



OCT 12 2012

Bernie Reed
Algonquin Power Sanger, LLC
1125 Muscat Avenue
Sanger, CA 93657-4000

**Re: Notice of Final Action - Title V Permit
District Facility # C-4071
Project # C1110687**

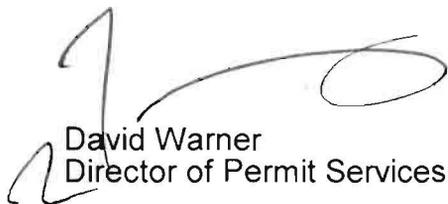
Dear Mr. Reed:

The District has issued the Final Title V Permit for Algonquin Power Sanger, LLC. The preliminary decision for this project was made on August 29, 2012. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation.

The public notice for issuance of the Final Title V Permit will be published approximately three days from the date of this letter.

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

Sincerely,



David Warner
Director of Permit Services

Attachments

cc: Kamaljit Sran, Permit Services Engineer

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
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34946 Flyover Court
Bakersfield, CA 93308-9725
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OCT 12 2012

Gerardo C. Rios, Chief
Permits Office (AIR-3)
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

**Re: Notice of Final Action - Title V Permit
District Facility # C-4071
Project # C1110687**

Dear Mr. Rios:

The District has issued the Final Title V Permit for Algonquin Power Sanger, LLC. The preliminary decision for this project was made on August 29, 2012. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation.

The public notice for issuance of the Final Title V Permit will be published approximately three days from the date of this letter.

I would like to thank you and your staff for working with us. We appreciate your concurrence with this action. Should you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

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OCT 12 2012

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

**Re: Notice of Final Action - Title V Permit
District Facility # C-4071
Project # C1110687**

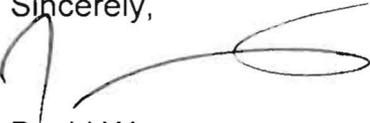
Dear Mr. Tollstrup:

The District has issued the Final Title V Permit for Algonquin Power Sanger, LLC. The preliminary decision for this project was made on August 29, 2012. A summary of the comments and the District's response to each comment is included as an attachment to the engineering evaluation.

The public notice for issuance of the Final Title V Permit will be published approximately three days from the date of this letter.

I would like to thank you and your staff for working with us. Should you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

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Fresno Bee

**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT
NOTICE OF FINAL DECISION TO ISSUE
FEDERALLY MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District has made its final decision to issue the initial Federally Mandated Operating Permit to Algonquin Power Sanger, LLC for its power generation facility located at 1125 Muscat Avenue, Sanger, California.

The District's analysis of the legal and factual basis for this proposed action, project #C1110687, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. For additional information regarding this matter, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900, or contact David Warner, Director of Permit Services, in writing at SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CA 93726-0244.

SANJOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

**TITLE V APPLICATION REVIEW
ALGONQUIN POWER SANGER, LLC
FACILITY # C-4071**

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Title V Application Review

Electric Generation Facility

Project #: C-1110687

Deemed Complete: April 13, 2011

Engineer: Kamaljit Sran

Date: October 12, 2012

Facility Number: C-4071
Facility Name: Algonquin Power Sanger, LLC
Mailing Address: 1125 Muscat Avenue
Sanger, CA 93657

Contact Name: Bernie Reed
Phone: (559) 875-0800

Responsible Official: Michael Griffin
Title: Director, Asset Management

I. PROPOSAL

Algonquin Power Sanger, LLC is proposing that the initial Title V Operating Permit be issued for its existing power generation facility located in Fresno County. The purpose of this engineering evaluation is to identify all applicable requirements, determine if the facility will comply with those applicable requirements, and to provide the legal and factual basis for proposed permit conditions.

Permit unit C-4071-9-3 is currently out of operation and are designated as dormant emission unit by District Permit conditions. A condition has been added to this permit unit, that the permit unit cannot be operated unless facility submits an application to comply with Title V requirements of District Rule 2520. Therefore this permit unit will not be evaluated further in this permitting action.

On August 29, 2012, the District issued public notice of its preliminary decision to issue the initial Title V permit for Algonquin Power Sanger, LLC. In accordance with District Rule 2520, copies of the proposed permit and evaluation were forwarded to the facility, US EPA, and the Californian Air Resources Board. Copies were also made available for public review. The notice of District's preliminary decision was published in Fresno Bee (newspaper of general circulation in Fresno County) on September 75, 2012. During the review period that followed the notice of preliminary decision, the District received formal comments from EPA and Algonquin Power Sanger, LLC. District has addressed these comments (see attachments D and E) and therefore has decided to issue the initial Title V permit to Algonquin Power Sanger, LLC.

II. FACILITY LOCATION

This power generation facility is located at 1125 Muscat Avenue in Sanger in Fresno County, California.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is shown in Attachment A.

A summary of the exempt equipment categories which describe the insignificant activities or equipment at the facility not requiring a permit is shown in Attachment B. This equipment is not exempt from facility-wide requirements.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant is requesting to use the following model general permit Templates:

A. Template SJV-UM-0-3 Facility Wide Umbrella

The applicant has requested to utilize general permit template SJV-UM-0-3, Facility Wide Umbrella. Based on the information submitted in the Template Qualification Form, the applicant qualifies for the use of this template.

Template SJV-UM-0-3 conditions have been added as conditions 1 through 40 for the facility wide requirements (C-4071-0-0).

V. SCOPE OF EPA AND PUBLIC REVIEW

Model general permit templates have been previously subject to EPA and public review. The terms and conditions from the model general permit templates as identified above are not subject to further EPA and public review.

For permit applications utilizing model general permit templates, public and agency comments on the District's proposed actions are limited to the applicant's eligibility for model general permit template, applicable requirements not covered by the model general permit template, and the applicable procedural requirements for issuance of Title V Operating Permits.

The following permit conditions, including their underlying applicable requirements, originate from model general permit templates and are not subject to further EPA and Public review: conditions 1 through 40 for the facility wide requirements (C-4071-0-0).

VI. APPLICABLE REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES

District Rule 1070, Inspections, (as amended December 17, 1992)

District Rule 1100, Equipment Breakdown, (as amended December 17, 1992)

District Rule 2010, Permits Required, (as amended December 17, 1992)

District Rule 2020, Exemptions, (as amended August 18, 2011)¹

District Rule 2031, Transfer of Permits (as amended December 17, 1992)

District Rule 2040, Applications, (as amended December 17, 1992)

District Rule 2070, Standards for Granting Applications (as amended December 17, 1992)

District Rule 2080, Conditional Approval, (as amended December 17, 1992)

District Rule 2201, District New and Modified Stationary Source Review Rule, (as amended April 21, 2011)

District Rule 2520, Federally Mandated Operating Permits, (as amended June 21, 2001), Sections 5.2, 9.1.1, 9.4, 9.5, 9.7, 9.8, 9.9, 9.13.1, 9.13.2, 9.16, and 10.0

District Rule 4101, Visible Emissions, (as amended December 17, 2005)

District Rule 4601, Architectural Coatings, (as amended December 17, 2009)

District Rules 8021, 8031, 8041, 8051, and 8061, Fugitive Dust (PM₁₀) Emissions (as amended August 19, 2004)

District Rule 8071, Fugitive Dust (PM₁₀) Emissions, (as amended Sept. 16, 2004)

40 CFR 61, Subpart M - Asbestos

40 CFR 82, Subpart F - Stratospheric Ozone

VII. APPLICABLE REQUIREMENTS NOT ADDRESSED BY GENERAL PERMIT TEMPLATES

District Rule 1080, Stack Monitoring, (as amended December 17, 1992)

¹ The amendments made to this rule on August 18, 2011 have no impact to this source; therefore template SJV-UM-D-3 is still valid for this project.

District Rule 1081, Source Sampling, (as amended December 16, 1993)

District Rule 4201, Particulate Matter Concentration, (as amended December 17, 1992)

District Rule 4702, Internal Combustion Engines – Phase 2 (Amended August 18, 2011)

District Rule 4703, Stationary Gas Turbines, (as amended September 20, 2007)

District Rule 4801, Sulfur Compounds, (as amended December 17, 1992) (Non SIP replacement for Fresno County Rule 407)

40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines

40 CFR 60 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

40 CFR 63 Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

40 CFR 63 Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR Part 64 - Compliance Assurance Monitoring (CAM)

40 CFR Part 72 - Acid Rain Program

VIII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permit. The terms and conditions that are part of the facility's Title V permit are designated as "Federally Enforceable Through the Title V Permit".

The facility is subject to the following District rules which are not currently Federally Enforceable:

1. District Rule 4102 – Nuisance

For this facility, conditions 41 of the facility wide requirements, condition 2 of the requirements for permit unit C-4071-4-1, and condition 19 of the requirements for

permit unit C-4071-8-3 are based on the rules identified above and are not Federally Enforceable Through the Title V Permit.

2. District Rule 7012 - Hexavalent Chromium - Cooling Towers

For this facility, condition 2 of the requirements for permit unit C-4071-7-1 is based on the rules identified above and is not Federally Enforceable Through the Title V Permit.

3. Title 17 CCR, Section 93115, Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

a. Emergency IC Engines C-4071-3-2 & -4-1

Conditions 2, 7, 9, and 10 for the requirements for permit unit C-4071-3-2 and conditions 6, 7, 8, 9, 10, 11, and 12 for the requirements for permit unit C-4071-4-1 are based on this rule.

IX. COMPLIANCE

A. Requirements Addressed by Model General Permit Templates

1. Facility Wide Requirements (C-4071-0-0)

The applicant is proposing to use a general permit template to address federally applicable facility wide requirements. Section IV of template SJV-UM-0-3 includes a demonstration of compliance for all applicable requirements. Template conditions have been added to the facility wide requirements (C-4071-0-0) as condition numbers 1 through 40 to assure compliance with these requirements.

B. Requirements Not Addressed by Model General Permit Templates

1. District Rule 2201 New and Modified Stationary Source Review Rule

a. 208 HP Cummins Diesel Fired Emergency IC Engine (C-4071-3-2)

The permit unit was subject to the District NSR Rule upon application for Authority to Construct (ATC). In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 from the PTO was included as condition 41 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.

- Condition 2 from the PTO was included as condition 1 of the requirements for this permit unit.
- Condition 3 from the PTO was included as condition 22 of the facility wide requirements.
- Condition 4 from the PTO was included as condition 5 of the requirements for this permit unit.
- Conditions 5, 6 & 7 from the PTO were included as conditions 2, 3, & 4 of the requirements for this permit unit.
- Conditions 8, 9 & 10 from the PTO were included as conditions 7, 8, & 9 of the requirements for this permit unit.
- Condition 11 from the PTO was not included as in the requirements for this permit unit, since requirement is now obsolete.
- Condition 12 from the PTO was included as condition 10 of the requirements for this permit unit.

b. 174 Caterpillar Diesel Fired Emergency IC Engine (C-4071-4-1)

The permit unit was subject to the District NSR Rule upon application for Authority to Construct (ATC). In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 from the PTO was included as condition 1 of the requirements for this permit unit.
- Condition 2 from the PTO was included as condition 2 of the requirements for this permit unit.
- Condition 3 from the PTO was included as condition 41 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Condition 4 from the PTO was included as condition 5 of the requirements for this permit unit.
- Condition 5 from the PTO was included as condition 22 of the facility wide requirements.
- Conditions 6, 7 & 8 from the PTO were included as conditions 6, 7, & 8 of the requirements for this permit unit.
- Conditions 9 & 10 from the PTO were included as conditions 3 & 4 of the requirements for this permit unit.
- Conditions 11 through 15 from the PTO were included as conditions 9 through 13 of the requirements for this permit unit.
- Condition 16 from the PTO was not included as in the requirements for this permit unit, since requirement is now obsolete.
- Condition 17 from the PTO was included as condition 14 of the requirements for this permit unit.

c. Cooling Tower (C-4071-7-1)

This permit unit was subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 & 3 from the PTO were included as conditions 1 & 2 of the requirements for this permit unit.
- Conditions 2 & 4 from PTO were included as conditions 41 & 22 of the facility-wide requirements C-4071-0-0.

d. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

These permit units were subject to the District NSR Rule at the time the applicant applied for an Authority to Construct. In accordance with the White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 & 2 from the PTO were included as conditions 1 & 2 of the requirements for this permit unit.
- Condition 3 from the PTO was included as condition 41 of the facility wide requirements. This condition is not federally enforceable because it is based on the public nuisance requirements of the California Health and Safety Code rather than a federally applicable requirement.
- Condition 4 from the PTO was included as condition 3 of the requirements for this permit unit.
- Condition 5 from the PTO was included as condition 22 of the facility wide requirements.
- Conditions 6 through 33 from the PTO were included as conditions 4 through 31 of the requirements for this permit unit.
- Conditions 34 & 35 from the PTO were included as conditions 1 & 2 of the facility-wide requirements C-4071-0-1. These conditions specify breakdown requirement of District Rule 1100.
- Conditions 36 through 39 from PTO were included as conditions 32 through 35 of the requirements for this permit unit.
- Condition 40 from PTO was included as condition 37 of the requirements for this permit unit.

2. District Rule 1081 Source Monitoring

a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

This rule grants the APCO the authority to request the installation, use maintenance, and inspection of continuous emission monitoring equipment. The general, source, and pollutant specific requirements for continuous emission monitoring equipment (CEM) are defined. This rule also specifies the performance standards for the equipment and administrative recordkeeping, reporting, and violation and equipment breakdown notification requirements.

Section 6.3 requires that calibration gas mixtures shall meet the specifications in 40 CFR, Part 51, Appendix P, Section 3.3, and Part 60, Appendix B, Performance Specification 2, Section 2.1, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the Environmental Protection Agency.

Section 6.4 requires that cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the Environmental Protection Agency.

Section 6.5 requires that the continuous SO₂ and NO_x monitors meet the applicable performance specification requirements in 40 CFR, Part 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the Environmental Protection Agency.

Section 6.6 requires that the continuous CO₂ and O₂ monitoring system shall meet the performance specification requirements in 40 CFR, Part 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the Environmental Protection Agency.

Section 6.7 requires that the continuous opacity monitoring system shall meet the performance specification requirements in 40 CFR, Part 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the Environmental Protection Agency.

Section 7.1 requires that a person operating or using a stack-monitoring system shall, upon written notice from the APCO, provide a summary of the data obtained from such systems. This summary of data shall be in the form and the manner prescribed by the APCO.

Section 7.2 requires that data shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through

5.3.3, or by other methods deemed equivalent by mutual agreement of the District, the ARB and the Environmental Protection Agency.

Section 7.3 requires that records from the monitoring equipment shall be kept by the owner for a period of two (2) years. The records shall be in permanent form, shall be suitable for inspection and shall be made available to the ARB and the District upon request. The records shall at a minimum include:

7.3.1 The occurrence and duration of any start-up, shutdown or malfunction in the operation of any affected facility;

7.3.2 Performance testing, evaluations, calibrations, checks, adjustments and maintenance of any continuous emission monitors that have been installed pursuant to this rule; and

7.3.3 Emission measurements.

Section 8.0 requires that owners or operators subject to Section 4.0 shall submit a written report for each calendar quarter to the APCO. The report is due by the 30th day following the end of the calendar quarter and shall include:

8.1 Time intervals, data and magnitude of excess emissions, nature and cause of the excess (if known), corrective actions taken and preventive measures adopted.

8.2 Averaging period used for data reporting corresponding to averaging period specified in the emission test period used to determine compliance with an emission standard for the pollutant/source category in question.

8.3 Time and date of each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs and adjustments.

8.4 A negative declaration when no excess emissions occurred.

8.5 Reports on opacity monitors giving the number of three (3) minute periods during which the average opacity exceeded the standard for each hour of operation. The averages may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four (4) equally spaced instantaneous opacity measurements per minute. Any time period exempted shall be considered before determining the excess averages of opacity.

Section 9.0 requires that a violation of emission standards of these rules, as shown by the stack-monitoring system, shall be reported by such person to the Air Pollution Control Officer within 96 hours.

Section 10.0 requires that in the event of a breakdown of monitoring equipment, the owner shall notify the APCO as soon as reasonably possible, but no later than eight (8) hours after its detection, unless the owner or operator demonstrates to the APCO's satisfaction that a longer reporting period was necessary, and shall initiate repairs. The owner shall inform the APCO of the intent to shut down any monitoring equipment at least 24 hours prior to the event.

Section 11.0 requires that the APCO or an authorized representative shall inspect, as he determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly.

Conditions 27 through 32 of the requirements for permit units C-4071-8-3 assure compliance with this rule.

3. District Rule 1081 Source Sampling

- a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

Sections 3.0, 4.0, 5.0, 6.0, and 7.0 of the District Rule 1081 set forth requirements for sampling facilities, collection of samples, test methods, test procedures, and administrative requirements, respectively. These requirements are covered by conditions 20 through 24 of the requirements for permit units C-4071-8-3.

4. District Rule 2520 Federally Mandated Operating Permits

- a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

Section 9.3.2 requires that each permit shall contain all emissions monitoring and analysis procedures or test methods required under the applicable requirements, periodic monitoring to yield reliable data for the relevant time period that are representative of the source's compliance with the permit where applicable requirements do not require periodic testing or instrumental or non-instrumental monitoring. Condition 36 of the requirements for permit units C-4071-8-3 assures compliance with this section.

There are no federally applicable Greenhouse Gas (GHG) requirements for this source. It should be noted that the Mandatory Greenhouse Gas Reporting rule (40CFR Part 98) is not included in the definition of an

applicable requirement within Title V (per 40CFR 71.2). Therefore, there will be no further discussion of GHG in this evaluation.

5. District Rule 4201 Particulate Matter Concentration

Section 3.0 prohibits the discharge into the atmosphere of dust, fumes, or total suspended particulate matter from any single source operation in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

- a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

Compliance with the Particulate Matter (PM) emission limit of 0.1 gr/dscf is expected because the gas turbines are fired on pipeline quality (low-sulfur) natural gas. Results from source tests of natural gas fired-turbines in the San Joaquin Valley indicate emission rates of approximately 0.001 gr/dscf of PM. AP-42 (4/00), Table 3.1-2a lists a total PM emission rate of 6.6×10^{-3} lb/MMbtu (6.6 lb/scf assuming 1,000 btu per scf). This rate will be used to show compliance in the equation below.

The expected concentration of PM emitted from the natural gas-fired turbines is shown by the following equation:

$$\left(\frac{6.6 \text{ lb} - \text{PM}}{10^6 \text{ scf}} \right) \times \left(\frac{1,000 \text{ scf}}{10^6 \text{ Btu}} \right) \times \left(\frac{7,000 \text{ grains}}{\text{lb}} \right) \times \left(\frac{10^6 \text{ Btu}}{8,710 \text{ dscf}} \right) = 0.0053 \frac{\text{grain}}{\text{dscf}}$$

Where:

$$\frac{6.6 \text{ lb} - \text{PM}}{10^6 \text{ scf}} = \text{Emission Factor (AP-42 (4/00), Table 3.1-2a)}$$

$$\frac{10^6 \text{ Btu}}{8,710 \text{ dscf}} = \text{F Factor (40 CFR 60, Appendix A-7, Table 19-1)}$$

0.0053 gr/dscf < 0.1gr/dscf; therefore natural gas-fired turbines will be in compliance with the emission limit of this rule.

- b. Emergency IC Engines C-4071-3-2 & -4-1

Per the CAPCOA/CARB/EPA IX Title V Periodic Monitoring Recommendations memo, dated July 2001, diesel-fired emergency IC engines do not need to be source tested for compliance with the District's grain loading limit of 0.1 grain/dscf as long as the Permit to Operate contain following conditions:

- 1) Engine usage is limited to maintenance, testing, and time of actual unforeseen emergencies.

- 2) Usage for maintenance and testing is not to exceed 200 hours per year.
- 3) Maintain records of all engine usage and maintenance.

6. District Rule 4702 Internal Combustion Engines – Phase 2

a. Emergency IC Engines C-4071-3-2 & -4-1

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. This rule applies to any internal combustion engine with a rated brake horsepower greater than 50 horsepower. Section 4.3 provides that except for the administrative requirements of section 6.2.3, the requirements of this rule shall not apply to an engine that is: (a) operated exclusively to preserve or protect property, human life, or public health during a disaster or state of emergency, such as a fire or flood; (b) except for operations associated with (a), limited to operate no more than 100 hours per calendar year as determined by an operational nonresettable elapsed operating time meter, for periodic maintenance, periodic readiness testing, and readiness testing during and after repair work of the engine, and (c) operated with a nonresettable elapsed operating time meter. In lieu of installing a nonresettable time meter, the owner of an engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

Section 6.2.3 requires that an owner claiming an exemption under section 4.3 shall maintain annual operating records. This information shall be retained for at least five years, shall be readily available, and provided to the APCO upon request. The records shall include, but are not limited to, the following: total hours of operation, the type of fuel used, the purpose for operating the engine, for emergency standby engines, all hours of nonemergency and emergency operation shall be reported, and other support documentation necessary to demonstrate claim to the exemption.

Conditions 5 through 10 of permit unit C-4071-3-2, conditions 6, 7, and 9 through 14 of permit unit C-4071-4-1 ensure compliance with requirements of this rule.

7. District Rule 4703 Stationary Gas Turbines

a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

The purpose of this rule is to limit NO_x emissions from stationary gas turbine systems. Pursuant to Section 2.0, this rule applies to all stationary gas

turbine systems, which are subject to District permitting requirements, and with ratings equal to or greater than 0.3 megawatt (MW) and/or a maximum heat input rating of more than 3,000,000 Btu per hour.

Emissions during periods of thermal stabilization and reduced load are not subject to the emissions requirements of this rule, as exempted by Sections 5.1 and 5.2.

Section 5.1.2 of this rule specifies the NO_x limits that the turbines must meet. The turbines at the facility must meet Tier 2 emission limits. Table 5-2 of this rule limits the NO_x emissions from combined cycle and/or simple cycle, stationary gas turbine systems rated at greater than 10 MW and allowed to operate more than 876 hours per year to 5 ppmv @ 15% O₂ (Standard Compliance Option) and 3 ppmv @ 15% O₂ (Enhanced Compliance Option). The gas turbine is currently permitted at 5 ppmv NO_x @ 15% O₂ and therefore meets this limit.

Condition 14 of the permits for units C-4071-8-3 limits emissions to a maximum of 5.0 ppmv NO_x @ 15% O₂, therefore compliance with the section 5.1.2 is assured.

This section also requires that NO_x emissions concentrations measured for compliance with Section 5.0 shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with either the applicable test method in Section 6.4, or, if continuous emission monitors are used, all applicable requirements of 40 CFR Part 60, as detailed in Section 6.2. The units are required to measure NO_x over a one-hour period, which is more stringent than the requirement of the section. Therefore compliance is expected.

Section 5.2 requires that the owner or operator of any stationary gas turbine system shall not operate such unit under load conditions, excluding the thermal stabilization period and the reduced load period, which results in the measured CO emissions concentration exceeding the compliance 200 ppmv CO @ 15% O₂. The gas turbine is currently permitted at 35.2 ppmv CO @ 15% O₂, and meets this limit.

Condition 14 of the permits for units C-4071-8-3 limits emissions to a maximum of 35.2 ppmv CO @ 15% O₂, therefore compliance with the section 5.1.2 is assured.

Section 6.1 requires that the owner or operator of any existing stationary gas turbine system, unless exempted in Section 6.1.5, shall submit, to the APCO for approval, an emissions control plan of all actions, including a schedule of increments of progress, which will be taken to comply with the requirements of the applicable NO_x Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0.

Section 6.2.3 requires that for units 10 MW and greater that operated an average of more than 4,000 hours per year over the last three years before August 18, 1994, the owner or operator shall monitor the exhaust gas NO_x emissions. The NO_x monitoring system shall meet EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 2, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13, or other systems that are acceptable to the EPA. The owner or operator shall submit to the APCO information demonstrating that the emission monitoring system has data gathering and retrieval capability. Gas turbines at this facility are equipped with CEMS system.

Section 6.2.4 requires that the owner or operator shall maintain all records for a period of five years from the date of data entry and shall make such records available to the APCO upon request.

Section 6.2.6 requires that the owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local time start-up and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used (liquid/gas).

Section 6.3.1 requires that the owner or operator of any stationary gas turbine systems subject to the provisions of Section 5.0 of this rule shall provide source test information annually regarding the exhaust gas NO_x and CO concentrations.

Section 6.4 requires that the specific test methods shall be used unless otherwise approved by the APCO and EPA. Since the combustion turbines comply with the Tier 2 NO_x emissions limits and CEMS are installed and operated, the determination of turbines' EFF to demonstrate compliance with NO_x emissions level of Tier 1 will not be required.

Section 7.0 specifies compliance schedule for the turbines subject to the requirement of section 5.0. These turbines are currently in compliance with the Tier 2 emissions limit requirements.

Conditions 21, 23, 25, 26, 34, and 35 of the requirements for permit unit C-4071-8-3 assure compliance with this rule

8. District Rule 4801 Sulfur Compounds

District Rule 4801 has been submitted to the EPA to replace Fresno County Rule 407, which is in the SIP. District Rule 4801 is as stringent as Fresno County Rule 407, as shown below in Table 1.

Table 1 - Comparison of District Rule 4801 and Fresno County Rule 407

REQUIREMENTS	District Rule 4801	Fresno County Rule 407
a person shall not discharge into the atmosphere sulfur compounds exceeding in concentration at the point of discharge 0.2 percent by volume calculated as sulfur dioxide on a dry basis averaged over 15 consecutive minutes.	✓	✓
EPA Method 8 and ARB Method 1-100 shall be used to determine such emissions.	✓	

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

- a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

The following analysis shows that these turbines comply with the sulfur compound emissions limit. The combustion equation for natural gas is (neglecting NO_x and SO_x relative to O₂ in the exhaust):

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO₂
 T (Standard Temperature) = 60°F = 520°R
 P (Standard Pressure) = 14.7 psi
 R (Universal Gas Constant) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$

SO_x emissions from the turbines are based on combusting the fuel with a total fuel sulfur (S) content of 1.0 grain per 100 scf, which results in a SO_x emission rate of 0.003 lb/MMBtu

$$\frac{0.003 \text{ lb SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}} \times \frac{520 \text{ °R}}{14.7 \text{ psi}} \times \frac{1,000,000 \text{ parts}}{\text{million}} = 2.0 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = $2.0 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$

Condition 5 of permit unit C-4071-8-3 ensures compliance with requirements of this rule.

- b. Emergency ICE Engines C-4071-3-2, & -4-1

Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used in this engine. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

n = moles SO₂

T (standard temperature) = 60 °F or 520 °R

$$R \text{ (universal gas constant)} = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$$

$$\frac{0.000015 \text{ lb-S}}{\text{lb-fuel}} \times \frac{7.1 \text{ lb}}{\text{gal}} \times \frac{64 \text{ lb-SO}_2}{32 \text{ lb-S}} \times \frac{1 \text{ MMBtu}}{9,051 \text{ scf}} \times \frac{1 \text{ gal}}{0.137 \text{ MMBtu}} \times \frac{\text{lb-mol}}{64 \text{ lb-SO}_2} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb-mol} \cdot \text{°R}} \times \frac{520 \text{°R}}{14.7 \text{ psi}} \times 10^6 = 1.0 \text{ ppmv}$$

Since 1.0 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801.

Condition 2 of the requirements for permit unit C-4071-3-2 and condition 8 of the requirements for permit unit C-4071-4-1 ensure compliance with requirements of this rule.

9. 40 CFR 60 Subpart GG

- a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

Compliance with Standards for NO_x Emission Concentration Limit - 60.332, 60.334, and 60.335:

The gas turbines at this facility are subject to the requirements of this subpart. Section §60.332(a), Standard for nitrogen oxides, requires that NO_x emissions from any turbine with rate heat greater than 100 MMBtu/hr be less than the standards calculated as:

$$\text{STD} = 0.0075 \times (14.4)/(Y) + F$$

where:

- STD = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).
 Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.
 F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

The lowest STD value calculated is when Y is equal to 14.4 and F is equal to 0. Under this condition, the STD calculated to be 0.0075% by volume @ 15% O₂ or 75 ppmvd @ 15% O₂. The NO_x emissions from the turbine are

currently limited to 5.0 ppmvd @ 15% O₂. Therefore, compliance with NO_x emissions standard of this subpart is expected.

Section 60.334 specifies monitoring and reporting requirements. The turbines are not equipped with water injection system; therefore, the water injection system monitoring requirements from sections 60.334(a), (b), (d), and (g) are not applicable.

Section 60.334(c) states that for any turbine that commenced construction, reconstruction, or modification after October 3, 1977, but before July 8, 2004, and which does not use steam or water injection to control NO_x emissions, the owner or operator may, for purposes of determining excess emissions, use a CEMS that meets the requirements of paragraph (b) of the section. All turbines at the facility are equipped with CEMS for NO_x, CO, and O₂. Therefore, the requirements of the section are met.

The construction of the turbines did not commence after July 8, 2004; therefore, requirements from sections 60.334(d), (e), and (f) are not applicable.

Compliance with Standard for SO_x Emission Concentration Limit - 60.333, 60.334, and 60.335:

60.333(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015% by volume at 15% oxygen and on a dry basis.

60.333(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel, which contains sulfur in excess of 0.8% by weight (8000 ppmw).

60.334(h)(3) 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) demonstrated by representative fuel sampling data which shows that sulfur content of gas does not exceed 1.0 gr/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of Appendix D of 40 CFR part 75 is required.

Because turbines are required to combust natural gas with fuel sulfur content of 1.0gr/100 scf or less, compliance is assured with the 60.333(a) emission limit of 150 ppmv SO₂ (dry std. conditions at 15% O₂), 60.333(b) fuel sulfur limit of 0.8% by weight. Therefore, as demonstrated below, the proposed requirements of 0.75 gr/100 scf, assure compliance with all otherwise applicable requirements.

Compliance is expected as shown by the following calculations at 1.0 grain of total sulfur per 100 standard cubic feet of gas, assuming all sulfur is converted to SO₂.

$$\%S(\text{lb/lbNG}) = \left(\frac{1.0 \text{ gr}}{100 \text{ scf}} \right) \left(\frac{1 \text{ lb}}{7000 \text{ gr}} \right) \left(\frac{24.5 \text{ L}}{\text{mol NG}} \right) \left(\frac{1 \text{ mol}}{16 \text{ g}} \right) \left(\frac{454 \text{ g}}{1 \text{ lb}} \right) \left(\frac{0.035 \text{ scf}}{1 \text{ L}} \right) (100)$$

= 0.0035% sulfur by weight

$$\text{lb SO}_2/\text{scf gas} = (0.000035)(1 \text{ lb}/23.8 \text{ scf gas})(64 \text{ lb SO}_2/32 \text{ lb S})$$

$$= 2.94 \text{ E}^{-6} \text{ lb SO}_2/\text{scf gas}$$

$$\text{lb SO}_2/V_{\text{exhaust}} = (\text{lb SO}_2/\text{scf gas}) \div (\text{F factor}) (\text{Btu content of natural gas})$$

$$\left(\frac{\text{lb SO}_2}{V_{\text{exhaust}}} \right) = \frac{\left(2.94 \text{ E}^{-6} \frac{\text{lb SO}_2}{\text{scf gas}} \right) \left(\frac{10^6 \text{ Btu}}{\text{MMBtu}} \right)}{\left(8710 \frac{\text{dscf}}{\text{MMBtu}} \right) \left(1000 \frac{\text{Btu}}{\text{scf}} \right)} = 3.3 \text{ E}^{-7} \frac{\text{lb SO}_2}{\text{dscf exhaust}}$$

$$V_{\text{SO}_2}/V_{\text{exhaust}} = nRT/P$$

where,

$$n = \text{moles SO}_2 = (3.35 \text{ E}^{-7} \text{ lb SO}_2/\text{dscf exhaust}) / (64 \text{ lb SO}_2/\text{lb-mol})$$

$$R = \text{universal gas constant} = 10.73 \text{ psi-ft}^3/\text{lb-mol-R}$$

$$T = \text{standard temperature} = 60 \text{ }^\circ\text{F} = 520 \text{ }^\circ\text{R}$$

$$P = \text{standard pressure} = 14.7 \text{ psi}$$

$$\text{Therefore, } \left(\frac{V_{\text{SO}_2}}{V_{\text{exhaust}}} \right) = \frac{\left(\frac{3.3 \text{ E}^{-7} \text{ lb SO}_2}{\text{dscf exhaust}} \right) \left(\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mole} \cdot \text{R}} \right) (520 \text{ }^\circ\text{R})}{\left(\frac{64 \text{ lb SO}_2}{\text{lb} \cdot \text{mol}} \right) (14.7 \text{ psi})} = 2.0 \text{ E}^{-6} \frac{\text{dscf}}{\text{dscf exhaust}} = 2.0 \text{ ppmv dry}$$

Diluting it to 15% O₂

$$\text{ppmv @ 15\% O}_2 = \text{ppmv dry} \times \left(\frac{20.9 - 15}{20.9} \right) \ll 0.56 \text{ ppmv} \ll 150 \text{ ppmv}$$

Therefore, compliance with SO_x emissions standards of this subpart is expected

10. 40 CFR 60 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

- a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

The EPA promulgated this new NSPS that would apply to new stationary combustion turbines greater than or equal to 1 MW that commence construction, modification or reconstruction after February 18, 2005.

These gas turbines were initially constructed before February 18, 2005 and not been modified or reconstructed since. Therefore requirements of this NSPS are not applicable.

11. 40 CFR 63 Subpart Q—National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

a. Cooling Tower (C-4071-7-1)

Per § 63.402, no owner or operator of shall use chromium-based water treatment chemicals in any cooling tower.

Condition 2 of the requirements for permit unit C-4071-7-1 ensures compliance this requirement.

12. 40 CFR 63 Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

This subpart applies to stationary combustion turbines that are located at a major source of HAP emissions is a contiguous site under common control that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year.

Per condition District's emissions inventory, this facility is not major source of HAP emissions, requirements of this subpart does not apply.

13. 40 CFR Part 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

a. Emergency ICE Engines C-4071-3-2 & -4-1

The requirements of 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, are applicable to owners and operators of a stationary RICE located at a major or area source of HAP emissions. This facility is not a major source of HAP emissions and is therefore, by definition, and area source of HAP emissions. Therefore, the requirements of this subpart are applicable to these engines

The subject engines were installed before 2006; therefore, as defined by Section 63.65.90(iii), these engines can be classified as existing stationary RICE. In accordance with Section 63.6595, the emission limitations and

operating limits for existing stationary RICE at an area source of HAP emissions do not become applicable until May 1, 2013 for compression ignited engines. However, the requirements of this regulation will be included in this project for future reference.

§63.6603(a), states the owner or operator of an existing emergency stationary RICE located at an area source of HAP emissions must comply with the requirements listed in Table 2(d)(4) & (d)(5).

Table 2d - Requirements for Existing Stationary RICE Located at Area Sources:

For each	except during periods of startup you must	During periods of startup you must
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;	N/A
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. ²	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	N/A
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	N/A

²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

The following condition ensure compliance with the requirements of this section:

- {Effective May 3, 2013} The permittee shall change oil and filter every 500 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR Part 63.6603(a)]

§63.6625(f), states the owner or operator of an existing emergency CI stationary RICE located at an area source of HAP emissions must install a non-resettable hour meter if one is not already installed.

Existing condition 5 of the requirements for permit units C-4071-3-2 and condition 6 of the requirements for permit unit C-4071-4-1 ensure compliance with requirements of this section.

§63.6625(f)(ii), states the owner or operator of an existing emergency CI stationary RICE located at an area source of HAP emissions may operate the emergency stationary RICE for the purpose of maintenance checks

and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

Existing condition 7 of the requirements for permit units C-4071-3-2 and condition 9 of the requirements for permit unit C-4071-4-1 ensure compliance with requirements of this section.

§63.6625(h), states the owner or operator of an existing stationary RICE must minimize the engine's time spent at idle during start and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all time other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

The Table 2d applicable to existing stationary RICE located at area sources of HAP emissions does not specify any startup requirements for emergency engines.

§63.6640(f) applies to emergency stationary RICE. The facility shall operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If the facility does not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

Operation of these engines is restricted by District Rule 4702 to maintenance, testing, and required regulatory purposes, and during emergency situations. Therefore requirement of this section is pre-empted by requirements of District Rule 4702.

The operator must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

Table 6 to Subpart ZZZZ of Part 63 - Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

For each	Complying with the requirement to	You must demonstrate continuous compliance by
9. Existing emergency and black start stationary RICE located at an area source of HAP	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Existing condition 6 of the requirements for permit units C-4071-3-2 and condition 7 of the requirements for permit unit C-4071-4-1 ensure compliance with requirements of this section.

§63.6655(a) states, the operator must keep the records described belows:

- (4) Records of all required maintenance performed on the air pollution control and monitoring equipment.
- (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

§63.6655(d) states the operator must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies.

§63.6655(e) states the operator shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the facility operated and maintained the stationary RICE and after-treatment control device (if any) according to the facility's own maintenance plan if the following stationary RICE are owned or operated:

- (2) An existing stationary emergency RICE.
- (3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

§63.6655(f) states that an owner or operator of any of an existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand

response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

Existing condition 9 of the requirements for permit units C-4071-3-2 and condition 13 of the requirements for permit unit C-4071-4-1 ensure compliance with requirements of this section.

14. 40 CFR Part 64, Compliance Assurance Monitoring (CAM)

40 CFR Part 64 requires Compliance Assurance Monitoring (CAM) for units that meet the following three criteria:

- 1) the unit must have an emission limit for the pollutant;
- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
- 3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

a. Emergency ICE Engines C-4071-3-2 & -4-1

These emission units are not equipped with add-on control for any criteria pollutants. Therefore, these units are not subject to CAM for any criteria pollutants.

b. Cooling Tower C-4071-7-1

This emissions unit is not equipped with add-on control for any criteria pollutants. Therefore, the unit is not subject to CAM for any criteria pollutants.

c. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

Pursuant to §64.2(b)(J)(vi), the requirements of this part are not applicable to emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1. This facility has CEMS to monitor NO_x and CO emissions from the gas turbine; therefore, the gas turbine is exempt from the requirements of this part.

15. 40 CFR 72, Acid Rain Program

a. 49 MW GE LM-6000 Natural Gas-Fired Turbine Engine/Electrical Generator (C-4071-8-3)

Per the paragraph (b) (4) (i) of 40 CFR 72.6, the following types of units are not affected units subject to the requirements of the Acid Rain Program:

A cogeneration facility which for a unit that commenced construction on or prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 MWe-hrs actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis).

Potential output capacity of the Algonquin Power Sanger is = 49 MWe x 8760 hrs/year = 429,240 MWe-hrs

Actual output of the Algonquin Power Sanger is = 49 MWe x 3,300 hrs/year = 161,700 MWe-hrs

Since Actual output of the Algonquin Power Sanger is less than 219,000 MWe-hrs, it is exempt from the requirements of the Acid Rain Program.

X. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Operating Permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

A. Requirements Addressed by Model General Permit Templates

a. SJV-UM-0-3, Facility-Wide Umbrella General Permit Template

By submitting model general permit template SJV-UM-0-3, the applicant has requested that a permit shield be granted for all the applicable requirements identified by the template. Therefore, the permit shield, as granted in the model general template is included as condition 39 and 40 of the facility wide requirements (C-4071-0-0).

XI. PERMIT CONDITIONS

See attached Operating Permits.



Permit to Operate

FACILITY: C-4071

EXPIRATION DATE: 05/31/2017

LEGAL OWNER OR OPERATOR:

ALGONQUIN POWER SANGER LLC

MAILING ADDRESS:

PO BOX 397
SANGER, CA 93657-0397

FACILITY LOCATION:

1125 MUSCAT AVE
SANGER, CA 93657

FACILITY DESCRIPTION:

POWER GENERATION

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

Seyed Sadredin

Executive Director / APCO

David Warner

Director of Permit Services

San Joaquin Valley Air Pollution Control District

FACILITY: C-4071-0-0

EXPIRATION DATE: 05/31/2017

FACILITY-WIDE 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, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
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, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.9.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: ALGONQUIN POWER SANGER LLC
Location: 1125 MUSCAT AVE, SANGER, CA 93657
C-4071-0-0 : Oct 15 2012 11:04AM - SRANK

10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit
22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
25. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. 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 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8021 and 8011] Federally Enforceable Through Title V Permit
30. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8031 and 8011] Federally Enforceable Through Title V Permit
31. 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 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8041 and 8011] Federally Enforceable Through Title V Permit
32. 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 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8051 and 8011] Federally Enforceable Through Title V Permit
33. 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 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit
34. Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit
35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
42. On October 31, 2012, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-3-2

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

208 BHP CUMMINS MODEL 6BTA5.9F1 DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115] Federally Enforceable Through Title V Permit
3. Emissions from this engine shall not exceed any of the following limits: 6.63 g-NOx/hp-hr, 3.36 g-CO/hp-hr or 0.33 g-VOC/hp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The PM10 emissions rate shall not exceed 0.25 g/hp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201 and District Rule 4102] Federally Enforceable Through Title V Permit
5. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
8. An emergency situation is an unscheduled event caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit
9. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, emergency fire fighting, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
10. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Effective May 3, 2013, The permittee shall change oil and filter every 500 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR Part 63.6603(a)] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-4-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

174 BHP CATERPILLAR MODEL 3304 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Emissions from this engine shall not exceed any of the following limits: 5.84 g-NOx/bhp-hr, 0.52 g-CO/bhp-hr, or 0.24 g-VOC/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The PM10 emissions rate shall not exceed 0.06 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
8. This engine shall be operated using only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight. [District Rules 2201, 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit
9. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
10. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
11. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] Federally Enforceable Through Title V Permit
13. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 17 CCR 93115, and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
14. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
15. Effective May 3, 2013, The permittee shall change oil and filter every 500 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR Part 63.6603(a)] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-7-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

14,000 GPM COOLING TOWER WITH 2 CELLS AND DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. No hexavalent chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-8-3

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

49 MW NOMINALLY RATED GE MODEL LM-6000 GAS TURBINE/GENERATOR WITH COMBUSTION CONTROLS SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system shall serve the gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Turbine and associated electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
5. The gas turbine shall be fired exclusively on natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [40 CFR 60.333(b) and District Rule 2201] Federally Enforceable Through Title V Permit
6. The rate of fuel consumption shall not exceed 11,000,000 scf per day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Combined natural gas consumption for this gas turbine, the 16.8 MMBtu/hr boiler listed under C-4071-9, and the dryer listed under C-4071-10, calculated on a twelve consecutive month rolling basis, shall not exceed 1,386 MMScf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Annual emissions from this gas turbine, the 16.8 MMBtu/hr boiler listed under C-4071-9, and the dryer listed under C-4071-10, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO₂) - 31,086 lb/year; SOx (as SO₂) - 3,960 lb/year; PM₁₀ - 14,289 lb/year; CO - 122,760 lb/year; or VOC - 21,576 lb/year. Records of annual natural gas consumption for these units shall be maintained to enforce these emissions limits. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During startup periods, gas turbine exhaust emissions shall not exceed any of the following limits: NOx (as NO₂) - 21.9 lb/hr, CO - 66.0 lb/hr, or VOC - 11.6 lb/hr, based on a one hour average. [District Rules 2201, 4102 and 4703] Federally Enforceable Through Title V Permit
10. During shutdown periods, gas turbine stack exhaust emissions shall not exceed any of the following limits: NOx (as NO₂) - 21.9 lb/hr, CO - 66.0 lb/hr, or VOC - 11.6 lb/hr, based on a one hour average. [District Rules 2201, 4102 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Startup or shutdown periods shall be defined as periods of time during which the stack exhaust gas, gas turbine exhaust, and SCR temperature are not within the normal operating temperature range. Startup/shutdown emissions shall be counted toward all applicable emission limits (lb/day and lb/year). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
12. The duration of each startup or shutdown period shall not exceed two hours. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
13. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703] Federally Enforceable Through Title V Permit
14. Emission rates from this unit, except during startup and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 7.6 lb/hr or 5.0 ppmvd @ 15% O₂; SO_x (as SO₂) - 0.25 lb/hr; PM₁₀ - 4.33 lb/hr; CO - 33.0 lb/hr or 35.2 ppmvd @ 15% O₂; or VOC (as methane) - 5.7 lb/hr or 10.9 ppmvd @ 15% O₂. All emission concentration limits are based on three hour rolling averages. [40 CFR 60.332(a)(1), (a)(2) and District Rules 2201 & 4703] Federally Enforceable Through Title V Permit
15. Ammonia (NH₃) emissions shall not exceed 15 ppmvd @ 15% O₂ based on 24 hr rolling average. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
16. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Emissions from this unit, on days when a startup and/or shutdown occurs, shall not exceed the following: NO_x (as NO₂) - 134.0 lb/day; SO_x (as SO₂) - 14.4 lb/day; PM₁₀ - 52.0 lb/day; CO - 496.0 lb/day; or VOC - 87.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c / 1,000,000)) \times (1,000,000 / b)) \times d$, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 4102]
20. Source testing to measure startup NO_x, CO, and VOC mass emission rates shall be conducted at least once every seven years. CEM relative accuracy audit (RAA) shall be determined during startup source testing in accordance with 40 CFR 60, Appendix F. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing to measure 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 four calendar quarters. [District Rules 1081 and 4703] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified no less than 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. 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
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 (front half and back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, ammonia - BAAQMD ST-1B, and fuel gas sulfur content - ASTM D6228 or D5504. NO_x test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703] Federally Enforceable Through Title V Permit
24. 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 Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The turbine shall be equipped with a continuous monitoring system to measure and record hours of operation, mass ratio of water-to-fuel injected and fuel consumption. [District Rules 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO_x, CO, and O₂. The CEMs shall meet the requirements of 40 CFR part 60, Appendices A, B, and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703] Federally Enforceable Through Title V Permit
27. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
28. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
29. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
30. Audits (RAA or CGA) of continuous emission monitors shall be conducted on a calendar quarterly basis, except during calendar quarters in which relative accuracy and total accuracy testing is performed. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO and O₂ CEMS 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. The permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks excluding normal calibration periods or when the monitored source is not in operation) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Permittee shall provide notification and recordkeeping as required under 40 CFR, Part 60, Subpart A, 60.7. [District Rule 4001] Federally Enforceable Through Title V Permit
34. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
35. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
36. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, tariff or transportation contract or (ii) the representative fuel sampling data shows that sulfur content of gas does not exceed 1.0 gr/100 scf. [District Rules 4001 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-9-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

NON-COMPLIANT DORMANT EMISSION UNIT - 16.8 MMBTU HURST MODEL S5-X-400-150 NATURAL GAS-FIRED BOILER WITH POWER FLAME MODEL NVC9-G-30 ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. 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]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
8. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
9. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306 and 4320]
10. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305, 4306 and 4320]
11. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.004 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
12. On and after July 1, 2012, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
13. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

14. If either the NOx or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NOx and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320]
18. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
20. 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]
21. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
26. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306 and 4320]
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

28. Combined natural gas consumption for this boiler, permitted as C-4071-9, and the 49 MW turbine, permitted as C-4071-8, calculated on a twelve consecutive month rolling basis, shall not exceed 1,386 MMScf/year. [District Rule 2201]
29. Annual emissions from this boiler, permitted as C-4071-9, and the 49 MW turbine, permitted as C-4071-8, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 31,086 lb/year; SO_x (as SO₂) - 3,960 lb/year; PM₁₀ - 14,289 lb/year; CO - 122,760 lb/year; or VOC - 21,576 lb/year. Records of annual natural gas consumption for these units shall be maintained to enforce these emissions limits. [District Rule 2201]

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

Attachment A

Equipment Listing

Permit#	Equipment Description
C-4071-3-2	208 BHP CUMMINS MODEL 6BTA5.9F1 DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP
C-4071-4-1	174 BHP CATERPILLAR MODEL 3304 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR
C-4071-7-1	14,000 GPM COOLING TOWER WITH 2 CELLS AND DRIFT ELIMINATOR
C-4071-8-3	49 MW NOMINALLY RATED GE MODEL LM-6000 GAS TURBINE/GENERATOR WITH COMBUSTION CONTROLS SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION
C-4071-9-1	NON-COMPLIANT DORMANT EMISSION UNIT - 16.8 MMBTU HURST MODEL S5-X-400-150 NATURAL GAS-FIRED BOILER WITH POWER FLAME MODEL NVC9-G-30 ULTRA LOW NOX BURNER
C-4071-12-0	TEMPORARY TRANSPORTABLE 133 BHP JOHN DEER MODEL PE4045HF285H TIER 3 CERTIFIED DIESEL-FIRED IC ENGINE POWERING AN ELECTRICAL GENERATOR

Attachment B

Exempt Equipment

The following exempt equipment was identified by the applicant on TVFORM-003, Insignificant Activities

Exemption Category	Rule 2020 Citation	✓
Structure or incinerator assoc. with a structure designed as a dwelling for 4 families or less	4.1	
Locomotives, airplanes, and watercraft used to transport passengers or freight	4.4	
Natural gas or LPG-fired boilers or other indirect heat transfer units of 5 MMBtu/hr or less	6.1.1	
Piston-type i.c. engine with maximum continuous rating of 50 braking horsepower (bhp) or less	6.1.2	✓
Gas turbine engines with maximum heat input rating of 3 MMBtu/hr or less	6.1.3	
Space heating equipment other than boilers	6.1.4	✓
Cooling towers with a circulation rate less than 10,000 gal/min, and that are not used for cooling of process water, or water from barometric jets or condensers++	6.2	
Use of less than 2 gal/day of graphic arts materials	6.3	
Equipment at retail establishments used to prepare food for human consumption	6.4.1	
Ovens at bakeries with total daily production less than 1,000 pounds and exempt by sec. 6.1.1	6.4.3	
Equipment used exclusively for extruding or compression molding of rubber or plastics, where no plastisizer or blowing agent is used	6.5	
Containers used to store clean produced water	6.6.1	
Containers ≤100 bbl used to store oil with specific gravity ≥ 0.8762	6.6.2	
Containers ≤ 100 bbl installed prior to 6/1/89 used to store oil with specific gravity ≥ 0.8762	6.6.3	
Containers with a capacity ≤ 250 gallons used to store org-anic material where the actual storage temperature <150 F	6.6.4	✓
Containers used to store unheated organic material with an initial boiling point ≥ 302 F	6.6.5	
Containers used to store fuel oils or non-air-blown asphalt with specific gravity ≥0.9042	6.6.6	
Containers used to store petroleum distillates used as motor fuel with specific gravity ≥ 0.8251	6.6.7	✓

Exemption Category	Rule 2020 Citation	✓
Containers used to store refined lubricating oils	6.6.8	✓
Unvented pressure vessels used exclusively to store liquified gases or assoc with exempt equipment	6.6.9 or 6.13	
Portable tanks used exclusively to store produced fluids for ≤ six months	6.6.10	
Mobile transport tanks on delivery vehicles of VOCs	6.6.11	
Loading racks used for the transfer of less than 4,000 gal/day of unheated organic material with initial boiling point ≥ 302 F or of fuel oil with specific gravity ≥0.8251	6.7.1.1	
Loading racks used for the transfer of asphalt, crude or residual oil stored in exempt tanks, or crude oil with specific gravity ≥ 0.8762	6.7.1.2	
Equipment used exclusively for the transfer of refined lubricating oil	6.7.2	
Equipment used to apply architectural coatings	6.8.1	✓
Unheated, non-conveyorized cleaning equipment with < 10 ft ² open area; using solvents with initial boiling point ≥ 248 F; and < 25 gal/yr. evaporative losses	6.9	
Brazing, soldering, or welding equipment	6.10	✓
Equipment used to compress natural gas	6.11	✓
Fugitive emissions sources assoc. with exempt equipment	6.12	✓
Pits and Ponds as defined in Rule 1020	6.15	
On-site roadmix manufacturing and the application of roadmix as a road base material	6.17	
Emissions less than 2 lb/day from units not included above	6.19	✓
Venting PUC quality natural gas from for sole purpose of pipeline and compressor repair and or maintenance	7.2	✓
Non-structural repairs & maintenance to permitted equipment	7.3	✓
Detonation of explosives ≤ 100 lb/day and 1,000 lb/year	7.4	

ATTACHMENT C

PERMITS TO OPERATE (PTOs)

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-3-1

EXPIRATION DATE: 05/31/2016

EQUIPMENT DESCRIPTION:

208 BHP CUMMINS MODEL 6BTA5.9F1 DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. 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 I or 20% opacity. [District Rule 4101]
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115]
5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 220, 4801 and 17 CCR 93115]
6. Emissions from this IC engine shall not exceed any of the following limits: 6.63 g-NO_x/bhp-hr, 3.36 g-CO/bhp-hr, or 0.33 g-VOC/bhp-hr. [District Rules 2201 and 13 CCR 2423 and 17 CCR 93115]
7. The PM₁₀ emissions rate shall not exceed 0.25 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115]
8. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems". Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]
9. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
10. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]
11. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
12. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-4-0

EXPIRATION DATE: 05/31/2016

EQUIPMENT DESCRIPTION:

174 BHP CATERPILLAR MODEL 3304 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201]
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. 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]
6. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115]
7. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
8. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115]
9. Emissions from this engine shall not exceed any of the following limits: 5.84 g-NOx/bhp-hr, 0.52 g-CO/bhp-hr, or 0.24 g-VOC/bhp-hr. [District Rule 2201]
10. The PM10 emissions rate shall not exceed 0.06 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201]
11. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702 and 17 CCR 93115]
12. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
13. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
14. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

15. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]
16. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
17. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-7-0

EXPIRATION DATE: 05/31/2016

EQUIPMENT DESCRIPTION:

14,000 GPM COOLING TOWER WITH TWO CELLS AND DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. 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]
4. No hexavalent chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-8-2

EXPIRATION DATE: 05/31/2016

EQUIPMENT DESCRIPTION:

49 MW NOMINALLY RATED GE MODEL LM-6000 GAS TURBINE/GENERATOR WITH COMBUSTION CONTROLS SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM WITH AMMONIA INJECTION

PERMIT UNIT REQUIREMENTS

1. A selective catalytic reduction (SCR) system shall serve the gas turbine engine. Exhaust ducting may be equipped (if required) with a fresh air inlet blower to be used to lower the exhaust temperature prior to inlet of the SCR system catalyst. [District Rule 2201]
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. 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]
6. Turbine and associated electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101]
7. The gas turbine shall be fired exclusively on natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201]
8. The rate of fuel consumption shall not exceed 11,000,000 scf per day. [District Rule 2201]
9. Combined natural gas consumption for this gas turbine, the 16.8 MMBtu/hr boiler listed under C-4071-9, and the dryer listed under C-4071-10, calculated on a twelve consecutive month rolling basis, shall not exceed 1,386 MMScf/year. [District Rule 2201]
10. Annual emissions from this gas turbine, the 16.8 MMBtu/hr boiler listed under C-4071-9, and the dryer listed under C-4071-10, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 31,086 lb/year; SOx (as SO2) - 3,960 lb/year; PM10 - 14,289 lb/year; CO - 122,760 lb/year; or VOC - 21,576 lb/year. Records of annual natural gas consumption for these units shall be maintained to enforce these emissions limits. [District Rule 2201]
11. During startup periods, gas turbine exhaust emissions shall not exceed any of the following limits: NOx (as NO2) - 21.9 lb/hr, CO - 66.0 lb/hr, or VOC - 11.6 lb/hr, based on a one hour average. [District Rules 2201, 4102 and 4703]
12. During shutdown periods, gas turbine stack exhaust emissions shall not exceed any of the following limits: NOx (as NO2) - 21.9 lb/hr, CO - 66.0 lb/hr, or VOC - 11.6 lb/hr, based on a one hour average. [District Rules 2201, 4102 and 4703]
13. Startup or shutdown periods shall be defined as periods of time during which the stack exhaust gas, gas turbine exhaust, and SCR temperature are not within the normal operating temperature range. Startup/shutdown emissions shall be counted toward all applicable emission limits (lb/day and lb/year). [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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14. The duration of each startup or shutdown period shall not exceed two hours. [District Rules 2201 and 4703]
15. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703]
16. Emission rates from this unit, except during startup and shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 7.6 lb/hr or 5.0 ppmvd @ 15% O₂; SOx (as SO₂) - 0.25 lb/hr; PM10 - 4.33 lb/hr; CO - 33.0 lb/hr or 35.2 ppmvd @ 15% O₂; or VOC (as methane) - 5.7 lb/hr or 10.9 ppmvd @ 15% O₂. All emission concentration limits are based on three hour rolling averages. [District Rules 2201, 4001, and 4703]
17. Ammonia (NH₃) emissions shall not exceed 15 ppmvd @ 15% O₂ based on 24 hr rolling average. [District Rules 2201 and 4102]
18. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average will commence on the hour. The twenty-four hour average will be calculated starting and ending at twelve-midnight. [District Rule 2201]
19. Emissions from this unit, on days when a startup and/or shutdown occurs, shall not exceed the following: NOx (as NO₂) - 134.0 lb/day; SOx (as SO₂) - 14.4 lb/day; PM10 - 52.0 lb/day; CO - 496.0 lb/day; or VOC - 87.0 lb/day. [District Rule 2201]
20. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201]
21. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c / 1,000,000)) \times (1,000,000 / b)) \times d$, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 4102]
22. Source testing to measure startup NOx, CO, and VOC mass emission rates shall be conducted at least once every seven years. CEM relative accuracy audit (RAA) shall be determined during startup source testing in accordance with 40 CFR 60, Appendix F. [District Rule 1081]
23. Source testing to measure 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 four calendar quarters. [District Rules 1081 and 4703]
24. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified no less than 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. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
25. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5 (front half and back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, ammonia - BAAQMD ST-1B, and fuel gas sulfur content - ASTM D6228 or D5504. NOx test results shall be corrected to ISO standard conditions as defined in 40 CFR Part 60 Subpart GG Section 60.335. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 4001, and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. 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 Source Emission Monitoring and Testing. [District Rule 1081]
27. The turbine shall be equipped with a continuous monitoring system to measure and record hours of operation, mass ratio of water-to-fuel injected and fuel consumption. [District Rules 2201, 4001, and 4703]
28. The exhaust stack shall be equipped with a continuous emissions monitor (CEM) for NO_x, CO, and O₂. The CEMs shall meet the requirements of 40 CFR part 60, Appendices A, B, and F and shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 1080, 2201, 4001, and 4703]
29. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080]
30. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080]
31. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080]
32. Audits (RAA or CGA) of continuous emission monitors shall be conducted on a calendar quarterly basis, except during calendar quarters in which relative accuracy and total accuracy testing is performed. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO and O₂ CEMS 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]
34. Permittee 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, 6.1]
35. 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, 7.0]
36. The permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks excluding normal calibration periods or when the monitored source is not in operation) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080]
37. Permittee shall provide notification and recordkeeping as required under 40 CFR, Part 60, Subpart A, 60.7. [District Rule 4001]
38. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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39. The permittee shall maintain the following records: hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703]
40. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4703]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-4071-9-3

EXPIRATION DATE: 05/31/2016

EQUIPMENT DESCRIPTION:

COMPLIANT DORMANT EMISSION UNIT - 16.8 MMBTU HURST MODEL S5-X-400-150 NATURAL GAS-FIRED BOILER WITH POWER FLAME MODEL NVC9-G-30 ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010]
2. The fuel line shall be physically disconnected from the unit. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]
5. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. 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]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
8. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
9. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306 and 4320]
10. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305, 4306 and 4320]
11. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.004 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
12. On and after July 1, 2012, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
13. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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14. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
16. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320]
18. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
20. 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]
21. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
26. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, 4306 and 4320]
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. Combined natural gas consumption for this boiler, permitted as C-4071-9, and the 49 MW turbine, permitted as C-4071-8, calculated on a twelve consecutive month rolling basis, shall not exceed 1,386 MMScf/year. [District Rule 2201]
29. Annual emissions from this boiler, permitted as C-4071-9, and the 49 MW turbine, permitted as C-4071-8, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 31,086 lb/year; SO_x (as SO₂) - 3,960 lb/year; PM₁₀ - 14,289 lb/year; CO - 122,760 lb/year; or VOC - 21,576 lb/year. Records of annual natural gas consumption for these units shall be maintained to enforce these emissions limits. [District Rule 2201]

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ATTACHMENT D

District Responses to EPA Comments

EPA Comments for Proposed Initial Title V Permit for Algonquin Power, LLC, Facility ID C-4071, Project # C-1110687

1. Application evaluation incorrectly states that NESHAP ZZZZ does not apply to existing emergency generators at area sources. Please correct application evaluation and include NESHAP ZZZZ in permit.

District Response: The 40 CFR 63 subpart ZZZZ requirements has been added to permit and has been addressed in application evaluation.

2. NSPS GG emission limits were subsumed by local turbine limits. Because of the limits from the two standards (including units, averaging times, etc.) this is clearly an acceptable conclusion, but the conditions that state the emission limits should cite both the federal rule from the CFR and the local rule. Also, the application evaluation should have a streamlining discussion. Please correct the permit and application evaluation.

District Response: The NSPS rule reference has been included in the conditions 5 & 14 of the requirements for permit unit C-4071-8-3.

3. The application evaluation states that NESHAP Q does not apply because chromium is not used in the cooling tower. The NESHAP does not apply because the facility is an area source of HAP.

District Response: The first part of applicability test is if Chromium is used in treatment of water. Since Chromium is not used in water treatment, therefore NESHAP Q does not apply.