 lb; 4th quarter: 13,469 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

29. The total CO emissions from the gas turbine system (N-2697-5) and the auxiliary boiler (N-2697-7) shall not exceed 198,000 pounds in any 12-consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit

30. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve the gas turbine system. [District Rule 2201] Federally Enforceable Through Title V Permit

31. The gas turbine engine and generator lube oil vents shall be equipped with mist eliminators or equivalent technology sufficient to limit the visible emissions from the lube oil vents to not exceed 5% opacity, except for a period not exceeding three minutes in any one hour. [District Rule 2201] 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. [District Rule 1081] Federally Enforceable Through Title V Permit

33. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted at least once every seven years. CEM relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NOX and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. If an annual startup and shutdown NOx and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NOx and CO testing frequency shall return to the once every seven years schedule. [District Rule 1081] Federally Enforceable Through Title V Permit

35. Source testing to determine compliance with the NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. [District Rules 2201 and 4703, 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

36. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days after the end of commissioning period and weekly thereafter. If the sulfur content is less than or equal to 1.0 gr/100 dscf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rule 2201 and 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

37. The following test methods shall be used: NOx - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

38. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

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

40. A mass or volumetric fuel flow meter that meets the requirements of 40 CFR Part 75 shall be installed, utilized and maintained to measure the amount of natural gas combusted in the unit. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

41. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.4340(b)(1) and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

42. The NOx and O2 CEMS shall be installed and certified in accordance with the requirements of 40 CFR Part 75. The CO CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 4A (PS 4A), or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

43. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

44. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h) and in accordance with 40 CFR 60.4350, or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit

45. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CO CEMS must be audited at least once each calendar quarter, by conducting cylinder gas audits (CGA) or relative accuracy audits (RAA). CGA or RAA may be conducted three of four calendar quarters, but no more than three calendar quarters in succession. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

46. The owner/operator shall perform a RATA for CO as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

47. The NOx and O2 CEMS shall be audited in accordance with the applicable requirements of 40 CFR Part 75. Linearity reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

48. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

49. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

50. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

51. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

52. Monitor Downtime is defined as any unit operating hour in which the data for NOx, O2 concentrations is either missing or invalid. [40 CFR 60.4380(b)(2)] Federally Enforceable Through Title V Permit

53. The owner or operator shall maintain records of the following items on the combustor tuning activities: (1) date on which combustor tuning activity occurs, (2) description of each combustor tuning activity, (3) reason why each combustor tuning activity is required, (4) documentation (such as operating manuals, letters, e-mails, etc.) showing that each combustor tuning activity is necessary. [District Rule 2201] Federally Enforceable Through Title V Permit

54. The owner or operator shall maintain records of the following items: (1) hourly and daily emissions, in pounds, for each pollutant listed in this permit on the days startup, shutdown and/or combustor tuning activities of the gas turbine system occur, (2) hourly and daily emissions, in pounds, for each pollutant in this permit on the days startup, shutdown and/or combustor tuning activities of the gas turbine system do not occur, (3) quarterly emissions, in pounds, for each pollutant listed in this permit, and (4) the combined CO emissions (12 consecutive month rolling total) , in pounds, for permit unit N-2697-5 and N-2697-7. [District Rule 2201] Federally Enforceable Through Title V Permit

55. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, total hours of operation, the type and quantity of fuel used, mode of start-up (cold, warm, or hot), duration of each start-up, duration of each shutdown, and duration of each combustor tuning event. [District Rule 2201 and 4703, 6.26, 6.28, 6.2.11] Federally Enforceable Through Title V Permit

56. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703, 6.2.4] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

57. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Date, time intervals, data and magnitude of excess NOx emissions, nature and the 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 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
58. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected source and each affected unit at the source shall have an Acid Rain permit and operate in compliance with all permit requirements. [40 CFR 72] Federally Enforceable Through Title V Permit
60. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
61. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
62. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
63. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
64. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
65. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
66. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
67. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
68. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
69. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

70. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

71. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

72. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

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Appendix II
Existing Permit to Operate N-2697-5-2

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-2697-5-2 **EXPIRATION DATE:** 05/31/2019

EQUIPMENT DESCRIPTION:
294 MW (NOMINAL) COMBINED-CYCLE ELECTRIC GENERATION PLANT CONSISTING OF A SIEMENS INDUSTRIAL FRAME "FLEX PLANT 30" STG6-5000F NATURAL GAS-FIRED TURBINE ENGINE WITH DRY LOW-NOX COMBUSTORS, AN UNFIRED HEAT RECOVERY STEAM GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION AND AN OXIDIZATION CATALYST AND A STEAM TURBINE GENERATOR

PERMIT UNIT REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100]
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100]
3. Particulate matter emissions from the gas turbine system shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
5. Commissioning period shall commence when all mechanical, electrical, and control systems are installed and individual system startup has been completed, or when a gas turbine is first fired, whichever occurs first. The commissioning period shall terminate when the plant has completed initial source testing, completed final plant tuning, and is available for commercial operation. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The duration of startup or shutdown period shall not exceed 3.0 hours per event for any type of startup event (hot, warm, or cold). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
7. The combined startup and shutdown duration for all events shall not exceed 6.0 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The owner/operator shall maintain records of the date, start-up time, downtime for gas turbine and the steam turbine prior to startup, startup type, minute-by-minute turbine load (MW), and NOx and CO concentrations (ppmvd @ 15% O2) measurement using CEMS, for each startup event in the first 12 months of operation following the end of the commissioning period. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Within 15 months of the end of the commissioning period, the owner/operator shall submit to the District, the CARB and the EPA proposed new time limits for each type of startup that reflect the effect of "Flex Plant 30" fast start-up technology. The proposed time limits shall be based on the required data collected in the first 12 months of operation following the end of the commissioning period. The submittal must include all CEMS data. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. A margin of compliance of 60 minutes (or less) may be added to the longest startup to establish a startup limit for each type of startup event (hot, warm, or cold). The established startup limit shall not exceed 3.0 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The District shall administratively establish appropriate startup times for each startup mode (hot, warm, or cold), and associated recordkeeping requirements. [District Rule 2201] Federally Enforceable Through Title V Permit
12. During all types of operation, including startup (cold, warm and hot), shutdown, and combustor tuning periods, ammonia injection into the SCR system shall occur once the minimum temperature of 406°F at the catalyst face has been reached to ensure NOx emission reductions can occur with a reasonable level of ammonia slip. The District may administratively modify the temperature as necessary following any replacement of the SCR catalyst material. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The SCR system shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the catalyst face. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The oxidation catalyst shall be equipped with a continuous temperature monitoring system to measure and record the temperature at the inlet face of the oxidation catalyst. [40 CFR Part 64] Federally Enforceable Through Title V Permit
15. The oxidation catalyst shall be maintained between 450°F and 1,350°F except during startup, shutdown, and combustor tuning periods. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. The District may administratively re-establish temperature range as necessary following any replacement of the oxidation catalyst material. [40 CFR Part 64] Federally Enforceable Through Title V Permit
16. The owner or operator shall measure and record temperature at the inlet face of the oxidation catalyst during each source test while measuring VOC emissions. [40 CFR Part 64] Federally Enforceable Through Title V Permit
17. During start-up, and shutdown and combustor tuning periods, the emissions shall not exceed any of the following limits: NOx (as NO2) - 160.00 lb/hr; CO - 1,500.00 lb/hr; VOC (as methane) - 16.00 lb/hr; PM10 - 9.00 lb/hr; SOx (as SO2) - 6.10 lb/hr; or NH3 - 28.76 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. . [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
19. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status ending when the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
20. Combustor tuning periods are any periods, not to exceed 8 hours in any calendar day or 40 hours in any calendar year, when combustor tuning activities are taking place. Combustor tuning activities are defined as any testing, adjustment, tuning, and calibration activities recommended by the gas turbine manufacturer to ensure safe and reliable steady-state operation of the gas turbine following replacement of the combustor components, during seasonal tuning events, or at other times when recommended by the turbine manufacturer or necessary to maintain low emissions performance. This includes, but is not limited to, adjusting the amount of fuel distributed between the combustion turbine's staged fuel systems to simultaneously minimize NOx and CO production while minimizing combustor dynamics and ensuring combustor stability. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup, shutdown and combustor tuning periods. [District Rules 2201 and 4703, 5.3.2] Federally Enforceable Through Title V Permit
22. Except during startup, shutdown and combustor tuning periods, emissions from the gas turbine system shall not exceed any of the following limits: NOx (as NO2) - 15.54 lb/hr and 2.0 ppmvd @ 15% O2; CO - 9.46 lb/hr and 2.0 ppmvd @ 15% O2; VOC (as methane) - 3.79 lb/hr and 1.4 ppmvd @ 15% O2; PM10 - 9.0 lb/hr; or SOx (as SO2) - 6.10 lb/hr. NOx (as NO2) emission limits are based on 1-hour rolling average period. All other emission limits are based on 3-hour rolling average period. [District Rules 2201, 4001 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. NH3 emissions shall not exceed any of the following limits: 10.0 ppmvd @ 15% O2 over a 24-hour rolling average period and 28.76 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Each 3-hour rolling average period will be compiled from the three most recent one hour periods. Each one hour period shall commence on the hour. Each one hour period in a twenty-four hour rolling average for ammonia slip will commence on the hour. The twenty-four hour rolling average shall be calculated using the most recent twenty-four one-hour periods. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Emissions from the gas turbine system, on days when startup, shutdown and/or combustor tuning activities occur, shall not exceed the following limits: NOx (as NO2) - 879.7 lb/day; CO - 5,570.3 lb/day; VOC - 164.2 lb/day; PM10 - 216.0 lb/day; SOx (as SO2) - 146.4 lb/day, or NH3 - 690.3 lb/day. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Emissions from the gas turbine system, on days when startup, shutdown and/or combustor tuning activities do not occur, shall not exceed the following: NOx (as NO2) - 373.0 lb/day; CO - 227.0 lb/day; VOC - 91.0 lb/day; PM10 - 216.0 lb/day; SOx (as SO2) - 146.4 lb/day, or NH3 - 690.3 lb/day. Daily emissions shall be compiled for a twenty-four hour period starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Gas turbine system shall be fired on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dscf of natural gas. [District Rule 2201 and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit

28. NOx (as NO2) emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 38,038 lb; 2nd quarter: 38,411 lb; 3rd quarter: 37,126 lb; 4th quarter: 37,840 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

29. CO emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 142,312 lb; 2nd quarter: 142,539 lb; 3rd quarter: 86,374 lb; 4th quarter: 113,660 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

30. VOC emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 8,086 lb; 2nd quarter: 8,177 lb; 3rd quarter: 8,417 lb; 4th quarter: 8,323 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

31. NH3 emissions from the SCR system shall not exceed any of the following: 1st quarter: 62,122 lb; 2nd quarter: 62,812 lb; 3rd quarter: 63,502 lb; 4th quarter: 63,502 lb. [District Rule] Federally Enforceable Through Title V Permit

32. PM10 emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 19,440 lb; 2nd quarter: 19,656 lb; 3rd quarter: 19,872 lb; 4th quarter: 19,872 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

33. SOx (as SO2) emissions from the gas turbine system shall not exceed any of the following: 1st quarter: 13,176 lb; 2nd quarter: 13,322 lb; 3rd quarter: 13,469 lb; 4th quarter: 13,469 lb. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The total CO emissions from the gas turbine system (N-2697-5) and the auxiliary boiler (N-2697-7) shall not exceed 198,000 pounds in any 12-consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit

35. A selective catalytic reduction (SCR) system and an oxidation catalyst shall serve the gas turbine system. [District Rule 2201] Federally Enforceable Through Title V Permit

36. The gas turbine engine and generator lube oil vents shall be equipped with mist eliminators or equivalent technology sufficient to limit the visible emissions from the lube oil vents to not exceed 5% opacity, except for a period not exceeding three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

37. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

38. Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081] Federally Enforceable Through Title V Permit

39. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted at least once every seven years. CEM relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). If CEM data is not certifiable to determine compliance with NOX and CO startup emission limits, then startup and shutdown NOx and CO testing shall be conducted every 12 months. If an annual startup and shutdown NOx and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NOx and CO testing frequency shall return to the once every seven years schedule. [District Rule 1081] Federally Enforceable Through Title V Permit

40. Source testing to determine compliance with the NOx, CO, VOC and NH3 emission rates (lb/hr and ppmvd @ 15% O2) and PM10 emission rate (lb/hr) shall be conducted at least once every 12 months. [District Rules 2201 and 4703, 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

41. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract, or (ii) monitored within 60 days after the end of commissioning period and weekly thereafter. If the sulfur content is less than or equal to 1.0 gr/100 dscf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rule 2201 and 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit

42. The following test methods shall be used: NOx - EPA Method 7E or 20 or CARB Method 100; CO - EPA Method 10 or 10B or CARB Method 100; VOC - EPA Method 18 or 25; PM10 - EPA Method 5 (front half and back half) or 201 and 202a; ammonia - BAAQMD ST-1B; and O2 - EPA Method 3, 3A, or 20 or CARB Method 100. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

43. Fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)(i)] Federally Enforceable Through Title V Permit

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

45. A mass or volumetric fuel flow meter that meets the requirements of 40 CFR Part 75 shall be installed, utilized and maintained to measure the amount of natural gas combusted in the unit. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

46. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201 and 4703, 40 CFR 60.4340(b)(1) and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

47. The NOx and O2 CEMS shall be installed and certified in accordance with the requirements of 40 CFR Part 75. The CO CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 4A (PS 4A), or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

48. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h) and in accordance with 40 CFR 60.4350, or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit

50. In accordance with 40 CFR Part 60, Appendix F, 5.1, the CO CEMS must be audited at least once each calendar quarter, by conducting cylinder gas audits (CGA) or relative accuracy audits (RAA). CGA or RAA may be conducted three of four calendar quarters, but no more than three calendar quarters in succession. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

51. The owner/operator shall perform a RATA for CO as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

52. The NOx and O2 CEMS shall be audited in accordance with the applicable requirements of 40 CFR Part 75. Linearity reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit

53. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit

54. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

55. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

56. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit

57. Monitor Downtime is defined as any unit operating hour in which the data for NOx, O2 concentrations is either missing or invalid. [40 CFR 60.4380(b)(2)] Federally Enforceable Through Title V Permit

58. The owner or operator shall maintain records of the following items on the combustor tuning activities: (1) date on which combustor tuning activity occurs, (2) description of each combustor tuning activity, (3) reason why each combustor tuning activity is required, (4) documentation (such as operating manuals, letters, e-mails, etc.) showing that each combustor tuning activity is necessary. [District Rule 2201] Federally Enforceable Through Title V Permit

59. The owner or operator shall maintain records of the following items: (1) hourly and daily emissions, in pounds, for each pollutant listed in this permit on the days startup, shutdown and/or combustor tuning activities of the gas turbine system occur, (2) hourly and daily emissions, in pounds, for each pollutant in this permit on the days startup, shutdown and/or combustor tuning activities of the gas turbine system do not occur, (3) quarterly emissions, in pounds, for each pollutant listed in this permit, and (4) the combined CO emissions (12 consecutive month rolling total), in pounds, for permit unit N-2697-5 and N-2697-7. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

60. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, total hours of operation, the type and quantity of fuel used, mode of start-up (cold, warm, or hot), duration of each start-up, duration of each shutdown, and duration of each combustor tuning event. [District Rule 2201 and 4703, 6.26, 6.28, 6.2.11] Federally Enforceable Through Title V Permit

61. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 2201 and 4703, 6.2.4] Federally Enforceable Through Title V Permit

62. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Date, time intervals, data and magnitude of excess NOx emissions, nature and the 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 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

63. The owner or operator shall submit to the District information correlating the NOx control system operating parameters to the associated measured NOx output. The information must be sufficient to allow the District to determine compliance with the NOx emission limits of this permit when the CEMS is not operating properly. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

64. The owners and operators of each affected source and each affected unit at the source shall have an Acid Rain permit and operate in compliance with all permit requirements. [40 CFR 72] Federally Enforceable Through Title V Permit

65. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit

66. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

67. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit

68. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit

69. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit

70. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit

71. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit

72. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit

73. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

74. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

75. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

76. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

77. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

Appendix III
Permit Application

San Joaquin Valley Air Pollution Control District

www.valleyair.org

Permit Application For:

[ ] ADMINISTRATIVE AMENDMENT [✔] MINOR MODIFICATION [] SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO:
Northern California Power Agency

2. MAILING ADDRESS:

STREET/P.O. BOX: **P. O. Box 1478**

CITY: **Lodi** STATE: **CA** 9-DIGIT ZIP CODE: **95241-1478**

3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:

STREET: **12745 North Thornton Road** CITY: **Lodi**

SW ¼ SECTION **24** TOWNSHIP **T3N** RANGE **R5E**

INSTALLATION DATE:
n/a

4. GENERAL NATURE OF BUSINESS:
Electrical Power Production

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

Permit Unit N-2697-5-1: 294 MW (nominal) combined cycle electrical generation plant consistent of a Siemens "Flex Plant 30" STG6-5000F natural gas-fired turbine with unfired HRSG:

Amend Condition #6 of existing PTO to reduce startup time limit from 3.0 hours to 100 minutes, as required by Condition #9.

6. TYPE OR PRINT NAME OF APPLICANT:
Michael DeBortoli

TITLE OF APPLICANT:
Plant Manager, NCPA Lodi Energy Center

7. SIGNATURE OF APPLICANT: Michael DeBortoli DATE: 3/10/14

PHONE: (916) 781-4528
FAX:
EMAIL: Michael.DeBortoli@ncpa.com

For APCD Use Only:

DATE STAMP
RECEIVED
MAR 14 2014
SJVAPCD
NORTHERN REGION

FILING FEE RECEIVED: $19.00 CHECK#: 184729
DATE PAID: 3/13/14
PROJECT NO: N-1141038 FACILITY ID: N-2697

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

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

COMPANY NAME: **Northern California Power Agency**	FACILITY ID: **- 2697**
1. Type of Organization:[ ] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [✔] Utility	
2. Owner's Name: **Northern California Power Agency**	
3. Agent to the Owner: **Michael DeBortoli**	

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

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

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

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

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

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

Michael DeBortoli — Signature of Responsible Official

3/10/14 — Date

Michael DeBortoli

Name of Responsible Official (please print)

Plant Manager, Lodi Energy Center

Title of Responsible Official (please print)

Appendix IV
Emissions Change

Emissions Change

There is no quarterly emissions change due to this project.