San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAR 15 2011

Don Burkard
Panoche Energy Center, LLC
63 Kendrick St.
Needham, MA 02494

Re: Notice of Preliminary Decision - Federally Mandated Operating Permit
District Facility # C-7220
Project # C-1101605

Dear Mr. Burkard:

Enclosed for your review and comment is the District's analysis of Panoche Energy Center, LLC's application for the Federally Mandated Operating Permit for its power plant at 43883 W. Panoche Rd in Firebaugh, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day comment period which begins on the date of publication of the public notice.

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

Sincerely,

David Warner
Director of Permit Services

cc: Jonah Aiyabei, Permit Services Engineer

Attachments

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

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MAR 15 2011

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

Re: Notice of Preliminary Decision - Federally Mandated Operating Permit
District Facility # C-7220
Project # C-1101605

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of Panoche Energy Center, LLC's application for the Federally Mandated Operating Permit for its power plant at 43883 W. Panoche Rd in Firebaugh, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 45-day comment period which begins on the date of publication of the public notice.

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

Sincerely,

David Warner
Director of Permit Services

cc: Jonah Aiyabei, Permit Services Engineer

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AIR POLLUTION CONTROL DISTRICT

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MAR 15 2011

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

Re: Notice of Preliminary Decision - Federally Mandated Operating Permit
District Facility # C-7220
Project # C-1101605

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Panoche Energy Center, LLC's application for the Federally Mandated Operating Permit for its power plant at 43883 W. Panoche Rd in Firebaugh, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day comment period which begins on the date of publication of the public notice.

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

Sincerely,

David Warner
Director of Permit Services

cc: Jonah Aiyabei, Permit Services Engineer

Attachments

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www.valleyair.org www.healthyairliving.com

Fresno Bee

NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
FEDERALLY MANDATED OPERATING PERMITS

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed issuance of the Federally Mandated Operating permits to Panoche Energy Center, LLC for its power plant at 43883 W. Panoche Rd in Firebaugh, California.

The District's analysis of the legal and factual basis for this proposed action, project #C-1101605, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. There are no emission changes associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the proposed Federally Mandated Operating initial permits. If requested by the public, the District will hold a public hearing regarding issuance of this initial permit. For additional information, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E. GETTYSBURG AVE, FRESNO, CALIFORNIA 93726-0244.

SAN JOAQUIN VALLEY
UNIFIED AIR POLLUTION CONTROL DISTRICT

Panoche Energy Center

ENGINEERING EVALUATION
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INITIAL TITLE V PERMIT APPLICATION REVIEW

Project #: C-1101605
Deemed Complete: May 12, 2010

Engineer: Jonah Aiyabei
Date: March 9, 2011

Facility Number:	C-7220
Facility Name:	Panoche Energy Center, LLC
Mailing Address:	63 Kendrick Street Needham, MA 02494
Contact Name:	Don Burkard, General Manager
Phone:	(559) 659-2270
Responsible Official:	Don Burkard
Title:	General Manager

I. PROPOSAL

Panoche Energy Center, LLC is proposing that an initial Title V permit be issued for its electricity generation facility located in Firebaugh. The purpose of this 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.

II. FACILITY LOCATION

Panoche Energy Center, LLC is located in Firebaugh, Fresno County, at the SW/4 of Section 5, Township 15S, Range 13, CA.

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 has requested to use the facility-wide umbrella general permit template (SJV-UM-03). Based on the information submitted in the Template Qualification Form, the applicant qualifies for the use of this template.

V. SCOPE OF EPA AND PUBLIC REVIEW

Certain segments of the proposed Operating Permit are based on model general permit templates that have been previously subject to EPA and public review. The terms and conditions from the model general permit templates are included in the proposed permit and 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.

- Conditions 1 through 41 of permit unit C-7220-0-0, including their underlying applicable requirements, originate from the model general permit template and are not subject to further EPA and Public review.

VI. APPLICABLE REQUIREMENTS

A. Rules Addressed by General Permit Template

- District Rule 1100, Equipment Breakdown, (amended December 17, 1992)
- District Rule 1160, Emission Statements, (adopted November 18, 1992)
- District Rule 2010, Permits Required, (amended December 17, 1992)
- District Rule 2020, Exemptions, (amended December 20, 2007)

- District Rule 2031, Transfer of Permits, (amended December 17, 1992)
- District Rule 2040, Applications, (amended December 17, 1992)
- District Rule 2070, Standards for Granting Applications, (amended December 17, 1992)
- District Rule 2080, Conditional Approval, (amended December 17, 1992)
- District Rule 2520, Federally Mandated Operating Permits, 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, (amended June 21, 2001)
- District Rule 4101, Visible Emissions, (amended February 17, 2005)
- District Rule 4601, Architectural Coatings, (amended December 17, 2009)
- District Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities, (amended August 19, 2004)
- District Rule 8031, Bulk Materials, (amended August 19, 2004)
- District Rule 8041, Carryout and Trackout, (amended August 19, 2004)
- District Rule 8051, Open Areas, (amended August 19, 2004)
- District Rule 8061, Paved and Unpaved Roads, (amended August 19, 2004)
- District Rule 8071, Unpaved Vehicle/Equipment Traffic Areas, (amended September 16, 2004)
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos, (amended September 18, 2003)
- 40 CFR Part 82, Subpart B, Stratospheric Ozone, (amended November 9, 2007)
- 40 CFR Part 82, Subpart F, Stratospheric Ozone, (amended June 8, 2008)

B. Rules Not Addressed by General Permit Template

- District Rule 1080, Stack Monitoring, (amended December 17, 1992)
- District Rule 1081, Source Sampling, (amended December 16, 1993)
- District Rule 2201, New and Modified Stationary Source Review Rule, (amended December 18, 2008)
- District Rule 2520, Federally Mandated Operating Permits, (amended June 21, 2001)
- District Rule 4201, Particulate Matter Concentration, (amended December 17, 1992)
- District Rule 4701, Internal Combustion Engines – Phase I, (amended August 21, 2003)
- District Rule 4702, Stationary Internal Combustion Engines – Phase 2, (amended January 18, 2007)
- District Rule 4703, Stationary Gas Turbines, (amended August 17, 2006)
- District Rule 4801, Sulfur Compounds, (amended December 17, 1992)
- 40 CFR Part 60 Subpart A, General Provisions – Excess Emission Reports, Conducting Performance Tests, Continuous Emission Monitoring Requirements
- 40 CFR 60 Subpart GG, Standards of Performance for Stationary Gas Turbines
- 40 CFR 60 Subpart KKKK, Standards of Performance for Stationary Gas Turbines
- 40 CFR 63 Subpart YYYY, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines
- 40 CFR 63 Subpart Q, National Emissions Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers
- 40 CFR Part 64, Compliance Assurance Monitoring (CAM)

- 40 CFR Part 72, Acid Rain Program
- 40 CFR Part 73, Sulfur Dioxide Allowance System
- 40 CFR Part 75, Continuous Emission Monitoring
- 40 CFR Part 77, Excess Emissions

VII. 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 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 Title V Permit.

This facility is subject to the following rules that are not currently federally enforceable:

1. District Rule 4102, Nuisance

The purpose of this rule is to protect the health and safety of the public. The rule was last amended on December 17, 1992, and the current version has not been approved into the SIP.

a. C-7220-0-0: FACILITYWIDE REQUIREMENTS.

Condition 41 of the facilitywide requirements is based on Rule 4102 and is therefore not federally enforceable.

b. C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP.

Condition 2 of the requirements for this permit unit is based on Rule 4102 and is therefore not federally enforceable.

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

This ATCM was adopted by the Air Resources Board on February 26, 2004. The purpose of the ATCM is to reduce diesel particulate matter (PM) and criteria pollutant emissions from stationary diesel-fired

compression-ignition engines. The ATCM requirements include operational limits, emission limits as well as monitoring and recordkeeping.

C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP.

Conditions 3 and 6 through 10 of the requirements for this permit unit are jointly based on the ATCM and other federally-enforceable requirements. These conditions are therefore federally enforceable, but not through the ATCM.

3. District Rule 7012, Hexavalent Chromium - Cooling Towers

The purpose of this rule is to limit emissions of Hexavalent Chromium from circulating water in cooling towers and to prohibit the use or sale of products containing these compounds for treating cooling tower water. The rule was last amended on December 17, 1992, and the current version has not been approved into the SIP.

C-7220-6-1: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

Condition 3 of the requirements for this permit unit is jointly based on Rule 7012 and other federally enforceable requirements. This condition is therefore federally enforceable, but not through District Rule 7012.

VIII. COMPLIANCE

1. District Rule 1080, Stack Monitoring

This Rule grants the APCO the authority to request the installation and use of continuous emissions monitors (CEMs), and specifies performance standards for the equipment and administrative requirements for record keeping, reporting, and notification. The rule was last amended on December 17, 1992, and was approved into the SIP on April 26, 2004.

Section 4.0 requires that upon the request of the APCO and as directed by him, the owner shall provide, install, and operate continuous monitoring equipment on such operations as directed. The owner shall maintain,

calibrate, and repair the equipment and shall keep the equipment operating at design capabilities.

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 and 6.6 require that the continuous NOx and O2 monitors shall 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 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 8.0 requires that the owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; a negative declaration when no excess emissions occurred.

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.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR

SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 29 through 33 and 36 through 41 on the proposed permits to operate ensure compliance with the requirements of this rule.

2. District Rule 1081, Source Sampling

District Rule 1081 was last amended on December 16, 1993, and was approved into the SIP on April 26, 2004.

The purpose of this rule is to ensure that any source operation which emits or may emit air contaminants provides adequate and safe facilities for use in sampling to determine compliance. This rule also specifies methods and procedures for source testing, sample collection, and compliance determination.

Section 3.0 stipulates that upon request and direction of the APCO, the owner of any source operation which emits or may emit air contaminants for which emission limits have been established shall provide sampling ports, sampling platforms, and access to sampling platforms, constructed in accordance with the general industry safety orders of the State of California.

Section 4.0 stipulates that the owner of such a source operation, when requested by the APCO, shall provide records or other information which will enable the APCO to determine when a representative sample can be taken. In addition, upon the request of the APCO and as directed by him, the owner of such a source operation shall collect, have collected, or allow the APCO to collect, a source sample.

Sections 5.0 stipulates that if a test method is not specified in the applicable rule, the test shall be conducted in accordance with Title 40 CFR Subpart 60 Appendix A - Reference Methods, except source tests for PM10 for compliance with Rule 2201 (New and Modified Stationary Source Review) requirements, which shall be conducted in accordance with Title 40 CFR Subpart 51, Appendix M, Method 201 or 201A. This section further specifies that if no test method exists in the preceding references for a source type, source sampling shall be conducted in accordance with CARB approved methods.

Section 6.0 stipulates that: (a) for the purpose of determining compliance with an applicable standard or numerical limitation, the arithmetic mean of three (3) test runs shall apply, unless two (2) of the three (3) results are above the applicable limit; (b) a scheduled source test may not be discontinued solely due to the failure of one or more runs to meet applicable standards; (c) in the event that a sample is accidentally lost or conditions occur in which one (1) of the three (3) runs must be discontinued because circumstances beyond the owner or operators control, upon the APCO's approval, compliance may be determined using the arithmetic mean of the other two (2) runs.

Section 7.0 specifies administrative requirements, including the following: (a) the District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling; (b) source sampling to determine the compliance status of an emissions source shall be witnessed or authorized by District personnel; and (c) source test reports must be submitted to the District within 60 days of completion of field testing, regardless of pass or fail status.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

   For these permit units, conditions 18, 21, 23, 26, and 27 on the proposed permits to operate ensure compliance with the requirements of this rule.

e. C-7220-6-1: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

   For this permit unit, condition 7 on the proposed permit to operate ensures compliance with the requirements of this rule.

3. District Rule 2201, <u>New and Modified Stationary Source Review Rule (District NSR Rule)</u>

For this facility, all the emission units have become subject to the District NSR Rule due to 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 PTOs were addressed to define how NSR permit terms should be incorporated into the Title V permit.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 1, 5 through 12, 14 through 19, 22, 30, 31, and 46 through 48 from the existing PTOs have been included as federally enforceable conditions 1, 3 through 10, 12 through 17, 28, 29, and 42 through 44 of the requirements for the proposed Title V PTOs.

e. C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

For this permit unit, conditions 5, 8 and 9 from the existing PTO have been included as federally enforceable conditions 3, 6 and 7 of the requirements for the proposed Title V PTO.

f. C-7220-6-1: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

For this permit unit, conditions 1, and 6 through 8 from the existing PTO have been included as federally enforceable conditions 1, and 4 through 6 of the requirements for the proposed Title V PTO.

4. District Rule 2520, <u>Federally Mandated Operating Permits</u>

Section 13.2 provides that compliance with permit conditions in part 70 permits that expressly state that a permit shield exists shall be deemed

compliance with the applicable requirements on which the permit conditions are based.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

   For these permit units, conditions 61 through 63 on the proposed Title V operating permits ensure compliance with the requirements of this rule.

e. C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

   For this permit unit, conditions 11 and 12 on the proposed Title V operating permit ensure compliance with the requirements of this rule.

f. C-7220-6-1: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

   For this permit unit, condition 8 on the proposed Title V operating permit ensures compliance with the requirements of this rule.

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

District Rule 4201 was last amended on December 17, 1992, and was approved into the SIP on April 4, 2002.

The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard.

Section 3.0 stipulates that a person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions, as determined by the test methods in section 4.0. Section 4.0 specifies the test methods for demonstration of compliance with section 3.0.

Natural Gas Combustion - Turbine:

Compliance with the Particulate Matter (PM) emission limit of 0.1 gr/dscf is expected for gas turbines fired on PUC-quality (low-sulfur) natural gas. Results from source tests of natural gas turbines in the San Joaquin Valley indicate emission rates of approximately 0.001 gr/dscf of PM.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR

SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, condition 2 on the proposed permits to operate ensures compliance with the requirements of this rule.

Diesel Combustion – Internal Combustion Engine:

Results from source tests of diesel-fired internal combustion (IC) engines generally indicate emission rates from these units are less than the allowable limit of 0.1 grain/dscf. Per the CAPCOA/CARB/EPA IX Title V Periodic Monitoring Recommendations memo, dated July 2001, the District's grain loading limit of 0.1 grain/dscf does not need to be source tested as long as the following conditions are required in the Permit to Operate:

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

2) Usage for maintenance and testing is not to exceed 100 hours per year.

3) Records are maintained for all engine usage and maintenance.

C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP.

For this permit unit, condition 1 on the proposed Title V operating permit ensures compliance with the requirements of this rule.

Cooling Tower:

For cooling towers, compliance with the PM concentration limit may be shown as follows:

$$\left(\frac{0.019\ lb\ PM_{10}}{10^3\ gal}\right)\left(\frac{7{,}000\ grain}{lb}\right)(0.75) = \frac{0.099\ grain}{dscf} < \frac{0.1\ grain}{dscf}$$

Where:

$\frac{0.019\ lb\ PM_{10}}{10^3\ gal}$ = AP42 emission factor for PM_{10} from wet cooling towers (table 13.4-1)

(0.75) = Ratio of cooling tower water flow rate to cooling tower air flow rate (gal/dscf)

C-7220-6-1: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR.

For this permit unit, condition 2 on the proposed Title V operating permit ensures compliance with the requirements of this rule.

6. District Rule 4701, Internal Combustion Engines – Phase 1

District rule 4701 was last amended on August 21, 2003 and the current version was approved into the SIP on May 18, 2004.

This rule has since been superceded by District Rule 4702 (Phase 2). Engines complying with District Rule 4702 are automatically in compliance with the requirements of District Rule 4701.

A permit shield will be granted from the outdated requirements of District Rule 4701.

7. District Rule 4702, Internal Combustion Engines – Phase 2

District rule 4702 was last amended on January 18, 2007 and the current version was approved into the SIP on January 10, 2008.

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 non-emergency and emergency operation shall be reported, and other support documentation necessary to demonstrate claim to the exemption.

C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP.

For this permit unit, conditions 4, 5, and 8 through 10 on the proposed Title V PTO ensures compliance with the requirements of this rule.

8. District Rule 4703, <u>Stationary Gas Turbines</u>

District rule 4703 was last amended on September 20, 2007 and the current version was approved into the SIP on October 21, 2009.

The purpose of this rule is to limit oxides of nitrogen (NOx) emissions from stationary gas turbine systems.

Section 5.1.1 (Tier I) of this rule limits the NO_X emissions from stationary gas turbine systems greater than 10 MW, and equipped with Selective Catalytic Reduction (SCR), based on the following equation:

$$NO_X \text{ (ppmv @ 15\% } O_2) = 9 \times \left(\frac{EFF}{25} \right)$$

Where EFF is the higher of EFF_1 or EFF_2, and:

$$EFF_1 = \frac{3{,}412 \frac{Btu}{kW-hr}}{\text{Actual Heat Rate @ HHV } (\frac{Btu}{kW-hr})} \text{ x } 100 \text{, and } EFF_2 = EFF_{MFR} \frac{LHV}{HHV}$$

For the subject equipment, the Actual Heat Rate @ HHV is 7,815 Btu/kW-hr. Therefore:

$$EFF_1 = \frac{3{,}412 \frac{Btu}{kW-hr}}{7{,}815 \frac{Btu}{kW-hr}} \times 100 = 43.66\%$$

$$NO_X \text{ limit utilizing } EFF_1 = 9 \times \left(\frac{43.66}{25}\right) = 15.7 \text{ ppmvd @ } 15\% O_2$$

EFF_2 calculations are not necessary since Rule 4703 emission limits will be no lower than 9 ppmv NO_X and the subject turbines will be limited to a maximum of 2.5 ppmv NO_X @ 15% O_2 (based on a 1-hour average).

Section 5.1.2 (Tier 2) of this rule limits the NO_X emissions from 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% O_2 (Standard option) and 3 ppmv @ 15% O_2 (Enhanced Option). Section 7.2.1 (Table 7-1) sets a compliance date of April 30, 2004 for the Standard Option and Section 7.2.4 sets a compliance date of April 30, 2008 for the Enhanced Option. The subject turbines are limited to 2.5 ppmv @ 15% O_2 (based on a 1-hour average).

Section 5.2 limits the CO emissions concentration from the subject turbines to less than 200 ppmvd @ 15% O_2.

Section 5.3 provides that the emission limit requirements of sections 5.1.1, 5.1.2 or 5.2 shall not apply during startup, shutdown, or a reduced load period provided an operator complies with the requirements specified below:

- The duration of each startup or each shutdown shall not exceed two hours, and the duration of each reduced load period shall not exceed one hour.
- The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during startup, shutdown, or a reduced load period.
- An operator may submit an application to allow more than two hours for each startup or each shutdown or more than one hour for each reduced load period provided the operator meets all of the conditions specified in the rule.

Section 6.2.1 requires the owner to operate and maintain continuous emissions monitoring equipment for NO_X and oxygen, or install and maintain APCO-approved alternate monitoring.

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

Section 6.2.6 requires the facility to maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local startup and stop time, length and reason for reduced load periods, total hours of operation, and the type and quantity of fuel used.

Section 6.2.8 requires owners or operators performing startups or shutdowns to keep records of the duration of each startup and shutdown.
Section 6.3.1 states that the owner or operator of any stationary gas turbine system 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 states that the facility must demonstrate compliance annually with the NO_X and CO emission limits using the following test methods, unless otherwise approved by the APCO and EPA:

- Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20.
- Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B.
- Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20.
- HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 5, 9 through 11, 21, 23, 24, 28, 34, and 42 through 44 on the proposed permits to operate ensure compliance with the requirements of this rule.

9. District Rule 4801 and County Rule 406 - Sulfur Compounds

District Rule 4801 was last amended on December 17, 1992, and has been submitted to the EPA to replace Fresno County Rule 406 in the SIP. This District Rule is at least as stringent as the county rule, as demonstrated by the comparison below:

Comparison of District Rule 4801 and San Joaquin County Rule 407		
REQUIREMENT	**Rule 4801**	**Rule 406**
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.	✓	

Both District Rule 4801 and County Rule 406 stipulate a limit on sulfur compounds. The limit at the point of discharge is 0.2 percent by volume, which is 2,000 ppmv, calculated as sulfur dioxide (SO_2), on a dry basis averaged over 15 consecutive minutes. Since this limit is the same for both rules, District Rule 4801 is at least as stringent as the county rule.

Natural Gas External Combustion:

Compliance is expected as shown by the following calculations at 1 grain of total sulfur per 100 standard cubic feet of gas, assuming all sulfur is converted to SO_2.

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

= 0.00348% sulfur by weight

lb SO_2/scf gas = (0.0000348)(1 lb/23.8 scf gas)(64 lb SO_2/32 lb S)
= 2.92 E-6 lb SO_2/scf gas

lb $SO_2/V_{exhaust}$ = (lb SO_2/scf gas) ÷ (F factor) (Btu content of gas)

$$\left(\frac{lb\,SO_2}{V_{exhaust}}\right) = \frac{\left(2.92\,E-6\,\frac{lb\,SO_2}{scf\,gas}\right)\left(\frac{10^6\,Btu}{MMBtu}\right)}{\left(8710\,\frac{dscf}{MMBtu}\right)\left(1000\,\frac{Btu}{scf}\right)} = 3.35E-7\,\frac{lb\,SO_2}{dscf\,exhaust}$$

$V_{SO2}/V_{exhaust} = nRT/P$

where,
n = moles SO_2 = (3.35 E-7 lb SO_2/dscf exhaust)/(64 lb SO_2/ lb-mol)
R = universal gas constant = 10.73 psi-ft^3/lb-mol- R
T = standard temperature = 60 °F = 520 °R
P = standard pressure = 14.7 psi

$$\text{Therefore, } \left(\frac{V_{SO2}}{V_{exhaust}}\right) = \frac{\left(\frac{3.35\,E-6\,lb\,SO_2}{dscf\,exhaust}\right)\left(\frac{10.73\,psi-ft^3}{lb-mole-°R}\right)(520\,°R)}{\left(\frac{64\,lb\,SO_2}{lb-mol}\right)(14.7\,psi)} = 1.99E-6\,\frac{dscf}{dscf\,exhaust}$$

= 1.99 ppmv dry << 2,000 ppmv

Compliance with 2,000 ppmv is assured because the subject turbines are limited to using only natural gas with sulfur content of 1.0 gr/100 scf.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR

SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, condition 4 on the proposed permits to operate ensures compliance with the requirements of this rule.

Diesel Internal Combustion:

The following analysis shows that the proposed requirement to use CARB certified diesel fuel with sulfur content not to exceed 0.0015% (weight) in the IC engines is more stringent than the sulfur compounds emission limit of District Rule 4801 and County Rule 406:

Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

Volume SO_2 = nRT/P

Where:
n = moles SO_2
T (standard temperature) = 60 °F or 520 °R
R (universal gas constant) = $\frac{10.73 \text{psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$

P (standard pressure) =14.7 psi

And:
Density of diesel fuel = 7.1 lb/gallon
Heating value of diesel fuel = 0.137 MMBtu/gal
F factor for diesel fuel = 9051 scf/MMBtu
Molecular weight of SO2 = 64 lb/lb.mol
Molecular weight of S = 32 lb/lb.mol

Vol. SO2 = (0.0015% S) x (7.1 lb/gal) x (2.0 lb SO2/lb S) x (1 MMBtu/9051 scf) x (1 gal/0.137 MMBtu) x (1 lb.mol/64 lb.SO2) x (10.73 psi.ft^3/lb.mol.°R) x (520 °R /14.7 psi)

= 1.0 ppmv

Internal combustion of diesel fuel with a sulfur content not exceeding 0.0015% by weight results in exhaust SO_2 concentrations of 1.0 ppmv; which is much lower than the District Rule 4801 sulfur compounds emission limit of 2,000 ppmv.

C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP.

For this permit unit, condition 3 on the proposed permit to operate ensures compliance with the requirements of this rule.

10. 40 CFR Part 60 Subpart A, General Provisions – Excess Emission Reports, Conducting Performance Tests, Continuous Emission Monitor Requirements

This subpart contains requirements for reporting of excess emissions (60.7), conducting performance tests (60.8), and performance standards for CEMS (60.13). These requirements are subsumed within the monitoring, recordkeeping, and reporting requirements associated with the NOx requirements from District Rules 4703 and 1081.

A permit shield will be granted from the requirements of this subpart.

11. 40 CFR 60 Subpart GG, Standards of Performance for Stationary Gas Turbines

40 CFR Part 60 Subpart GG applies to all stationary gas turbines with a heat input greater than 10.7 gigajoules per hour (10.2 MMBtu/hr), that commence construction, modification, or reconstruction after October 3, 1977.

However, 40 CFR 60 Subpart KKKK, Section 60.4305(b), states that stationary combustion turbines regulated under this subpart are exempt from the requirements of 40 CFR 60 Subpart GG. Since this facility's turbines are subject to 40 CFR 60 Subpart KKKK as discussed in the

following section, they are exempt from the requirements of 40 CFR 60 Subpart GG.

A permit shield against the requirements of 40 CFR 60 Subpart GG will be issued.

12. 40 CFR 60 Subpart KKKK, Standards of Performance for Stationary Gas Turbines

40 CFR Part 60 Subpart KKKK applies to all stationary gas turbines rated at greater than or equal to 10 MMBtu/hr that commence construction, modification, or reconstruction after February 18, 2005.

Subpart KKKK established requirements for nitrogen oxide (NO_X) and sulfur dioxide (SO_X) emissions.

Section 60.4320 - Standards for Nitrogen Oxides:

Paragraph (a) states that NO_X emissions shall not exceed the emission limits specified in Table 1 of this subpart. Paragraph (b) states that if you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NO_X. Table 1 states that new turbines firing natural gas with a combustion turbine heat input at peak load of greater than 850 MMBtu/hr shall meet a NO_X emissions limit of 15 ppmvd @ 15% O_2 or 54 ng/J of useful output (0.43 lb/MWh).

Section 60.4330 - Standards for Sulfur Dioxide:

Paragraph (a) states that if your turbine is located in a continental area, you must comply with one of the following:

(1) Operator must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2 in excess of 110 nanograms per Joule (ng/J) (0.90) pounds per megawatt-hour (lb/MWh)) gross output; or

(2) Operator must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input.

Section 60.4335 – NO_X Compliance Demonstration, with Water or Steam Injection:

Paragraph (a) states that when a turbine is using water or steam injection to reduce NO_X emissions, you must install, calibrate, maintain and operate

a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

Paragraph (b) states that alternatively, an operator may use continuous emission monitoring, as follows:

(1) Install, certify, maintain and operate a continuous emissions monitoring system (CEMS) consisting of a NO_X monitor and a diluent gas (oxygen (O_2) or carbon dioxide (CO_2)) monitor, to determine hourly NO_X emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and

(2) For units complying with the output-based standard, install, calibrate, maintain and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and

(3) For units complying with the output based standard, install, calibrate, maintain and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and

(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).

Section 60.4345 – CEMS Equipment Requirements:

Paragraph (a) states that each NO_X diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_X diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

Paragraph (b) states that as specified in §60.13(e)(2), during each full unit operating hour, both the NOX monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality

assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOX emission rate for the hour. Paragraph (c) states that each fuel flow meter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flow meters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

Paragraph (d) states that each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

Paragraph (e) states that the owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter.

Section 60.4350 – CEMS Data and Excess NO_X Emissions:

Section 60.4350 states that for purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NO_X and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_X emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O_2 concentration exceeds 19.0 percent O_2 (or the hourly average CO_2 concentration is less than 1.0 percent CO_2), a diluent cap value of 19.0 percent O_2 or 1.0 percent CO_2 (as applicable) may be used in the emission calculations.

(c) Correction of measured NOX concentrations to 15 percent O2 is not allowed.

(d) If you have installed and certified a NOX diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NOX emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the equations 1 (simple cycle turbines) or 2 (combined cycle turbines) listed in §60.4350, paragraph (f).

Sections 60.4360, 60.4365 and 60.4370 – Monitoring of Fuel Sulfur Content:

Section 60.4360 states that an operator must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

Section 60.4365 states that an operator may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for units located in continental areas and 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05

weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for noncontinental areas; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO2/J (0.060 lb SO2/MMBtu) heat input for continental areas or 180 ng SO2/J (0.42 lb SO2/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

Section 60.4370 states that the frequency of determining the sulfur content of the fuel must be as follows:

(a) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (*i.e.*, flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

(b) Gaseous fuel. If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.

(c) Custom schedules. Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

Section 60.4380 – Excess NO_X Emissions:

Section 60.4380 establishes reporting requirements for periods of excess emissions and monitor downtime. Paragraph (a) lists requirements for operators choosing to monitor parameters associated with water or steam to fuel ratios. As discussed above, PEC is not proposing to monitor parameters associated with water or steam to fuel ratios to predict what the NO_X emissions from the turbines will be. Therefore, the requirements of this paragraph are not applicable and no further discussion is required.

Paragraph (b) states that for turbines using CEMs:

(1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_X emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a "4-hour rolling average NO_X emission rate" is the arithmetic average of the average NO_X emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_X emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_X emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a "30-day rolling average NO_X emission rate" is the arithmetic average of all hourly NO_X emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_X emissions rates for the preceding 30 unit operating days if a valid NO_X emission rate is obtained for at least 75 percent of all operating hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOX concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

Section 60.4385 – Excess SO_X Emissions:

Section 60.4385 states that if an operator chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

(a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

Sections 60.4375, 60.4380, 60.4385 and 60.4395 – Reporting:

These sections establish the reporting requirements for each turbine. These requirements include methods and procedures for submitting reports of monitoring parameters, annual performance tests, excess emissions and periods of monitor downtime.

Section 60.4400 – NO_X Performance Testing:

Section 60.4400, paragraph (a) states that an operator must conduct an initial performance test, as required in §60.8. Subsequent NO_X performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

Paragraphs (1), (2) and (3) set forth the requirements for the methods that are to be used during source testing.

Section 60.4415– SO_X Performance Testing:

Section 60.4415 states that an operator must conduct an initial performance test, as required in §60.8. Subsequent SO_2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17); or

(ii) (ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 4, 5, 21 through 23, 25, 28 through 31, 34 through 36, and 40 on the proposed permits to operate ensure compliance with the requirements of this subpart.

13. 40 CFR 63 Subpart YYYY, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

This subpart establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emissions from stationary combustion turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

Pursuant to section 63.6085(a), 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 or more per year or any combination of HAP at a rate of 25 tons or more per year. The facility is not a major source of HAP emissions and is not subject to this subpart.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 19 and 20 on the proposed permits to operate ensure compliance with the exemption limit requirements of this subpart.

14. 40 CFR 63 Subpart Q, National Emissions Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

This subpart establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emissions from industrial process cooling towers. Section 63.402 stipulates that no owner or operator of an industrial process cooling tower shall use chromium-based water treatment chemicals in any affected cooling tower.

C-7220-6-1: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

For this permit unit, condition 3 on the proposed permit to operate ensures compliance with the requirements of this subpart.

15. 40 CFR Part 64, Compliance Assurance Monitoring (CAM)

To be subject to CAM for a particular pollutant, an emissions unit must meet all of the following criteria:

i. The unit must have an emission limit for the pollutant,

ii. The unit must have add-on controls for the pollutant, and

iii. The pre-control potential to emit for the unit must exceed major source thresholds.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

These units are equipped with add-on control devices (SCR) for NOx emissions and have a NOx emission limit of 48,465 lb/yr. Since the post-control PE already exceeds the major source threshold of 20,000 lb/yr, the units are subject to CAM for NOx emissions.

However, since these units have continuous emission monitoring systems (CEMS) for NOx, they are exempt from additional CAM requirements. The standard conditions that require the CEMs to be installed, calibrated, maintained, and require the data to be reported ensure that the equipment will remain exempt from CAM requirements.

The units are not equipped with add-on control devices for SOx, PM10, CO, or VOC, and are therefore not subject to CAM for these criteria pollutants.

e. C-7220-5-2: 160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP.

This unit is not equipped with add-on control devices for any criteria pollutants and is therefore not subject to CAM.

f. C-7220-6-1: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

This unit has an emission limit for PM10. PM10 emissions are controlled by the use of drift eliminators. Drift eliminators are integral to the design and operation of the cooling tower and therefore do not qualify as add-on control devices for PM10. Since the unit has no add-on control devices, it is not subject to CAM.

16. 40 CFR 60 Part 72, Acid Rain Program

The purpose of this part is to establish certain general provisions and the operating permit program requirements for affected sources and affected units under the Acid Rain Program.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 45, 50, 51, 53, 54, 55, and 58 on the proposed Title V operating permits ensure compliance with the requirements of this part.

17. 40 CFR 60 Part 73, Sulfur Dioxide Allowance System

The purpose of this part is to establish the requirements and procedures for the following:

(a) The allocation of sulfur dioxide emissions allowances;

(b) The tracking, holding, and transfer of allowances;

(c) The deduction of allowances for purposes of compliance and for purposes of offsetting excess emissions pursuant to parts 72 and 77;

(d) The sale of allowances through EPA-sponsored auctions and a direct sale, including the independent power producers written guarantee program; and

(e) The application for, and distribution of, allowances from the Conservation and Renewable Energy Reserve.

(f) The application for, and distribution of, allowances for desulfurization of fuel by small diesel refineries.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 48 and 52 on the proposed Title V operating permits ensure compliance with the requirements of this part.

18. 40 CFR 60 Part 75, Continuous Emission Monitoring

The purpose of this part is to establish requirements for the monitoring, recordkeeping, and reporting of sulfur dioxide (SO_2), nitrogen oxides (NO_X), and carbon dioxide (CO_2) emissions, volumetric flow, and opacity data from affected units under the Acid Rain Program.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 46, 47, 50, 59 and 60 on the proposed Title V operating permits ensure compliance with the requirements of this part.

19. 40 CFR 60 Part 77, Excess Emissions

This part sets forth the excess emissions offset planning and offset penalty requirements under section 411 of the Clean Air Act. These requirements shall apply to the owners and operators and, to the extent

applicable, the designated representative of each affected unit and affected source under the Acid Rain Program.

a. C-7220-1-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

b. C-7220-2-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

c. C-7220-3-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

d. C-7220-4-1: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

For these permit units, conditions 49, 56 and 57 on the proposed Title V operating permits ensure compliance with the requirements of this part.

IX. 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 Title V 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. The following permit shields are granted as requested by the applicant:

Facilitywide Requirements

A permit shield is being granted for facilitywide requirements in conditions 39 and 40 of the proposed facility-wide permit to operate.

Permit units C-7220-1-1 through 4-1

For these permit units, permit shields are granted in conditions 61 through 63 against the requirements of District Rules 1081 (12/16/93), 4201 (12/17/92), 4703 (8/17/06), and 4801 (12/17/92); County Rule 406 (Fresno); and 40 CFR 60 Subpart A, 40 CFR 60 Subpart GG, 40 CFR 60 Subpart KKKK, and 40 CFR 60 Part 72.

Permit unit C-7220-5-2

For this permit unit, permit shields are granted in conditions 11 and 12 against the requirements of District Rules 4201 (12/17/92), 4701 (8/21/03), 4702 (1/18/07), and 4801 (12/17/92); and County Rule 406 (Fresno).

Permit unit C-7220-6-1

For this permit unit, a permit shield is granted in condition 8 against the requirements of District Rules 1081 (12/16/93) and 4201 (12/17/92).

X. PERMIT CONDITIONS

See proposed permit to operate conditions beginning on the following page.

San Joaquin Valley
Air Pollution Control District

FACILITY: C-7220-0-0 **EXPIRATION DATE:** 01/31/2014

FACILITY-WIDE REQUIREMENTS

1. {4362} 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. {4363} 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. {4364} 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. {4365} 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. {4366} 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. {4367} 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. {4368} 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. {4369} 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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

9. {4370} 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

10. {4371} 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. {4372} 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. {4373} 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. {4374} 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. {4375} 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. {4376} 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. {4377} 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. {4378} 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. {4379} 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. {4380} 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. {4381} 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. {4382} 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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

22. {4383} 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

23. {4384} 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. {4385} 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. {4386} 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. {4387} 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. {4388} 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. {4389} 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. {4390} 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. {4391} 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. {4392} 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. {4393} 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. {4394} 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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

34. {4395} 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. {4396} 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

36. {4397} 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. {4398} 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. {4399} 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. {4400} 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. {4401} 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 (12/1709); 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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

42. On {MONTH DAY, YEAR}, 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

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-1-1 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and 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
4. The CTG shall be fired exclusively on PUC-regulated 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 Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit

11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit

12. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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

16. 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

17. 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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0] Federally Enforceable Through Title V Permit

19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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 twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

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

23. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit

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 NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit

27. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit

28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

31. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

34. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

36. 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, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit

37. 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, 4.0] Federally Enforceable Through Title V Permit

38. 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, 4.0] Federally Enforceable Through Title V Permit

39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit

42. 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, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. The permittee shall maintain the following records: quarterly 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, 6.2.6] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit

45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

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

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

50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

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

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

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

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

55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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

61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-2-1 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and 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
4. The CTG shall be fired exclusively on PUC-regulated 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 Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit

11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit

12. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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

16. 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

17. 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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0] Federally Enforceable Through Title V Permit

19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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 twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

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

23. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit

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 NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit

27. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit.

28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

31. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

34. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

36. 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, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit

37. 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, 4.0] Federally Enforceable Through Title V Permit

38. 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, 4.0] Federally Enforceable Through Title V Permit

39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit

42. 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, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. The permittee shall maintain the following records: quarterly 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, 6.2.6] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit

45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

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

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

50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

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

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

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

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

55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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

61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-3-1 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and 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
4. The CTG shall be fired exclusively on PUC-regulated 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 Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit

11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit

12. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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

16. 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

17. 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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0] Federally Enforceable Through Title V Permit

19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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 twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

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

23. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit

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 NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit

27. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit

28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

31. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

34. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

36. 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, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit

37. 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, 4.0] Federally Enforceable Through Title V Permit

38. 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, 4.0] Federally Enforceable Through Title V Permit

39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit

42. 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, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. The permittee shall maintain the following records: quarterly 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, 6.2.6] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit

45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

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

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

50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

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

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

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

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

55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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

61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-4-1 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and 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
4. The CTG shall be fired exclusively on PUC-regulated 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 Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit

11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit

12. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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

16. 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

17. 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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0] Federally Enforceable Through Title V Permit

19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

21. 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 twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit

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

23. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit

24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit

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 NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit

27. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit

28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit

30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit

31. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit

34. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit

35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit

36. 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, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit

37. 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, 4.0] Federally Enforceable Through Title V Permit

38. 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, 4.0] Federally Enforceable Through Title V Permit

39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit

41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit

42. 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, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. The permittee shall maintain the following records: quarterly 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, 6.2.6] Federally Enforceable Through Title V Permit

44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit

45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

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

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

50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit

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

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

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

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

55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit

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

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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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

61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-5-2 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT 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. 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. 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
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 4.3.1] Federally Enforceable Through Title V Permit
5. 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
6. Emissions from this IC engine shall not exceed any of the following limits: 4.39 g-NOx/bhp-hr, 0.39 g-CO/bhp-hr, or 0.26 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed 0.20 g-PM10/bhp-hr based on using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115] Federally Enforceable Through Title V Permit
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", 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, 4.3.1 and 17 CCR 93115] 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, rolling blackout, general area power outage, 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, 6.2.3 and 17 CCR 93115] 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, 6.2.3 and 17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 4201 (12/17/92), District Rule 4701 (8/21/03), District Rule 4702 (1/18/07), District Rule 4801 (12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

12. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-6-1

EXPIRATION DATE: 01/31/2014

EQUIPMENT DESCRIPTION:
27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. 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 NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. No chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012 and 40 CFR 63.402] Federally Enforceable Through Title V Permit
4. Drift eliminator drift rate shall not exceed 0.0005%. [District Rule 2201] Federally Enforceable Through Title V Permit
5. PM10 emission rate from the cooling tower shall not exceed 8.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Compliance with the PM10 daily emission limit shall demonstrated as follows: PM10 lb/day = circulating water recirculation rate x total dissolved solids concentration in the blowdown water x design drift rate. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Compliance with the PM10 emission limit shall be determined by blowdown water sample analysis by independent laboratory within 120 days of initial operation and quarterly thereafter. [District Rule 1081, 4.0] Federally Enforceable Through Title V Permit
8. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93) and District Rule 4201 (12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

Attachment A

Detailed Facility Report

Detailed Facility Report

For Facility=7220

Sorted by Facility Name and Permit Number

PANOCHE ENERGY CENTER LLC
W PANOCHE RD
FIREBAUGH, CA

FAC # **C 7220**
STATUS: **A**
TELEPHONE:

TYPE: **TitleV**
TOXIC ID:

EXPIRE ON: 01/31/2014
AREA: 3 /
INSP. DATE: 05/11

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-7220-1-0	100 MW	3020-08B H	1	13,208.00	13,208.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-2-0	100 MW	3020-08B H	1	13,208.00	13,208.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-3-0	100 MW	3020-08B H	1	13,208.00	13,208.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-4-0	100 MW	3020-08B H	1	13,208.00	13,208.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-5-1	160 hp	3020-10 B	1	117.00	117.00	A	160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP
C-7220-6-0	Electrical Generation Component	999-99	1	0.00	0.00	A	27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

Number of Facilities Reported: 1

Attachment B

Exempt Equipment

San Joaquin Valley
Unified Air Pollution Control District
Title V Application - INSIGNIFICANT ACTIVITIES

COMPANY NAME: Panoche Energy Center, LLC	FACILITY ID: C - 7220

Check the box next to the exemption category from Rule 2020 which describes any insignificant activity or equipment at your facility not requiring a permit.

Exemption Category	Rule 2020 Citation	√	Exemption Category	Rule 2020 Citation	√
Structure or incinerator assoc. with a structure designed as a dwelling for 4 families or less	4.1		Containers used to store refined lubricating oils	6.6.8	
Locomotives, airplanes, and watercraft used to transport passengers or freight	4.4		Unvented pressure vessels used exclusively to store liquified gases or assoc with exempt equipment	6.6.9 or 6.13	
Natural gas or LPG-fired boilers or other indirect heat transfer units of 5 MMBtu/hr or less	6.1.1		Portable tanks used exclusively to store produced fluids for ≤ six months	6.6.10	
Piston-type i.c.engine with maximum continuous rating of 50 braking horsepower (bhp) or less	6.1.2		Mobile transport tanks on delivery vehicles of VOCs	6.6.11	√
Gas turbine engines with maximum heat input rating of 3 MMBtu/hr or less	6.1.3		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	
Space heating equipment other than boilers	6.1.4	√	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	
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		Equipment used exclusively for the transfer of refined lubricating oil	6.7.2	
Use of less than 2 gal/day of graphic arts materials	6.3		Equipment used to apply architectural coatings	6.8.1	
Equipment at retail establishments used to prepare food for human consumption	6.4.1		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	√
Ovens at bakeries with total daily production less than 1,000 pounds and exempt by sec. 6.1.1	6.4.3		Brazing, soldering, or welding equipment	6.10	
Equipment used exclusively for extruding or compression molding of rubber or plastics, where no plastisizer or blowing agent is used	6.5		Equipment used to compress natural gas	6.11	
Containers used to store clean produced water	6.6.1		Fugitive emissions sources assoc. with exempt equipment	6.12	
Containers ≤100 bbl used to store oil with specific gravity ≥ 0.8762	6.6.2		Pits and Ponds as defined in Rule 1020	6.15	√
Containers ≤ 100 bbl installed prior to 6/1/89 used to store oil with specific gravity ≥ 0.8762	6.6.3		On-site roadmix manufacturing and the application of roadmix as a road base material	6.17	
Containers with a capacity ≤ 250 gallons used to store organic material where the actual storage temperature <150 F	6.6.4	√	Emissions less than 2 lb/day from units not included above	6.19	
Containers used to store unheated organic material with an initial boiling point ≥ 302 F	6.6.5	√	Venting PUC quality natural gas from for sole purpose of pipeline and compressor repair and or maintenance	7.2	
Containers used to store fuel oils or non-air-blown asphalt with specific gravity ≥0.9042	6.6.6		Non-structural repairs & maintenance to permitted equipment	7.3	
Containers used to store petroleum distillates used as motor fuel with specific gravity ≥ 0.8251	6.6.7		Detonation of explosives ≤ 100 lb/day and 1,000 lb/year	7.4	

☐ No insignificant activities (Check this box if no equipment in the above categories exist at your facility.)

Attachment C

Current Permit to Operate

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

Permit to Operate

FACILITY: C-7220 **EXPIRATION DATE:** 01/31/2014

LEGAL OWNER OR OPERATOR: PANOCHE ENERGY CENTER LLC
MAILING ADDRESS: 43883 W PANOCHE RD
FIREBAUGH, CA 93622

FACILITY LOCATION: W PANOCHE RD
FIREBAUGH, CA

FACILITY DESCRIPTION: ELECTRICAL 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

Nov 2 2010 5:13PM – AIYABEIJ

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-1-0 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Combustion turbine generator (CTG) and 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]
6. The CTG shall be fired exclusively on PUC-regulated 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 and 40 CFR 60.4330(a)(2)]
7. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
8. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201]
9. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201]
10. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201]
11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]
12. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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]

14. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201]

15. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201]

16. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201]

17. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

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]

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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201]

20. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081]

21. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tpy all HAPS or 10 tpy any single HAP. [District Rule 4002]

22. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s). Permittee shall conduct a speciated HAPS and total VOC source test for one of the GTEs (C-7220-1, '2, '3 or '4), by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. PEC shall correlate the total HAPS emissions rate and the single highest HAP emission rate to the VOC mass emission determined during the speciated HAPs source test. [District Rule 4002]

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 twelve months. [District Rules 1081 and 4703 and 40 CFR 60.4400(a)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

25. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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 and 4703 and 40 CFR 60.4400(1)(i)]

26. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5]

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

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080]

29. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

30. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

34. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080]

36. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

37. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)]

38. 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]

39. 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]

40. 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]

41. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

42. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

43. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

44. 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]

45. 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]

46. 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]

47. The permittee shall maintain the following records: quarterly 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]

48. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

50. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

51. 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 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

52. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

53. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

54. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

55. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

56. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

57. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

58. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-2-0 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Combustion turbine generator (CTG) and 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]
6. The CTG shall be fired exclusively on PUC-regulated 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 and 40 CFR 60.4330(a)(2)]
7. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
8. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201]
9. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201]
10. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201]
11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]
12. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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]

14. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201]

15. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201]

16. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201]

17. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

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]

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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201]

20. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081]

21. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tpy all HAPS or 10 tpy any single HAP. [District Rule 4002]

22. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s). Permittee shall conduct a speciated HAPS and total VOC source test for one of the GTEs (C-7220-1, '2, '3 or '4), by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. PEC shall correlate the total HAPS emissions rate and the single highest HAP emission rate to the VOC mass emission determined during the speciated HAPs source test. [District Rule 4002]

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 twelve months. [District Rules 1081 and 4703 and 40 CFR 60.4400(a)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

25. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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 and 4703 and 40 CFR 60.4400(1)(i)]

26. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5]

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

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080]

29. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

30. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

34. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080]

36. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

37. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)]

38. 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]

39. 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]

40. 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]

41. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

42. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

43. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

44. 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]

45. 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]

46. 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]

47. The permittee shall maintain the following records: quarterly 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]

48. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

50. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

51. 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 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

52. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

53. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

54. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

55. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

56. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

57. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

58. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-3-0 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Combustion turbine generator (CTG) and 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]
6. The CTG shall be fired exclusively on PUC-regulated 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 and 40 CFR 60.4330(a)(2)]
7. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
8. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201]
9. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201]
10. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201]
11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]
12. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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]

14. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201]

15. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201]

16. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201]

17. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

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]

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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201]

20. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081]

21. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tpy all HAPS or 10 tpy any single HAP. [District Rule 4002]

22. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s). Permittee shall conduct a speciated HAPS and total VOC source test for one of the GTEs (C-7220-1, '2, '3 or '4), by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. PEC shall correlate the total HAPS emissions rate and the single highest HAP emission rate to the VOC mass emission determined during the speciated HAPs source test. [District Rule 4002]

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 twelve months. [District Rules 1081 and 4703 and 40 CFR 60.4400(a)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

25. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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 and 4703 and 40 CFR 60.4400(1)(i)]

26. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5]

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

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080]

29. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

30. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

34. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080]

36. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

37. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)]

38. 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]

39. 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]

40. 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]

41. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

42. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

43. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

44. 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]

45. 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]

46. 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]

47. The permittee shall maintain the following records: quarterly 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]

48. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

50. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

51. 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 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

52. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

53. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

54. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

55. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

56. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

57. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

58. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-4-0 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. 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]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. Combustion turbine generator (CTG) and 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]
6. The CTG shall be fired exclusively on PUC-regulated 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 and 40 CFR 60.4330(a)(2)]
7. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2; SOx (as SO2) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O2; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O2. NOX (as NO2) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703 and 40 CFR 60.4320(a) & (b)]
8. Ammonia (NH3) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O2 (based on a 24 hour rolling average). [District Rule 2201]
9. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201]
10. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO2) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201]
11. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703]
12. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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]

14. Daily emissions from the CTG shall not exceed any of the following limits: NOx (as NO2) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM10 - 144.1 lb/day; or SOx (as SO2) - 60.2 lb/day. [District Rule 2201]

15. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201]

16. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NOx (as NO2) - 48,465 lb/year; SOx (as SO2) - 12,550 lb/year; PM10 - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201]

17. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201]

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]

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: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = average 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 2201]

20. Source testing to measure startup and shutdown NOx, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NOx and CO startup emission limits, then source testing to measure startup NOx and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081]

21. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tpy all HAPS or 10 tpy any single HAP. [District Rule 4002]

22. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s). Permittee shall conduct a speciated HAPS and total VOC source test for one of the GTEs (C-7220-1, '2, '3 or '4), by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. PEC shall correlate the total HAPS emissions rate and the single highest HAP emission rate to the VOC mass emission determined during the speciated HAPs source test. [District Rule 4002]

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 twelve months. [District Rules 1081 and 4703 and 40 CFR 60.4400(a)]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

24. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [40 CFR 60.4360, 60.4365(a) and 60.4370(c)]

25. The following test methods shall be used: NOx - EPA Method 7E or 20, PM10 - EPA Method 5/202 (front half and back half), CO - EPA Method 10 or 10B, O2 - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206. 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 and 4703 and 40 CFR 60.4400(1)(i)]

26. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5]

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

28. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080]

29. 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 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

30. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)]

31. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, and 4703 and 40 CFR 60.4335(b)(1)]

32. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080 and 40 CFR 60.4345(b)]

33. The NOx, CO and O2 CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080 and 40 CFR 60.4345(a)]

34. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080]

36. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703 and 40 CFR 60.13]

37. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)]

38. 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]

39. 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]

40. 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]

41. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080]

42. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080 and 40 CFR 60.4375(a) and 60.4395]

43. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080]

44. 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]

45. 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]

46. 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]

47. The permittee shall maintain the following records: quarterly 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]

48. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

49. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

50. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

51. 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 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

52. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

53. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

54. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

55. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rules 8011 and 8071]

56. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rules 8011 and 8071]

57. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

58. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-5-1 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT 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 1 or 20% opacity. [District Rule 4101]
4. 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]
5. 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]
6. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
7. 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]
8. Emissions from this IC engine shall not exceed any of the following limits: 4.39 g-NOx/bhp-hr, 0.39 g-CO/bhp-hr, or 0.26 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115]
9. Emissions from this IC engine shall not exceed 0.20 g-PM10/bhp-hr based on using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115]
10. 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 and 17 CCR 93115]
11. 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, rolling blackout, general area power outage, 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 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]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

13. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]

14. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]

15. 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 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]

16. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]

17. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

18. Water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure shall be applied to unpaved vehicle travel areas as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071]

19. Where dusting materials are allowed to accumulate on paved surfaces, the accumulation shall be removed daily or water and/or chemical/organic dust stabilizers/suppressants shall be applied to the paved surface as required to maintain continuous compliance with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011 and limit Visible Dust Emissions (VDE) to 20% opacity. [District Rule 8011 and 8071]

20. On each day that 50 or more Vehicle Daily Trips or 25 or more Vehicle Daily Trips with 3 axles or more will occur on an unpaved vehicle/equipment traffic area, permittee shall apply water, gravel, roadmix, or chemical/organic dust stabilizers/suppressants, vegetative materials, or other District-approved control measure as required to limit Visible Dust Emissions to 20% opacity and comply with the requirements for a stabilized unpaved road as defined in Section 3.59 of District Rule 8011. [District Rule 8011 and 8071]

21. Whenever any portion of the site becomes inactive, Permittee shall restrict access and periodically stabilize any disturbed surface to comply with the conditions for a stabilized surface as defined in Section 3.58 of District Rule 8011. [District Rules 8011 and 8071]

22. Records and other supporting documentation shall be maintained as required to demonstrate compliance with the requirements of the rules under Regulation VIII only for those days that a control measure was implemented. Such records shall include the type of control measure(s) used, the location and extent of coverage, and the date, amount, and frequency of application of dust suppressant, manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. Records shall be kept for one year following project completion that results in the termination of all dust generating activities. [District Rules 8011, 8031, and 8071]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-7220-6-0 **EXPIRATION DATE:** 01/31/2014

EQUIPMENT DESCRIPTION:
27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. 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 NSR Rule]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. No hexavalent chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012]
6. Drift eliminator drift rate shall not exceed 0.0005%. [District Rule 2201]
7. PM10 emission rate from the cooling tower shall not exceed 8.4 lb/day. [District Rule 2201]
8. Compliance with the PM10 daily emission limit shall demonstrated as follows: PM10 lb/day = circulating water recirculation rate x total dissolved solids concentration in the blowdown water x design drift rate. [District Rule 2201]
9. Compliance with the PM10 emission limit shall be determined by blowdown water sample analysis by independent laboratory within 120 days of initial operation and quarterly thereafter. [District Rule 1081]
10. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 or Rule 8011. [District Rules 8011 and 8021]
11. An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity on any site that will include 10 acres or more of disturbed surface area for residential developments, or 5 acres or more of disturbed surface area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials on at least three days. [District Rules 8011 and 8021]
12. 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 (8/19/04) or Rule 8011(8/19/04). [District Rules 8011 and 8021]
13. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 or Rule 8011. [District Rules 8011 and 8051]
14. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 or Rule 8011. [District Rules 8011 and 8061]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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