



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



MAY 09 2013

Mr. Kevin Cunningham
Northern California Power Agency
P O Box 1478
Lodi, CA 95241-1478

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-2697
Project # N-1130201**

Dear Mr. Cunningham:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is to increase the hourly CO startup and shutdown emissions, establish combustor tuning period, and to modify fuel flow meter requirements to match with the fuel flow scheme used for the gas turbine.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

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,

David Warner
Director of Permit Services

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
Gerardo C. Rios, EPA (w/enclosure) via email
Eric W. Veerkamp, CEC (w/enclosure) via email

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**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Northern California Power Agency at 12745 North Thornton Road, Lodi, California. This project is to increase the hourly CO startup and shutdown emissions, establish combustor tuning period, and to modify fuel flow meter requirements to match with the fuel flow scheme used for the gas turbine.

The District's analysis of the legal and factual basis for this proposed action, project #N-1130201, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and at any District office. The hourly CO emission increase is not expected to cause any significant health risks to the nearby receptors or violate the ambient air quality standard. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact the District at (209) 557-6400. Written comments on the proposed initial permit must be submitted by June 13, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-8718.**

**San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review**

Facility Name: Northern California Power Agency

Date: May 7, 2013

Mailing Address: P O Box 1478
Lodi, CA 95241-1478

Engineer: Jagmeet Kahlon
Lead Engineer: Rupi Gill

Contact Person: Kevin Cunningham
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Application #(s): N-2697-5-1

Project #: N-1130201

Deemed Complete: February 13, 2013

I. Proposal

Northern California Power Agency (NCPA) submitted a permit application to modify the permit requirements issued in a Final Determination of Compliance (FDOC) prepared for Application for Certification Docket #: 08-AFC-10, District project #N1083490 for the gas turbine of a 294 MW combined-cycle electric generation plant operating under permit N-2697-5-0 as follows:

1. Increase the hourly CO startup and shutdown emissions from 900.00 lb/hr to 1,500.00 lb/hr.

The original startup limit for the gas turbine was established based on the data of similar gas turbines. However, NCPA has found that under certain conditions (e.g., very low ambient temperatures, or after the gas turbine has been shut down for many hours), low-load CO emissions are higher than expected and the oxidation catalyst takes longer than expected to reach its full control efficiency. Therefore, CO emissions during some gas turbine startups are higher than anticipated. The highest hourly CO emission rate observed during gas turbine startups from the period of 11/5/12 to 12/22/12 is 1,207 pounds per hour. Based on this information, hourly CO emission limit of 1,500 pounds per hour is proposed. This provides about 25% compliance margin above the maximum observed CO emissions rate. No changes to the existing daily or annual limits are proposed.

2. Establish combustor turning period for up to 8 hours per day, and 40 hours per calendar year and to limit tuning emissions to the same levels as the startup and shutdown emissions.

The gas turbine combustor was tuned during the commissioning period. However, the focus at that time was to minimize low-load NO_x emissions. The turbine manufacturer, Siemens, may be able to perform additional tuning to improve low-load CO emissions performance as well, and this tuning could be beneficial in reducing CO emissions during gas turbine startups. In addition, after the new gas turbine combustor components are installed, the gas turbine's fuel system must be tuned periodically, including after major overhauls, to maintain compliance with manufacturer's specification for emissions and combustion dynamics and to perform combustion and hot gas path inspections. Multiple fuel systems supply fuel gas to each gas turbine combustor, and the total gas flow is divided among the fuel systems to minimize NO_x and CO while also minimizing combustor dynamics and ensuring combustor stability. After gas turbine combustor replacement, a combustor must be tuned across its load range to achieve the optimal apportionment of fuel gas at each load point. During these low-load tuning operations, gas turbine CO and NO_x are expected to exceed the routine operation hourly and daily limits. Therefore, as part of this modification, NCPA proposes to limit tuning activities to 8 hours per tuning event, not to exceed 40 hours in a calendar year, and to limit tuning emissions to the same levels as startup and shutdown emissions.

The above items 1 and 2 results in the following changes:

"During start-up, and shutdown and combustor tuning periods, the emissions shall not exceed any of the following limits: NO_x (as NO₂) - 160.00 lb/hr; CO - ~~900.00~~ 1,500.00 lb/hr; VOC (as methane) - 16.00 lb/hr; PM₁₀ - 9.00 lb/hr; SO_x (as SO₂) - 6.10 lb/hr; or NH₃ - 28.76 lb/hr. [District Rule 2201]"

New Condition: "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 NO_x and CO production while minimizing combustor dynamics and ensuring combustor stability. [District Rule 2201]"

New Condition: "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]"

"Except during startup, ~~and 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]"

"Emissions from the gas turbine system, on days when a startup, ~~and/or~~ shutdown and/or combustor tuning activities occurs, 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]"

"Emissions from the gas turbine system, on days when a startup, ~~and/or~~ shutdown and/or combustor tuning activities does 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]"

"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, ~~and/or~~ shutdown and/or combustor tuning activities of the gas turbine system occurs, (2) hourly and daily emissions, in pounds, for each pollutant in this permit on the days startup, ~~and/or~~ shutdown and/or combustor tuning activities of the gas turbine system does 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]"

"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, ~~and duration of each shutdown, and duration of each combustor tuning event.~~ [District Rule 2201 and 4703, 6.26, 6.28, 6.2.11]"

3. Modify fuel flow meter condition

The gas turbine fuel flow meter must be calibrated annually, as required under the acid rain regulations. Therefore, the requirement that the fuel flow meter be non-resettable is in conflict with acid rain monitoring requirements. Therefore, the following changes are requested to make the condition consistent with the acid rain requirements:

"A non-resettable, totalizing mass or volumetric fuel flow meter that meets the requirements of 40 CFR Part 75 to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained to measure the amount of natural gas combusted in the unit. [District Rules 2201 and 4703]"

NCPA possesses a Title V permit for this site. The proposed changes are considered "significant" modifications to the Title V permit. Therefore, this project triggers a 30-day public notice, which includes publication of this project in a local newspaper "Stockton Record". In addition, NCPA has also proposed to receive the ATC with Certificates of Conformity in accordance with the requirements of 40 CFR 70.6(c), 70.7 and 70.8. Therefore, 45-day EPA notice will be conducted prior to the issuance of the ATC. Both COC and public notice will run concurrently. This document will be sent to the California Air Resource Board (CARB), California Energy Commission (CEC), EPA Region 9, and the applicant.

Note that permit N-2697-5-0 is considered implemented for the purpose of this project.

II. Applicable Rules

- Rule 1080 Stack Monitoring (12/17/92)
- Rule 1081 Source Sampling (12/16/93)
- Rule 1100 Equipment Breakdown (12/17/92)
- Rule 2010 Permits Required (12/17/92)
- Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
- Rule 2410 Prevention of Significant Deterioration (6/16/11)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 2540 Acid Rain Program (11/13/97)
- Rule 2550 Federally Mandated Preconstruction Review for Major Sources of Air Toxics (6/18/1998)
- Rule 4001 New Source Performance Standards (4/14/99)
 - 40 CFR Part 60 Subpart GG - Standards of Performance for Stationary Gas Turbines
 - 40 CFR Part 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines
- Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/18/00)
- Rule 4101 Visible Emissions (02/17/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4201 Particulate Matter Concentration (12/17/92)
- Rule 4202 Particulate Matter Emission Rate (12/17/92)
- Rule 4301 Fuel Burning Equipment (12/17/92)
- Rule 4703 Stationary Gas Turbines (9/20/07)
- Rule 4801 Sulfur Compounds (12/17/92)
- Rule 8011 General Requirements (8/19/04)

Rule 8021 Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities (8/19/04)
Rule 8031 Bulk Materials (8/19/04)
Rule 8041 Carryout and Trackout (8/19/04)
Rule 8051 Open Areas (8/19/04)
Rule 8061 Paved and Unpaved Roads (8/19/04)
Rule 8071 Unpaved Vehicle/Equipment Traffic Areas (9/16/04)
California Health & Safety Code Section 41700 (Public Nuisance)
California Health & Safety Code Section 42301.6 (School Notice)
California Health & Safety Code Section 44300 (Air Toxic "Hot Spots")
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The proposed equipment is located at 12745 North Thornton Road, Lodi, California. There is no K-12 school within 1,000 feet of this location. Therefore, school notice, under California Health & Safety Code 42301.6 is not required.

IV. Process Description

Siemens' "Flex-Plant™ 30" technology is used to lower the emissions from CTG during the startup period. An auxiliary boiler will be used as part of Flex-Plant package to pre-heat the CTG fuel and to provide STG sealing steam prior to the CTG startup. This technology is expected to reduce the startup time, thereby, expected to reduce the startup emissions.

CTG combustion air will flow through the inlet air filters, evaporative cooler and associated air inlet ductwork, be compressed in the CTG compressor section, and then enter the CTG combustion section. Natural gas fuel will be injected into the compressed air in the combustion section and the mixture is ignited. The hot combustion gases will expand through the power turbine section of the CTG, causing the shaft to rotate that drives both the electrical generator and CTG compressor. The hot combustion gases will exit the turbine section and enter the HRSG, where they will heat feedwater that will be pumped into the HRSG. The feedwater will be converted to superheated steam and delivered to the steam turbine at high pressure (HP), intermediate pressure (IP) and low pressure (LP). The use of multiple steam delivery pressures will permit an increase in cycle efficiency and flexibility. High pressure steam will be delivered to the HP section of the steam turbine, intermediate pressure steam will augment the reheat section of the HRSG and will deliver this steam to the IP section of the STG and LP steam will be injected at the beginning of the LP section of the steam turbine, and both flows (LP and IP) will expand in the LP steam turbine section. Steam leaving the LP section of the steam turbine will enter the deaerating surface condenser and transfer heat to circulating cooling water, which will condense the steam to water. The condensed water will be delivered to the HRSG feed water system. The condenser cooling water will circulate through a

mechanical draft evaporative cooling tower, where the heat absorbed in the condenser will be rejected to the atmosphere.

Flue gases due to combustion of natural gas fuel in the CTG will be vented through an SCR system for NOx emissions control, and an oxidation catalyst for CO control.

CTG and HRSG can be operated 24 hours per day and 7 days a week. The facility will be frequently dispatched and will operate on the order of approximately a 76 to 82% annual capacity factor.

V. Equipment Listing

N-2697-5-1

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-NO_x 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

VI. Emission Control Technology Evaluation

The applicant is not proposing any changes to the existing emission control technologies. Therefore, emission control technology evaluation is not required.

VII. General Calculations

A. Potential to Emit

1. Pre-Project Potential to Emit (PE1)

Per project N1083490,

Pollutant	PE1 (lb/day) with startup/shutdown	PE1 (lb/day) Without startup/shutdown	PE1 (lb/yr)
NO _x	879.7	373.0	151,415
SO _x	146.4	146.4	53,436
PM ₁₀	216.0	216.0	78,840
CO	5,570.3	227.0	198,000
VOC	164.2	91.0	33,003
NH ₃	690.3	690.3	251,938

2. Post Project Potential to Emit (PE2)

The proposed project will not result in daily or annual emissions increase for any pollutant. Therefore, PE2 will be same as PE1.

3. Quarterly Emissions Changes (QECs)

$$QEC = (PE2 - PE1)/4$$

PE2 is equal to PE1. Therefore, QEC is equal to zero for each pollutant.

4. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine if BACT is required for emission units that are being modified. AIPE is calculated using the equations mentioned in Section 4.3 and 4.4 of Rule 2201.

$$AIPE = PE2 - \left(\frac{EF2}{EF1} \right) (PE1)$$

Where, PE2 = Post-project potential to emit
PE1 = Pre-project potential to emit
EF2 = Post-project emission factor
EF1 = Pre-project emission factor

NCPA is not proposing any changes to the existing emission factors. Furthermore, PE2 will be same as PE1. Therefore, AIPE will be zero for each pollutant.

B. Facility Emissions

1. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all emission units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

The potential emissions in the following table are taken from the application review prepared under project N1083490.

SSPE1 (lb/yr)					
Permit #	NO _x	SO _x	PM ₁₀	CO	VOC
N-2697-1-4	40,880	11,571	17,520	117,530	51,830
N-2697-4-3	97	0	4	23	7
N-2697-5-0	151,415	53,436	78,840	198,000	33,003
N-3299-6-0	0	0	8,176	0	0
N-3299-7-0	1,240	416	1,108	--*	616
ERC	0	0	0	0	0
Total	193,632	65,423	105,648	315,553	85,456

*Combined CO emissions from units N-2697-5-0 and N-2697-7-0 were limited to 198,000 lb/year.

2. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/yr)					
Permit #	NO _x	SO _x	PM ₁₀	CO	VOC
N-2697-1-4	40,880	11,571	17,520	117,530	51,830
N-2697-4-3	97	0	4	23	7
N-2697-5-0	151,415	53,436	78,840	198,000	33,003
N-3299-6-0	0	0	8,176	0	0
N-3299-7-0	1,240	416	1,108	--*	616
ERC	0	0	0	0	0
Total	193,632	65,423	105,648	315,553	85,456

3. Major Source Determination

Rule 2201 Major Source Determination

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- Any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)					
Category	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE1	193,632	65,423	105,648	315,553	85,456
SSPE2	193,632	65,423	105,648	315,553	85,456
Major Source Thresholds	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

From the above table, the facility is an existing Major Source for NO_x, CO and VOC emissions.

Rule 2410 Major Source Determination

The facility or the equipment evaluated under this project is listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore, the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
Category	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀	*CO ₂ e
Estimated Facility PE before Project Increase	96.8	42.7	32.7	157.8	52.8	52.8	1,242,520
PSD Major Source Thresholds	100	100	100	100	100	100	100,000
PSD Major Source ?	No	No	No	Yes	No	No	Yes

*CO₂e = [(116.5 lb-CO₂e/MMBtu) × (417 MMBtu/hr) × (8,760 hr/yr) × (ton/2,000 lb)] = 212,783 tons/yr for N-2697-1-4; [(161.6 lb/MMBtu) × (12.73 gal/hr) × (100 hr/yr) × (0.137 MMBtu/gal) × ton/2,000 lb = 14.1 tons/yr for N-2697-4-3; [933,989 metric tons/yr page 191 of 1279515.pdf in EDMS × 2,205 lb/metric ton × ton/2,000 lb = 1,029,723 tons/yr for N-2697-5-0 and '7-0; Total = 212,783 tons/yr + 14.1 tons/yr + 1,029,723 tons/yr = 1,242,520 tons/yr

From the above table, the facility is an existing major source for PSD.

4. Stationary Source Increase in Potential Emissions (SSIPE)

SSIPE is the difference of SSPE2 and SSPE1. Since SSPE2 is equal to SSPE1 for each pollutant, SSIPE will be zero for each pollutant.

5. SB-288 Major Modification

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit; and

B. If a public notification is triggered (District Rule 2201, Section 5.4.1).

Per section VII.D.2 of this document, this facility is a Major Source for NO_x, CO, and VOC emissions. However, there is no SB-288 Major Modification threshold for CO in Table 3-5 of Rule 2201 since the San Joaquin Valley is in attainment for CO. Thus, analysis will be limited to NO_x and VOC emissions only.

The District draft policy "Implementation of Rule 2201 (as amended on 12/18/08 and approved by EPA on 6/10/10) for SB 288 Major Modifications and Federal Major Modifications (2/8/11)" is referenced to determine the emissions increase (EI). Page 4 of this policy states the project's emissions increase for each pollutant is equal to the sum of the differences between the potential to emit and the baseline actual emissions (BAE) for existing units. Furthermore, this policy states that for fully offset units (as defined in Rule 2201), the actual emissions are equal to the pre-project potential to emit (PE1). Therefore,

$$EI = PE2 - BAE$$

The unit in this project is fully offset for NO_x and VOC, and therefore, BAE is set equal to PE1 for these pollutants.

$$EI = PE2 - PE1$$

PE2 is equal to PE1 for NO_x as well as VOC. Thus,

$$EI = 0$$

EI is less than 50,000 lb/yr threshold for NO_x and VOC emissions (each); therefore, this project is not a Major Modification.

6. Federal Major Modification

The purpose of Federal Major Modification calculations is to determine the following:

- A. If a Rule-compliance project qualifies for Rule 2201's BACT and offset exemptions (District Rule 2201, §4.2.3.5); and
- B. If an Alternate Siting analysis must be performed (Rule 2201, §4.15.1);
- C. If the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards (Rule 2201, §4.15.2); and

D. If a public notification is triggered. (Rule 2201, §5.4.1)

Per section VII.D.2 of this document, this facility is a Major Source for NO_x, CO, and VOC emissions. However, there is no Federal Major Modification threshold for CO in Table 3-5 of Rule 2201 since the San Joaquin Valley is in attainment for CO. Thus, analysis will be limited to NO_x and VOC emissions only.

The District draft policy "Implementation of Rule 2201 (as amended on 12/18/08 and approved by EPA on 6/10/10) for SB 288 Major Modifications and Federal Major Modifications (2/8/11)" is referenced to determine the emissions increase. Case 2 in the draft policy states "If the proposed modification does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, then the unused baseline capacity emissions can also be excluded from the emission increase (EI).

Neither the rating nor the utilization rate of the gas turbine will increase. Furthermore, no changes to the annual potential to emit NO_x or VOC emissions occur. Therefore, the above referenced draft policy allows the unused baseline capacity to be included in the EI calculation. EI is as follows:

$$EI = PAE - BAE - \text{unused baseline capacity}$$

Where, PAE = post-project projected actual emissions
BAE = pre-project baseline actual emissions
Unused baseline capacity = PE1 - BAE

Therefore,

$$\begin{aligned} EI &= PE2 - BAE - (PE1 - BAE) \\ &= PE2 - BAE - PE1 + BAE \\ &= PE2 - PE1 \end{aligned}$$

PE2 is equal to PE1 for NO_x and VOC emissions. Thus, EI is equal to zero for each of these pollutants.

EI is not greater than 0 lb/yr threshold for NO_x and VOC emissions (each); therefore, this project is not a Federal Major Modification.

VIII. Compliance

Rule 1080 **Stack Monitoring**
Rule 1081 **Source Sampling**
Rule 1100 **Equipment Breakdown**
Rule 2010 **Permits Required**

The original FDOC was issued about 3 year ago (January 22, 2010). These rules have not been revised since that time. The existing permit contains sufficient

conditions to enforce the requirements in these rules. These conditions will be replicated in the permits associated with this project.

Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

BACT requirements shall be triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions*:

- Any new emissions unit or relocation from one Stationary Source to another of an existing emissions unit with a Potential to Emit (PE2) exceeding 2.0 pounds in any one day;
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds in any one day;
- Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined in this rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

Per section VII.C.4 of this document, AIPE from the proposed modifications is not greater than 2.0 pounds per day. Furthermore, the proposed project is not an SB-288 or Federal Major Modification per section VII.D.5 and VII.D.6 of this document. Therefore, BACT is not triggered for any pollutant from the gas turbine.

2. Offsets

Offsets are examined on a pollutant-by-pollutant basis, and are triggered for any pollutant with a SSPE2 equal to or greater than the threshold listed in following table.

Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Thresholds (lb/yr)	Offset Triggered?
NO _x	193,632	193,632	20,000	Yes
SO _x	65,423	65,423	54,750	Yes
PM ₁₀	105,648	105,648	29,200	Yes
CO	315,553	315,553	200,000	Yes
VOC	85,456	85,456	20,000	Yes

Section 4.7.1 states that for pollutants with SSPE1 greater than the emission offset threshold levels, emission offsets shall be provided for all increases in Stationary

Source emissions, calculated as the differences of post-project Potential to Emit (PE2) and the Baseline Emissions (BE) of all new and modified emissions units, plus all increases in Cargo Carrier emissions. Thus,

$EOQ = \Sigma(PE2 - BE) + ICCE$, where

PE2 = Post-Project Potential to Emit
BE = Baseline Emissions
ICCE = Increase in Cargo Carrier emissions

There is no increase in Cargo Carrier emissions from this project. Thus,

$EOQ = \Sigma(PE2 - BE)$

According to Section 3.7, BE shall be equal to PE1 for Clean Emissions Unit, located at a Major Source. Clean Emissions Unit is defined in Section 3.13 of Rule 2201, as an emission unit that is either equipped with an emission control technology with a minimum control efficiency of at least 95% or equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

About 3 years ago (January 2010), it was ensured that the turbine will meet the applicable BACT standard for each pollutant. Thus, the gas turbine is a clean emission unit, and the BE can be set equal to PE1.

$EOQ = PE2 - PE1$

NO_x, PM₁₀, VOC

PE2 is equal to PE1 for each pollutant. Thus, EOQ is equal to zero for each pollutant.

CO

The Ambient Air Quality Analysis (AAQA) modeling for project N-1083490 was conducted at a value of 2,000 lb/hr. This value is above and beyond the proposed increase to 1,500 lb/hr. The AAQA did not violate Ambient Air Quality Standard in the affected area. Therefore, offsets for CO emissions are not required.

3. Public Notification

District Rule 2201, section 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Major Modifications (SB -288, Federal)
- New emission units with a PE>100 lb/day of any one pollutant

- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSPE exceeding 20,000 lb/yr for any one pollutant

Per section VII of this document, this project is not in exceedance of the thresholds in any of the above listed items. Therefore, public notice is not required due to the above items.

4. Daily Emission Limits

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions.

The emissions limits in permit N-2967-5-0 will be replicated in the permit associated with this project.

5. Compliance Assurance

Source Testing, Monitoring, Recordkeeping, and Reporting

Source testing, monitoring, recordkeeping and reporting requirements from permit N-2697-5-0 will be replicated into the permit associated with this project. No additional requirements are placed in this permit.

Compliance is expected with this Rule.

Rule 2410 Prevention of Significant Deterioration

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

Step 1:

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not.

Per section VII.D.3 of this document, this facility is an existing major source for PSD.

Step 2:

The second step of the PSD evaluation is to determine if the project results in a PSD significant increase along with the project location relative to Class 1 area.

I. Project Location Relative to Class 1 Area

This facility is an existing major source for PSD. However, it is not located within 10 km of a Class 1 area, which in this case is "Yosemite National Park".

Therefore, modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO ₂	SO ₂	CO	PM	PM ₁₀	CO _{2e}
N-2697-5-1	75.7	26.7	99.0	39.4	39.4	1,021,201*
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	Yes	No	No	Yes	Yes	Yes

* 933,989 metric tons/yr (Total N-2697-5-0 and -7-0) – 7,730 metric tons/yr (boiler N-2697-7-0) page 191 of 1279515.pdf in EDMS = 926,259 metric tons/yr; 926,259 metric tons x 2,205 lb/metric ton x ton/2,000 lb = 1,021,201 tons/yr

As demonstrated above, because the project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase thresholds, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase thresholds, see step below.

b. Emission Increase (EI) for Each Attainment/Unclassified Pollutant with a Significant Emission Increase vs PSD Significant Emission Increase Thresholds

In this step, the emission increase for each attainment/unclassified pollutant is compared to the PSD significant emission increase thresholds, and if the

emission increase for each attainment pollutant is below this threshold, no further analysis is needed.

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

$$EI = PE2$$

There is no new unit involved in this project. Therefore, EI is equal to zero.

For the existing emissions units, the increase in emissions is calculated as follows:

$$EI = PAE - BAE - UBC$$

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions
UBC = Unused baseline capacity

Since this project does not result in an increase in design capacity or potential to emit¹ from the existing emission units, and it does not impact the ability of the emission unit to operate at a higher utilization rate, the UBC is the portion of PAE that the emission units could have accommodated during the baseline period. Therefore,

$$UBC = PE1 - BAE$$

To estimate EI, PAE is equal PE2. Thus,

$$\begin{aligned} EI &= PE2 - BAE - (PE1 - BAE) \\ &= PE2 - BAE - PE1 + BAE \\ &= PE2 - PE1 \end{aligned}$$

PE2 is equal to PE1 for each pollutant from the gas turbine. Thus, EI would be 0 for each pollutant.

The project's combined total emission increases are compared to the PSD significant emission increase thresholds in the following table.

¹Pre and post project potential annual CO emissions are same. Therefore, there is no annual increase in CO emissions.

PSD Significant Emission Increase Determination: Emission Increase (tons/year)						
Category	NO ₂	SO ₂	CO	PM	PM ₁₀	CO _{2e}
Emission Increases (only)	0	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	No	No	No	No	No	No

As shown in the table above, the project's emission increase, for all new and modified emission units, does not exceed any of the PSD significant emission increase thresholds. Therefore, the project does not result in a PSD major modification due to a significant emission increase and no further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is a Major Source for NO_x, CO and VOC emissions. Therefore, they are subject to the requirements of this rule. One of the proposed amendments are to increase hourly CO emission limit, which is a "...change to a case-by-case determination of an emission limit". This amendment is considered "significant" to the Title V permit. Therefore, this project triggers a 30-day public notice, which includes publication of this project in a local newspaper "Stockton Record". In addition, NCPA has also requested to receive the ATC with Certificates of Conformity in accordance with the requirements of 40 CFR 70.6(c), 70.7 and 70.8. Therefore, 45-day EPA notice will be conducted prior to the issuance of the ATC. The following conditions will be included in the permit.

- 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]
- 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]

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

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and

- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix III of this document).

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule. NCPA is expected to notify the District by filing TV Form -008 upon implementing the ATC.

Compliance is expected with this Rule.

Rule 2540	Acid Rain Program
Rule 2550	Federally Mandated Preconstruction Review for Major Sources of Air Toxics
Rule 4001	New Source Performance Standards 40 CFR Part 60 Subpart GG - Standards of Performance for Stationary Gas Turbines 40 CFR Part 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines
Rule 4002	National Emissions Standards for Hazardous Air Pollutants
Rule 4101	Visible Emissions
Rule 4102	Nuisance
Rule 4201	Particulate Matter Concentration
Rule 4202	Particulate Matter Emission Rate
Rule 4301	Fuel Burning Equipment
Rule 4703	Stationary Gas Turbines
Rule 4801	Sulfur Compounds
Rule 8011	General Requirements
Rule 8021	Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities
Rule 8031	Bulk Materials
Rule 8041	Carryout and Trackout
Rule 8051	Open Areas
Rule 8061	Paved and Unpaved Roads
Rule 8071	Unpaved Vehicle/Equipment Traffic Areas

The original FDOC was issued about 3 year ago (January, 2010). These rules have not been revised since that time. The existing permits N-2697-5-0 contain sufficient conditions to enforce the requirements in these rules. These conditions will be replicated in the permits associated with this project. Thus, compliance is expected with these rules.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the proposed modifications did not trigger Best Available Control Technology (BACT) requirements. Furthermore, the District concludes that potential health impacts are less than significant from the proposed emission units. Therefore, this project does not require discretionary judgment or deliberation. Consequently, this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts CEQA for those projects over which a public agency exercises only ministerial approval; therefore, the District finds that this project to be exempt from the provisions of CEQA.

IX. Recommendation

The following changes are made to some of the conditions in permits in N-2697-5-0:

NCPA has constructed the gas turbine after satisfying the CEQA requirements of the Lead Agency (California Energy Commission). Therefore, the following condition should not be included in the permit associated with this project.

1. The permittee shall not begin actual on-site construction of the equipment authorized by this Authority to Construct until the lead agency satisfies the requirements of the California Environmental Quality Act (CEQA). [California Environmental Quality Act]

The following requirements are related to the commissioning activities, which have been completed; therefore, these conditions should not be included in the permit associated with this project.

10. Commissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the construction contractor to ensure safe and reliable steady state operation of the gas turbine and associated electrical delivery systems. [District Rule 2201]
12. During the commissioning period, the emission rates from the gas turbine system shall not exceed any of the following limits: NO_x (as NO₂) - 400.00 lb/hr and 4,000 lb/day; VOC (as CH₄) - 16.00 lb/hr and 192.0 lb/day; CO - 2,000 lb/hr and 20,000 lb/day; PM₁₀ - 9.00 lb/hr and 108.0 lb/day; or SO_x (as SO₂) - 6.10 lb/hr and 73.1 lb/day. [District Rule 2201]
13. During commissioning period, NO_x and CO emissions rate shall be monitored using installed and calibrated CEMS. [District Rule 2201]
14. The total mass emissions of NO_x, VOC, CO, PM₁₀ and SO_x that are emitted during the commissioning period shall accrue towards the quarterly emission limits. [District Rule 2201]
15. During commissioning period, the owner or operator shall keep records of the natural gas fuel combusted in the gas turbine system on hourly and daily basis. [District Rule 2201]

The following conditions require establishing minimum temperature at the SCR catalyst face to start ammonia injection system. NCPA has supplied a minimum catalyst face temperature of 406°F at which ammonia injection into the SCR system would occur. Therefore, the following changes are recommended to these conditions. Note that the last sentence in condition 22 (below) is added to stay consistent with the other similar permits.

22. During all types of operation, including startup (cold, warm and hot) and, 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 NO_x emission reductions can occur with a reasonable level of ammonia slip. ~~The minimum catalyst face temperature shall be determined during the final design phase of this project and shall be submitted to the District at least 30 days prior to commencement of construction.~~ The District may administratively modify the temperature as necessary following any replacement of the SCR catalyst material. [District Rule 2201]
23. ~~The District shall administratively add the minimum temperature limitation established pursuant to the above condition in the final Permit to Operate.~~ [District Rule 2201]

NCPA has completed the testing required by the following condition in November 2012 before the end of the commissioning period. Therefore, the following changes are recommended.

46. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted ~~before the end of the commissioning period and~~ at least once every seven years ~~thereafter~~. CEM relative accuracy for NO_x 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 NO_x and CO startup emission limits, then startup and shutdown NO_x and CO testing shall be conducted every 12 months. If an annual startup and shutdown NO_x and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NO_x and CO testing frequency shall return to the once every seven years schedule. [District Rule 1081]
47. Source testing to determine compliance with the NO_x, CO, VOC and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted ~~before the end of commissioning period and~~ at least once every 12 months ~~thereafter~~. [District Rules 2201 and 4703, 40 CFR 60.4400(a)]

NCPA has supplied the amount of offsets required by the District as well as the CEC. Therefore, offset conditions should not be included in the permit associated with this project.

70. Prior to operating under ATCs N-2697-5-0 and N-2697-7-0, the permittee shall mitigate the following quantities of NO_x: 1st quarter: 38,348 lb, 2nd quarter: 38,721 lb, 3rd quarter: 37,436 lb, and 4th quarter: 38,150 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]
71. NO_x ERCs S-2857-2, S-2848-2, S-2849-2, S-2850-2, S-2851-2, S-2852-2, S-2854-2, S-2855-2, C-915-2, C-916-2, C-914-2, N-755-2, N-754-2, S-2894-2 and S-2895-2 (or a certificate split from any of these certificates) shall be used to supply the required NO_x offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201] Y
72. Prior to operating under ATCs N-2697-5-0 and N-2697-7-0, the permittee shall mitigate the following quantities of VOC: 1st quarter: 8,240 lb, 2nd quarter: 8,331 lb, 3rd quarter: 8,571 lb, and 4th quarter: 8,477 lb. Offsets shall be provided at the

applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06).
[District Rule 2201]

73. VOC ERC S-2860-1, and NOx ERCs S-2857-2, S-2848-2, S-2849-2, S-2850-2, S-2851-2, S-2852-2, S-2854-2, S-2855-2, C-915-2, C-916-2, C-914-2, N-755-2, N-754-2, S-2894-2 and S-2895-2 (or a certificate split from any of these certificates) shall be used to supply the required VOC offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201]
74. The District has authorized to use NOx reductions to overcome shortfall in the amount of VOC offsets at NOx/VOC interpollutant offset ratio of 1.00. [District Rule 2201]
75. Prior to operating under ATCs N-2697-5-0 and N-2697-7-0, the permittee shall mitigate the following quantities of SOx: 1st quarter: 2,668 lb, 2nd quarter: 2,668 lb, 3rd quarter: 2,668 lb, and 4th quarter: 2,668 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]
76. SOx ERCs S-2843-5, S-2845-5, S-2858-5, N-759-5, N-758-5, S-2846-5 and N-757-5 (or a certificate split from any of these certificates) shall be used to supply the required SOx offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201]
77. Prior to operating under ATCs N-2697-5-0, N-2697-6-0 and N-2697-7-0, the permittee shall mitigate the following quantities of PM10: 1st quarter: 19,112 lb, 2nd quarter: 19,112 lb, 3rd quarter: 19,112 lb, and 4th quarter: 19,112 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 9/21/06). [District Rule 2201]
78. PM10 ERCs S-2844-4, C-911-4, N-756-4, C-913-4, C-912-4, and SOx ERCs S-2843-5, S-2845-5, S-2858-5, N-759-5, N-758-5, S-2846-5 and N-757-5 (or a certificate split from any of these certificates) shall be used to supply the required PM10 offsets, unless a revised offsetting proposal is received and approved by the District. Following the revisions, this Authority to Construct permit shall be re-issued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to re-issuance of this Authority to Construct permit. [District Rule 2201]

79. The District has authorized to use SOx reductions to overcome shortfall in the amount of PM10 offsets at SOx/PM10 interpollutant offset ratio of 1.00. [District Rule 2201]

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct (ATC) permit N-2697-5-1 subject to the permit conditions on the attached draft ATC permit in Appendix I after addressing comments from the applicant, CEC, CARB, EPA and the public.

X. Billing Information

Permit #	Fee Schedule	Fee Description	Previous Fee Schedule
N-2697-5-1	3020-08B-H	294,000 kW Electric Generation Plant	3020-08B-H

Appendices

Appendix I: Draft Authority to Construct Permit

Appendix II: Compliance Certification

Appendix I
Draft Authority to Construct Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-2697-5-1

LEGAL OWNER OR OPERATOR: NORTHERN CALIFORNIA POWER

MAILING ADDRESS: 651 COMMERCE DR
ROSEVILLE, CA 95678

LOCATION: 12745 N THORNTON RD
LODI, CA 95241

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: INCREASE HOURLY CO STARTUP AND SHUTDOWN EMISSION LIMITS, ESTABLISH COMBUSTOR TUNING PERIOD, MODIFY FUEL FLOW METER CONDITION

CONDITIONS

1. {1830} 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. {1831} 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. 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]
4. 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]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 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

N-2697-5-1 : May 7 2013 3:43PM - KAHLOJ : Joint Inspection NOT Required

6. 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
7. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
8. 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
9. 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
10. 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
11. 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
12. 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 NO_x 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
13. 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
14. 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
15. 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
16. 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 NO_x 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
17. 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
18. During start-up, and shutdown and combustor tuning periods, the emissions shall not exceed any of the following limits: NO_x (as NO₂) - 160.00 lb/hr; CO - 1,500.00 lb/hr; VOC (as methane) - 16.00 lb/hr; PM₁₀ - 9.00 lb/hr; SO_x (as SO₂) - 6.10 lb/hr; or NH₃ - 28.76 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
19. 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
20. 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

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CONDITIONS CONTINUE ON NEXT PAGE

21. 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
22. 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
23. 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
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. 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
33. 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

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34. SO_x (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
35. 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
36. 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
37. 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
38. 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
39. 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
40. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted at least once every seven years. CEM relative accuracy for NO_x 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 NO_x and CO startup emission limits, then startup and shutdown NO_x and CO testing shall be conducted every 12 months. If an annual startup and shutdown NO_x and CO relative accuracy audit demonstrates that the CEM data is certifiable, the startup and shutdown NO_x and CO testing frequency shall return to the once every seven years schedule. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Source testing to determine compliance with the NO_x, 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
42. 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
43. The following test methods shall be used: NO_x - 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
44. 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
45. 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
46. 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

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47. 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 NO_x, 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
48. The NO_x 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
49. 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
50. 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
51. 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
52. 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
53. The NO_x 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
54. 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
55. 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
56. 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
57. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, 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

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58. Monitor Downtime is defined as any unit operating hour in which the data for NO_x, O₂ concentrations is either missing or invalid. [40 CFR 60.4380(b)(2)] Federally Enforceable Through Title V Permit
59. 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
60. 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
61. 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
62. 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
63. 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 NO_x 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
64. The owner or operator shall submit to the District information correlating the NO_x control system operating parameters to the associated measured NO_x output. The information must be sufficient to allow the District to determine compliance with the NO_x emission limits of this permit when the CEMS is not operating properly. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit
65. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
66. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
67. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 or Rule 8011. [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
68. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
69. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit

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70. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071] Federally Enforceable Through Title V Permit
71. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rule 8011 and 8071] Federally Enforceable Through Title V Permit
72. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071] Federally Enforceable Through Title V Permit
73. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit
74. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031 and 8071] Federally Enforceable Through Title V Permit
75. 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
76. 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
77. 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
78. 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
79. 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
80. 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
81. 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
82. 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

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83. 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
84. 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
85. 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
86. 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
87. 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
88. 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
Compliance Certification

**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 ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Northern California Power Agency	FACILITY ID: - 2697
1. Type of Organization: <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input checked="" type="checkbox"/> Utility	
2. Owner's Name: Northern California Power Agency	
3. Agent to the Owner: Kevin Cunningham	

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

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

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



Signature of Responsible Official

1-24-13

Date

Kevin Cunningham

Name of Responsible Official (please print)

General Manager, Lodi Energy Center

Title of Responsible Official (please print)