



JAN 17 2018

Mr. James Erwin
CXA La Paloma, LLC
CLMG Corp.
7195 Dallas Parkway
Plano, TX 75024

Re: Notice of Final Action - Title V Permit Renewal
Facility Number: S-3412
Project Number: S-1162576

Dear Mr. Erwin:

The District has issued the Final Renewed Title V Permit for CXA La Paloma, LLC (see enclosure). The preliminary decision for this project was made on November 10, 2017. No comments were received subsequent to the District preliminary decision.

Subsequent to the District's preliminary decision to issue the La Paloma Generating Company's Title V permit renewal, the District received applications and supporting paperwork transferring ownership of the power plant to CXA La Paloma, LLC. The required Title V Administrative Amendment application to transfer ownership of the facility has also been received and processed. The renewed Title V permit is being issued to the new owner, CXA La Paloma, LLC.

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

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

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

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

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

Facility # S-3412
CXA LA PALOMA, LLC
C/O CLMG CORP.
7195 DALLAS PARKWAY
PLANO, TX 75024

Notice of Permit Issuance

The enclosed permit unit requirements authorize the operation of the equipment as described. These permit unit requirements supersede any and all previous permits for the specified equipment.* Please insert these documents into the Facility Permit to Operate, and post copies on or near the equipment as required by District Rule 2010.

Please contact any of our Small Business Assistance (SBA) staff at the numbers below if you have any questions:

Modesto:	(209) 557-6446
Fresno:	(559) 230-5888
Bakersfield:	(661) 392-5665

*Failure to comply with the permit unit requirements may result in enforcement action.

Permit to Operate

FACILITY: S-3412

EXPIRATION DATE: 01/31/2023

LEGAL OWNER OR OPERATOR:
MAILING ADDRESS:

CXA LA PALOMA, LLC
C/O CLMG CORP.
7195 DALLAS PARKWAY
PLANO, TX 75024

FACILITY LOCATION:

1760 W SKYLINE RD
MCKITTRICK, CA 93251

FACILITY DESCRIPTION:

POWER PLANT

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

Arnaud Marjollet

Director of Permit Services

San Joaquin Valley Air Pollution Control District

FACILITY: S-3412-0-3

EXPIRATION DATE: 01/31/2023

FACILITY-WIDE REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The owner or operator 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 of District Rule 4201 (amended December 17, 1992). [District Rule 4201, 3.0] Federally Enforceable Through Title V Permit
3. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
4. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
5. 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
6. 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 (3/21/02). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
7. 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;] Federally Enforceable Through Title V Permit
8. 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
9. 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
10. 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

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

11. 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
12. 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
13. 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
14. 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 and PSD permit (SJ 98-01), VII] Federally Enforceable Through Title V Permit
15. 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
16. 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
17. 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
18. 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
19. 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
20. Upon presentation of appropriate credentials, a permittee shall allow the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the District, and/or their authorized representative 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 and PSD permit (SJ 98-01), V] Federally Enforceable Through Title V Permit
21. Upon presentation of appropriate credentials, a permittee shall allow the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the District, and/or their authorized representative 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 and PSD permit. (SJ 98-01), V] Federally Enforceable Through Title V Permit
22. Upon presentation of appropriate credentials, a permittee shall allow the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the District, and/or their authorized representative to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3 and PSD permit (SJ 98-01), V] Federally Enforceable Through Title V Permit

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

23. Upon presentation of appropriate credentials, a permittee shall allow the EPA Regional Administrator, the head of the State Air Pollution Control Agency, the head of the District, and/or their authorized representative 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 and PSD permit (SJ 98-01), V] Federally Enforceable Through Title V Permit
24. 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 (11/15/01). 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
25. 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 the Table of Standards of District Rule 4601 (10/31/01) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
26. All VOC-containing materials for architectural coatings subject to Rule 4601 (10/31/01) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
27. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (10/31/01). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
28. 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
29. 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 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
30. 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 82, Subpart B. [40 CFR 82, Subpart B] Federally Enforceable Through Title V Permit
31. 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8021 and 8011] Federally Enforceable Through Title V Permit
32. 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8031 and 8011] Federally Enforceable Through Title V Permit
33. 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8041 and 8011] Federally Enforceable Through Title V Permit
34. 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8051 and 8011] Federally Enforceable Through Title V Permit
35. 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit

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

36. Any unpaved vehicle/equipment area that anticipates more than 75 vehicle trips per day shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 100 vehicle trips per day shall comply with the requirements of Section 5.1.2 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 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit
37. 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
38. 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
39. 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
40. 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
41. 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. The Title V permit shall serve as the facility's Acid Rain permit. [40 CFR 72.9] Federally Enforceable Through Title V Permit
42. 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 72.9 & 40 CFR 75] Federally Enforceable Through Title V Permit
43. 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. [40 CFR 72.9 & 40 CFR 75] Federally Enforceable Through Title V Permit
44. 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 72.9 & 40 CFR 73] Federally Enforceable Through Title V Permit
45. 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 72.9] Federally Enforceable Through Title V Permit
46. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72.9] Federally Enforceable Through Title V Permit
47. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 72.9(c)(1)(i), prior to the calendar year for which the allowance was allocated. [40 CFR 72.9] Federally Enforceable Through Title V Permit
48. 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 72.9] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

49. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72.9] Federally Enforceable Through Title V Permit
50. 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. For the purposes of this condition, the term "excess emissions" is defined in 40 CFR 72.2. [40 CFR 72.9 & 40 CFR 77] Federally Enforceable Through Title V Permit
51. 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. For the purposes of this condition, the term "excess emissions" is defined in 40 CFR 72.2. [40 CFR 72.9 & 40 CFR 77] Federally Enforceable Through Title V Permit
52. The owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR part 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative; (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 under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program. [40 CFR 72.9 & 40 CFR 75] Federally Enforceable Through Title V Permit
53. 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 72.9 & 40 CFR 75] Federally Enforceable Through Title V Permit
54. Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source. [40 CFR 72.9] Federally Enforceable Through Title V Permit
55. FACILITY OPERATION: All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of the permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD permit (SJ 98-01), III] Federally Enforceable Through Title V Permit
56. MALFUNCTION: A. Reporting: The EPA Regional Administrator shall be notified by telephone, facsimile, or electronic mail transmission within two (2) working days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in emissions above any allowable emission limit stated in the PSD permit for units S-3412-1, S-3412-2, S-3412-3, S-3412-4, or S-3412-13. In addition, the Regional Administrator shall be notified in writing within fifteen (15) days of any such failure. The notification shall include all information required by Section IV.A of the PSD permit. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or of any law or regulation that such malfunction may cause, except as provided for in Section IV.B of the PSD permit. [PSD permit (SJ 98-01), IV.A] Federally Enforceable Through Title V Permit

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

57. **MALFUNCTION: B. Treatment of Emissions:** 1. Definition of malfunction: A malfunction means a sudden and reasonably unforeseeable breakdown of equipment or of a process beyond the control of the source requiring immediate corrective action to restore normal operation. 2. Emissions in excess of the limits in the PSD permit conditions for permit units S-3412-1, S-3412-2, S-3412-3, S-3412-4, or S-3412-13 shall constitute a violation and may be the subject of enforcement proceedings. 3. Affirmative defense: In the context of an enforcement proceeding, excess emissions shall not be subject to penalty if the permittee demonstrates compliance with all of the requirements of Section IV.B.3 of the PSD permit. 4. All emissions, including those associated with a malfunction which may be eligible for an affirmative defense, must be included in all emissions calculations and demonstrations of compliance with mass emission limits. 5. This provision is in addition to any emergency or malfunction provision contained in any applicable requirement or elsewhere in this permit. [PSD permit (SJ 98-01), IV.B] Federally Enforceable Through Title V Permit
58. **TRANSFER OF OWNERSHIP:** In the event of any changes in control or ownership of the facilities to be constructed, the PSD permit shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of the PSD permit and its conditions by letter, a copy of which shall be forwarded to the EPA Regional Administrator and the State and local Air Pollution Control Agency. [PSD permit (SJ 98-01), VI] Federally Enforceable Through Title V Permit
59. **OTHER APPLICABLE REGULATIONS:** The owner and operator of the facility shall construct and operate the stationary source in compliance with all other applicable provisions of 40 CFR Parts 52, 60, and 61 and all other applicable federal, state, and local air quality regulations. [PSD permit (SJ 98-01), VIII] Federally Enforceable Through Title V Permit
60. **Agency Notification:** All correspondence as required by the PSD permit shall be forwarded to EPA at the following address: Director, Air Division (Attn: Air-1), U. S. Environmental Protection Agency, Region 9, 75 Hawthorne Street San Francisco, CA 94105. [PSD permit (SJ 98-01), X.J] Federally Enforceable Through Title V Permit
61. 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), and Rule 111 (Kern, Tulare, Kings). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
62. 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 (11/15/01); 4601, sections 5.1, 5.2, 5.3, 5.8 and 8.0 (10/31/01); 8021 (11/15/01); 8031 (11/15/01); 8041 (11/15/01); 8051 (11/15/01); 8061 (11/15/01); and 8071 (11/15/01). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. On January 31, 2005, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-1-19

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NO_x, CO and O₂ downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit
4. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NO_x and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit
8. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
15. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
16. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit
18. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
20. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 4,790.0 lb/day, PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM10: 96,360 lb/year, SOx (as SO2): 30,517 lb/year, NOx (as NO2): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O2 on a twenty four hour rolling average. [District Rule 4102]
24. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = $((a-(bxc/1,000,000)) \times 1,000,000 / b) \times d$, where a = ammonia injection rate(lb/hr)/17(lb/lb. mol), b = dry exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]
25. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O2) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NOx: ppmvd @ 15% O2 and lb/hr, CO: ppmvd @ 15% O2 and lb/hr, VOC: ppmvd @ 15% O2 and lb/hr, PM10: lb/hr, and ammonia: ppmvd @ 15% O2. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Cold start NOx, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit
28. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Title V Annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used NOx: EPA Method 7E or 20, CO: EPA method 10 or 10B, O2: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM10: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit
32. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]
33. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O2) [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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34. The permittee shall maintain hourly records of NO_x, and CO emission concentrations (ppmv @ 15% O₂), and hourly, daily, and twelve month rolling average records of NO_x and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit
35. The permittee shall maintain records of SO_x lb/hr, lb/day, and lb/twelve month rolling average emission. SO_x emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit
36. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
37. The continuous NO_x and O₂ monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
39. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
40. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. Successive quarterly audits shall occur no closer than two months. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 6.2] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O₂ (150 ppmv @ 15% O₂) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit
43. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
44. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
45. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NO_x (as NO₂) @ 15% O₂ or 200 ppmv CO @ 15% O₂. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit
46. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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47. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
48. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NOx emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit
50. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NOx concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
51. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
52. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O2, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit
53. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NOx daily limits may be exceeded during recommissioning periods: NOx (as NO2): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO2: 91.4 lb/day, 15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit
54. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit

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55. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit
56. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit
57. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit
58. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit
59. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NO_x per hr; 4,790.0 lbs-NO_x per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NO_x per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit
60. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NO_x and CO emitted; c. Total emissions of NO_x and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit
61. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NO_x and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit
62. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NO_x and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NO_x and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit
63. Performance Tests: Performance tests for the emissions of CO and NO_x shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NO_x shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G.] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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64. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit
65. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit
66. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit
67. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NO_x, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit
68. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit
69. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit
70. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
71. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); District Rule 4703 (as amended 9/20/07), Sections 5.1.1, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
74. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
75. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]
76. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]
77. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]
78. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]
79. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]
80. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]
81. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]
82. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]
83. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]
84. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-2-20

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NO_x, CO and O₂ downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit
4. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NO_x and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit
8. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit

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10. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
15. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
16. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit
18. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
20. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

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21. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO₂): 4,790.0 lb/day, PM₁₀: 264.0 lb/day, SOx (as SO₂): 91.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM₁₀: 96,360 lb/year, SOx (as SO₂): 30,517 lb/year, NOx (as NO₂): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O₂ on a twenty four hour rolling average. [District Rule 4102]
24. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O₂ = ((a-(bxc/1,000,000)) x 1,000,000 / b) x d, where a = ammonia injection rate(lb/hr)/17(lb/lb. mol), b = dry exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NOx concentration ppmv at 15% O₂ across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]
25. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O₂) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NOx: ppmvd @ 15% O₂ and lb/hr, CO: ppmvd @ 15% O₂ and lb/hr, VOC: ppmvd @ 15% O₂ and lb/hr, PM₁₀: lb/hr, and ammonia: ppmvd @ 15% O₂. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Cold start NOx, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit
28. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Title V annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used NOx: EPA Method 7E or 20, CO: EPA method 10 or 10B, O₂: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM₁₀: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit
32. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]
33. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O₂) [District Rule 4102]

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34. The permittee shall maintain hourly records of NO_x, and CO emission concentrations (ppmv @ 15% O₂), and hourly, daily, and twelve month rolling average records of NO_x and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit
35. The permittee shall maintain records of SO_x lb/hr, lb/day, and lb/twelve month rolling average emission. SO_x emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit
36. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
37. The continuous NO_x and O₂ monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
39. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
40. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. Successive quarterly audits shall occur no closer than two months. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 6.2] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O₂ (150 ppmv @ 15% O₂) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit
43. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
44. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
45. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NO_x (as NO₂) @ 15% O₂ or 200 ppmv CO @ 15% O₂. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit
46. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

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47. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
48. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NOx emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit
50. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NOx concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
51. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
52. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O2, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O2, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit
53. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NOx daily limits may be exceeded during recommissioning periods: NOx (as NO2): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO2: 91.4 lb/day, 15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit
54. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit

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55. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit
56. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit
57. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit
58. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit
59. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NOx per hr; 4,790.0 lbs-NOx per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NOx per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit
60. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NOx and CO emitted; c. Total emissions of NOx and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit
61. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit
62. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NOx and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit
63. Performance Tests: Performance tests for the emissions of CO and NOx shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G.] Federally Enforceable Through Title V Permit

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64. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit
65. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit
66. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit
67. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NO_x, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit
68. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit
69. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit
70. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
71. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); District Rule 4703 (as amended 9/20/07), Sections 5.1.1, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
74. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
75. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]
76. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]
77. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]
78. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]
79. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]
80. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]
81. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]
82. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]
83. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]
84. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-3-20

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NO_x, CO and O₂ downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit
4. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NO_x and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit
8. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit

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10. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
15. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
16. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit
18. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit
20. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NO_x (as NO₂): 4,790.0 lb/day, PM₁₀: 264.0 lb/day, SO_x (as SO₂): 91.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM₁₀: 96,360 lb/year, SO_x (as SO₂): 30,517 lb/year, NO_x (as NO₂): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O₂ on a twenty four hour rolling average. [District Rule 4102]
24. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O₂ = ((a-(bxc/1,000,000)) x 1,000,000 / b) x d, where a = ammonia injection rate(lb/hr)/17(lb/lb. mol), b = dry exhaust gas flow rate (lb/hr)/(29(lb/lb. mol), c = change in measured NO_x concentration ppmv at 15% O₂ across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]
25. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O₂) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NO_x: ppmvd @ 15% O₂ and lb/hr, CO: ppmvd @ 15% O₂ and lb/hr, VOC: ppmvd @ 15% O₂ and lb/hr, PM₁₀: lb/hr, and ammonia: ppmvd @ 15% O₂. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Cold start NO_x, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit
28. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Title V annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used NO_x: EPA Method 7E or 20, CO: EPA method 10 or 10B, O₂: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM₁₀: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit
32. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]
33. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O₂) [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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34. The permittee shall maintain hourly records of NO_x, and CO emission concentrations (ppmv @ 15% O₂), and hourly, daily, and twelve month rolling average records of NO_x and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit
35. The permittee shall maintain records of SO_x lb/hr, lb/day, and lb/twelve month rolling average emission. SO_x emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit
36. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
37. The continuous NO_x and O₂ monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
39. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
40. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. Successive quarterly audits shall occur no closer than two months. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 6.2] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O₂ (150 ppmv @ 15% O₂) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit
43. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit
44. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
45. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NO_x (as NO₂) @ 15% O₂ or 200 ppmv CO @ 15% O₂. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit
46. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

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47. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
48. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NO_x emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit
50. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NO_x concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
51. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
52. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NO_x (as NO₂): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O₂, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O₂, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O₂, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit
53. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NO_x daily limits may be exceeded during recommissioning periods: NO_x (as NO₂): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO₂: 91.4 lb/day, 15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit
54. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit

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55. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit
56. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit
57. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit
58. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit
59. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NOx per hr; 4,790.0 lbs-NOx per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NOx per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit
60. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NOx and CO emitted; c. Total emissions of NOx and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit
61. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit
62. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NOx and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit
63. Performance Tests: Performance tests for the emissions of CO and NOx shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G.] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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64. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit
65. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit
66. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit
67. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NO_x, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit
68. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit
69. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit
70. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
71. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); District Rule 4703 (as amended 9/20/07), Sections 5.1.1, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
74. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
75. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]
76. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]
77. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]
78. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]
79. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]
80. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]
81. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]
82. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]
83. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]
84. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-4-15

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

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

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine and generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exceed 5% opacity, except for three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The gas turbine engine shall be equipped with continuously recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine exhaust shall be equipped with a continuously recording emissions monitor for NO_x, CO and O₂ downstream of the SCR catalyst dedicated to this unit. This continuous emission monitor shall meet the requirements of 40 CFR parts 60 and 75 and shall be capable of monitoring emissions during startups and shutdowns as well as normal operating conditions. [District Rule 2201, 4703, and 40 CFR Part 64] Federally Enforceable Through Title V Permit
4. Ammonia injection grid shall be equipped with operational ammonia flowmeter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Heat recovery steam generator design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NO_x and CO emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Except during startup ignition, gas turbine engine shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. Gas turbine igniters may be fueled with propane or natural gas as part of startup sequence. Use of propane during startup process is limited to 6 grams per second, for a duration of no more than 30 seconds per startup on a design basis. Ignition occurs for the duration of time required to ignite and achieve a sustained flame on natural gas. [District Rule 2201, District Rule 4801, Kern County Rule 407, and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit
8. Recommissioning activities are defined as, but not limited to, all testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and LPGC contractors to insure safe and reliable steady state operation of the plant. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. Recommissioning periods for this unit shall commence at first firing during major outage maintenance procedures. The recommissioning period shall terminate when the unit has completed performance testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall notify the District at least seven (7) calendar days prior to start, and no more than 7 calendar days after the end, of recommissioning period for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Startup is defined as the period beginning with turbine light-off, or when the combustion turbine output is reduced to below minimum load (minimum megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the lb/hr and ppmv emission limits in Condition 21) to engage the steam turbine, until the unit again reaches minimum load. Shutdown is defined as the period beginning with initiation of turbine shutdown sequence and ending either with cessation of firing of the gas turbine engine, or when the unit ramps back up after an aborted shutdown and the unit reaches minimum load. Startup durations shall not exceed three hours, except during recommissioning periods for this unit, and shutdowns shall not exceed one hour, per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Permittee may inject ammonia during startup when the selective catalytic reduction system is at least 302 degrees F, however ammonia must be injected during startup when the selective catalytic reduction system catalyst temperature exceeds 500 degrees F and selective catalytic reduction system inlet concentrations exceed 2.5 ppmv NOx and as needed during normal operation to meet the NOx emissions limits. Permittee shall monitor and record catalyst temperature during periods of startup. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. During startup and/or recommissioning of any gas turbine engines, combined emissions from the four gas turbine engines (S-3412-1, '-2, '-3 and '-4) heat recovery steam generator exhausts shall not exceed the following: NOx (as NO2): 900 lb and CO:2,500 lb in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
15. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the combustors of this unit shall be tuned to minimize emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
16. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the oxidation catalyst shall be utilized to minimize CO emissions from this unit. [District Rule 2201] Federally Enforceable Through Title V Permit
17. During recommissioning periods, at the earliest feasible opportunity, in accordance with the recommendations of the equipment manufacturer and the construction contractor, the Selective Catalytic Reduction (SCR) system shall be utilized to control NOx whenever gas turbine operations are sufficiently stable and minimum catalyst temperature is achieved. [District Rule 2201] Federally Enforceable Through Title V Permit
18. During recommissioning periods for this unit, emission rates from gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 517.3 lb/hr and CO: 439.6 lb/hr. NOx (as NO2) emission limit is a one hour average. CO emission limit is a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Emission rates from the gas turbine engine heat recovery steam generator exhaust, except during startup and/or shutdown of this unit, shall not exceed the following: PM10: 11.0 lb/hr, SOx (as SO2): 3.89 lb/hr, NOx (as NO2): 17.30 lb/hr and 2.5 ppmvd @ 15% O2, VOC (as propane): 2.80 lb/hr and 0.7 ppmvd @ 15% O2, and CO: 31.40 lb/hr and either 10 ppmvd @ 15% O2 at operating loads less than or equal to 221 MW (gross three hour average) or 6 ppmvd @ 15% O2 at operating loads greater than 221 MW (gross three hour average). NOx (as NO2) emission limit is a one hour average. All other emission limits are three hour rolling averages. NOx and CO emission limits shall not apply during recommissioning periods. [District Rule 2201; District Rule 4703, 5.1 and 5.2; and 40 CFR 60.332 and 60.333] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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20. Except during recommissioning periods for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following on days when a startup or shutdown of the unit occurs: PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, NOx (as NO2): 511.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
21. During recommissioning periods, for this unit, emission rates from the gas turbine engine heat recovery steam generator exhaust shall not exceed the following: NOx (as NO2): 4,790.0 lb/day, PM10: 264.0 lb/day, SOx (as SO2): 91.4 lb/day, VOC: 139.8 lb/day, and CO: 1,873.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Twelve month rolling average emissions from each gas turbine engine heat recovery steam generator exhaust shall not exceed the following PM10: 96,360 lb/year, SOx (as SO2): 30,517 lb/year, NOx (as NO2): 146,001 lb/year, VOC: 25,063 lb/year, and CO: 217,921 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Ammonia emission rate shall not exceed 10 ppmvd @ 15% O2 on a twenty four hour rolling average. [District Rule 4102]
24. Compliance with ammonia slip limit shall be demonstrated by using the following calculation procedure: ammonia slip ppmv @ 15% O2 = $((a-(b \times c / 1,000,000)) \times 1,000,000 / b) \times d$, where a = ammonia injection rate (lb/hr) / 17 (lb/lb. mol), b = dry exhaust gas flow rate (lb/hr) / (29 (lb/lb. mol)), c = change in measured NOx concentration ppmv at 15% O2 across catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. [District Rule 4102]
25. Short term emissions shall be measured to demonstrate compliance with short term emission limits (lb/hr and ppmv @ 15% O2) annually by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm at full load conditions as follows - NOx: ppmvd @ 15% O2 and lb/hr, CO: ppmvd @ 15% O2 and lb/hr, VOC: ppmvd @ 15% O2 and lb/hr, PM10: lb/hr, and ammonia: ppmvd @ 15% O2. Sample collection for ammonia emissions shall be based on a two-hour or longer average. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Cold start NOx, and CO mass emissions shall be measured, and measurement of cold start VOC emissions shall be performed for one of the gas turbines engines (S-3412-1, '2, '3, or '4) at least every seven years by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rules 1081; 2520, 9.3.2; and 2540] Federally Enforceable Through Title V Permit
28. The sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 3246. [District Rule 2520, 9.3.2 and 40 CFR 60.335(b)] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of fuel sulfur content monitoring data and records documenting a constant supplier or source of fuel (a substantial change in fuel quality shall be considered a change in fuel supply). Permittee shall submit results of fuel sulfur content monitoring annually to the District with the Title V annual Certificate. Permittee shall notify the District of any changes in fuel supplier or source within 60 days of such change. [District Rules 1081 and 2540] Federally Enforceable Through Title V Permit
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. Official test results and field data collected by source tests required by conditions on this permit shall be submitted to the District within 60 days of testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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31. The following test methods shall be used NO_x: EPA Method 7E or 20, CO: EPA method 10 or 10B, O₂: EPA Method 3, 3A, or 20, VOC: EPA method 18, and PM₁₀: EPA method 5 (front half and back half) or EPA methods 201A and 202. Alternative test methods as approved by the District and EPA may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4703, 6.4; and 40 CFR 60.335] Federally Enforceable Through Title V Permit
32. Source testing for ammonia shall be performed using BAAQMD ST-1B. [District Rule 4102]
33. The permittee shall maintain hourly records of ammonia emission concentrations (ppmv @ 15% O₂) [District Rule 4102]
34. The permittee shall maintain hourly records of NO_x, and CO emission concentrations (ppmv @ 15% O₂), and hourly, daily, and twelve month rolling average records of NO_x and CO emissions. Compliance with the hourly, daily, and twelve month rolling average VOC emission limits shall be demonstrated by annual VOC source tests. [District Rule 2201] Federally Enforceable Through Title V Permit
35. The permittee shall maintain records of SO_x lb/hr, lb/day, and lb/twelve month rolling average emission. SO_x emissions shall be based on fuel use records, natural gas sulfur content, and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit
36. CEM cycling times shall be those specified in 40 CFR, Part 51, Appendix P, Sections 3.4, 3.4.1 and 3.4.2, or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
37. The continuous NO_x and O₂ monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, 40 CFR 51, Appendix P, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.3, 6.5, 6.6 and 7.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
39. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
40. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. Successive quarterly audits shall occur no closer than two months. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 6.2] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as he or she determines to be necessary, the monitoring devices required by this rule to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.015% by volume at calculated at 15% O₂ (150 ppmv @ 15% O₂) on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, Kern County Rule 407, and 40 CFR 60.333(a)] Federally Enforceable Through Title V Permit
43. All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device. [40 CFR 60.13(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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44. Continuous emission monitors shall meet applicable requirements of 40 CFR 60.13. [District Rule 4703, 5.1 & 6.4 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
45. By two hours after turbine light-off the owner or operator shall not operate the gas turbine under load conditions, excluding shutdown or recommissioning periods for this unit, which results in the measured concentrations exceeding the following limits: 5 ppmv NO_x (as NO₂) @ 15% O₂ or 200 ppmv CO @ 15% O₂. [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit
46. The HHV and LHV of the fuel combusted shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
47. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown, recommissioning period, malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), emission measurements, total daily and annual hours of operation, hourly quantity of fuel used, and gross three hour average operating load. [District Rules 1080, 7.0; 2520, 9.3.2; 4703, 6.2; and 40 CFR 60.8(d)] Federally Enforceable Through Title V Permit
48. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Air Pollution Control Equipment/Operation: The Permittee shall continuously operate and maintain the following air pollution controls and operations to minimize emissions at or below the levels specified in Conditions X-E of the PSD permit. The aforementioned "continuous" periods of operation do not include periods of startup, shutdown, and recommissioning, as defined in Section X.E.3, and X.F.1 of the PSD permit, or periods of malfunction as defined in Section IV.B.1 of the PSD permit. The Permittee shall continuously operate Selective Catalytic Reduction (SCR) systems on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 to meet the NO_x emission limits specified in the PSD permit. The Permittee shall maintain an oxidation catalyst system on permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4 for control of CO. [PSD permit (SJ 98-01), X.B] Federally Enforceable Through Title V Permit
50. Continuous Emission Monitoring: Prior to the date of startup and thereafter, the Permittee shall install, maintain, and operate the following Continuous Emissions Monitoring Systems (CEM) on each Combustion Turbine Generator (CTG) set exhaust vent stack: a. A continuous monitoring system to measure stack gas NO_x concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B); and b. A continuous monitoring system to measure stack CO concentrations. The system shall meet EPA monitoring performance specifications (40 CFR 60, Appendix B). [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
51. Continuous Emission Monitoring: The permittee shall install, maintain, and operate a continuously recording fuel gas flow meter on each gas turbine engine. Exhaust gas flow rates shall then be determined from fuel gas flow using EPA Method 19. [PSD permit (SJ 98-01), X.D] Federally Enforceable Through Title V Permit
52. Emission Limits: Emissions from each of the gas turbines (permit units S-3412-1, S-3412-2, S-3412-3, and S-3412-4) shall not exceed the following limits, except during periods of startup, shutdown and recommissioning: a. NO_x (as NO₂): 17.30 lb/hr and 2.5 ppmvd @ 15 percent O₂, based on a 1-hour average; b. 25.30 lb-CO/hr and 6 ppmvd @ 15 percent O₂, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads above 221 MW (gross 3-hour average) or 31.40 lb-CO/hr and 10 ppmvd @ 15 percent O₂, based on a 3-hour average, whenever the combined-cycle combustion turbine is operating at loads at or below 221 MW (gross 3-hour average). [PSD permit (SJ 98-01), X.E.1] Federally Enforceable Through Title V Permit
53. Emission Limits: Emission rates from each gas turbine shall not exceed the following daily and annual limits, including all periods of startup, shutdown and recommissioning, except NO_x daily limits may be exceeded during recommissioning periods: NO_x (as NO₂): 511.4 lb/day, 73.0 tons/yr; CO: 1,873.0 lb/day, 109.0 tons/yr; SO₂: 91.4 lb/day, 15.3 tons/yr. The annual limit is a 12-month rolling average. [PSD permit (SJ 98-01), X.E.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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54. Emission Limits: The following definitions apply to the PSD permit: a. Startup of the combustion turbine is defined as the period beginning with combustion turbine light-off, until the unit reaches minimum load; b. Startup of the steam turbine is defined as the period when the combustion turbine output is reduced to below minimum load, in order to engage the steam turbine, until the unit again reaches minimum load; c. Shutdown is defined as the period beginning with initiation of combustion turbine shutdown sequence and ending either with the cessation of firing of the combustion turbine engine, or when the unit ramps back up after an aborted shutdown, until the unit reaches minimum load; d. Minimum load is defined as the minimum combustion turbine megawatt output at which the combustion turbine achieves stable operation and maintains compliance with the ppmv emission limits in Condition X.E.1 of the PSD permit. [PSD permit (SJ 98-01), X.E.3] Federally Enforceable Through Title V Permit
55. Emission Limits: Each startup, whether of the combustion or steam turbine, shall not exceed three hours per occurrence. Each shutdown shall not exceed one hour per occurrence. [PSD permit (SJ 98-01), X.E.4] Federally Enforceable Through Title V Permit
56. Recommissioning Periods: Recommissioning is defined as the period following an inspection, maintenance, repair and/or overhaul outage where the source conducts operational and contractual testing and tuning to ensure the safe, efficient and reliable operation of the plant. A recommissioning period for any single outage shall not exceed 60 cumulative days of combustion turbine firing. [PSD permit (SJ 98-01), X.F.1] Federally Enforceable Through Title V Permit
57. Recommissioning Periods: Prior to commencing a recommissioning period, permittee shall perform a PSD applicability determination for the action(s) triggering the recommissioning period. [PSD permit (SJ 98-01), X.F.2] Federally Enforceable Through Title V Permit
58. Recommissioning Periods: Permittee shall maintain a copy of each PSD applicability determination on site. In addition, if the action(s) triggering the recommissioning period include(s) the replacement of parts that could affect capacity or emissions, or an overhaul outage, then the permittee shall provide a copy of such determination to EPA prior to the start of the recommissioning period. [PSD permit (SJ 98-01), X.F.3] Federally Enforceable Through Title V Permit
59. Recommissioning Periods: Emission rates from each combustion turbine shall not exceed the following limits during a recommissioning period: 439.6 lbs-CO per hr; 517.3 lbs-NOx per hr; 4,790.0 lbs-NOx per day; 4,443.0 lbs-CO per recommissioning event; 8,545.0 lbs-NOx per recommissioning event. [PSD permit (SJ 98-01), X.F.4] Federally Enforceable Through Title V Permit
60. Recommissioning Periods: The permittee shall maintain the following records for each recommissioning period: a. The number of days the combustion turbine is fired; b. Hourly and daily emissions, in lbs/hr and lbs/day, of NOx and CO emitted; c. Total emissions of NOx and CO emitted during the recommissioning period; d. Documentation of the testing and tuning activities which occurred during the recommissioning period. [PSD permit (SJ 98-01), X.F.5] Federally Enforceable Through Title V Permit
61. Recommissioning Periods: Pursuant to 40 CFR 60.8, within 30 days after the end of a recommissioning period, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. Upon written request and adequate justification from the Permittee, EPA may waive a performance test after a recommissioning period. [PSD permit (SJ 98-01), X.F.6] Federally Enforceable Through Title V Permit
62. Performance Tests: Pursuant to 40 CFR 60.8, within 60 days after achieving the maximum production rate of the affected emission units, but no later than 180 days after the initial startup of equipment (as defined in 40 CFR 60.2), and at such other times as specified by the Regional Administrator, the owner/operator shall conduct or cause to be conducted performance tests (as described in 40 CFR 60.8) for NOx and CO and furnish the EPA (Attn: AIR-5) a written report of the results of such test. The tests for NOx and CO shall be conducted on an annual basis and at the maximum operating capacity of the facilities being tested. Upon written request (Attn: AIR-5) from the Permittee, EPA may approve the conducting of performance tests at a lower specified production rate. After initial performance test and upon written request and adequate justification from the Permittee, EPA may waive a specified annual test for the facility. [PSD permit (SJ 98-01), X.G.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

63. Performance Tests: Performance tests for the emissions of CO and NOx shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR 60, Part 60.8 and Appendix A. The following test methods, or alternatives approved by EPA, shall be used: a. Performance tests of the emissions of CO shall be conducted using EPA Methods 1-4 and 10; b. Performance tests of the emissions of NOx shall be conducted using EPA Methods 1-4 and 7E; c. Natural gas sulfur content shall be tested according to ASTM D3246. The EPA (Attn: AIR-5) shall be notified in writing at least 30 days prior to such test to allow time for the development of an approvable performance test plan and to arrange for an observer to be present at the test. Such prior approval shall minimize the possibility of EPA rejection of test results for procedural deficiencies. In lieu of the above mentioned test methods, equivalent methods may be used with prior written approval from EPA. [PSD permit (SJ 98-01), X.G.] Federally Enforceable Through Title V Permit
64. Performance Tests: For performance test purposes, sampling ports, platforms, and access shall be provided by the Permittee on the exhaust stack in accordance with 40 CFR 60.8(e). [PSD permit (SJ 98-01), X.G.4] Federally Enforceable Through Title V Permit
65. Recordkeeping and Reporting: A file shall be maintained of all measurements including continuous monitoring system evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, performance and all other information required by 40 CFR 60 or 75 recorded in a permanent form suitable for inspection. The file shall be retained for at least five (5) years following the date of such measurement, maintenance, reports, and records. [PSD permit (SJ 98-01), X.H.1] Federally Enforceable Through Title V Permit
66. Recordkeeping and Reporting: The Permittee shall maintain an operating log for each combustion turbine, which contains at a minimum, the following information: the start and finish times for all startup, shutdown and recommissioning periods. [PSD permit (SJ 98-01), X.H.3] Federally Enforceable Through Title V Permit
67. Recordkeeping and Reporting: The permittee shall submit a written report of all excess emissions to EPA (Attn: AIR-5) for every calendar quarter. The report shall include the following: a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions; b. Specific identification of each period of excess emissions that occurs during startups, shutdown, recommissioning, and malfunctions of the engine exhaust systems. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported; c. The date and time identifying each period during which a CEMS was inoperative, repaired, or adjusted, except for zero and span checks, and the nature of the system repairs or adjustments; d. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report; e. Excess emissions shall be defined as any 1-hour period during which the average emissions of NOx, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.a of the PSD permit; f. Excess emissions shall be defined as any 3-hour period during which the average emissions of CO, as measured by the CEM, exceeds the maximum emissions limits set forth in Condition X.E.1.b of the PSD permit. [PSD permit (SJ 98-01), X.H.4] Federally Enforceable Through Title V Permit
68. Recordkeeping and Reporting: The facility is subject to the recordkeeping and reporting requirements of the applicable New Source Performance Standards (NSPS) - 40 CFR Part 60, as described in this permit. [PSD permit (SJ 98-01), X.H.5] Federally Enforceable Through Title V Permit
69. New Source Performance Standards: The facility's combustion turbines are subject to the federal New Source Performance Standards (NSPS) - 40 CFR Part 60, Subpart GG, as well as the General Provisions of Subpart A. The owner/operator shall meet the applicable requirements of the aforementioned NSPS Subparts. [PSD permit (SJ 98-01), X.I] Federally Enforceable Through Title V Permit
70. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rule 4801 and Kern County Rule 407 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

71. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332, 60.333 (a) and (b); 40 CFR 60.334(a), (b)(2), (c), and 40 CFR 60.335(b); District Rule 4703 (as amended 9/20/07), Sections 5.1.1, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6 as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
72. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8, 60.8(d), 60.13, and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
73. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
74. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
75. Gas turbine engine exhaust shall be equipped with an additional continuous NOx analyzer located upstream of the SCR unit for purposes of monitoring ammonia slip (Ammonia Slip NOx Analyzer). This analyzer shall be capable of monitoring NOx concentration at this location during startups and shutdowns as well as normal operating conditions. [District Rule 4102]
76. The Ammonia Slip NOx Analyzer shall conform to the specifications of Section 6.0, Performance Specification 2, 40 CFR 60, Appendix B. [District Rule 4102]
77. Calibration drift (CD) assessment for the Ammonia Slip NOx Analyzer shall be performed in accordance with requirements specified in section 4 of Appendix F to 40 CFR Part 60. [District Rule 4102]
78. A Cylinder Gas Audit (CGA) of the Ammonia Slip NOx Analyzer shall be performed each quarter in accordance with the procedures of specified in section 5 of Appendix F to 40 CFR Part 60. [District Rule 4102]
79. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required by this permit, the Ammonia Slip NOx Analyzer shall be in continuous operation. [District Rule 4102]
80. The Ammonia Slip NOx Analyzer shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [District Rule 4102]
81. Emission data from the Ammonia Slip NOx Analyzer, including the calculated ammonia slip, shall be obtained for at least 18 hours in at least 22 out of 30 successive gas turbine operating days. [District Rule 4102]
82. Notification and record keeping for the Ammonia Slip NOx Analyzer shall be in accordance with the requirements specified in 40 CFR 60.7. [District Rule 4102]
83. An excess ammonia emissions and monitoring system performance report for the Ammonia Slip NOx Analyzer, in accordance with the requirements specified in 40 CFR 60.7, shall be submitted to the APCO for each calendar quarter. [District Rule 4102]
84. Although specific sections of 40 CFR 60 are referenced for convenience in permit conditions for the Ammonia Slip NOx Analyzer, the equipment is not subject to federal enforcement or other federal monitoring, reporting or recordkeeping requirements. [District Rule 4102]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-5-6

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

COOLING TOWER #1 WITH 8 CELLS AND HIGH EFFICIENCY DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. No hexavalent chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012]
2. Drift eliminator drift rate shall not exceed 0.0006%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. PM10 emission rate shall not exceed 20 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Daily PM10 emissions shall be calculated as follows: $PM10 \text{ lb/day} = \text{cooling water recirculation rate} * \text{total dissolved solids concentration in the blowdown water} * \text{design drift rate} * 0.5$. [District Rule 2201] Federally Enforceable Through Title V Permit
5. PM10 emissions shall be determined by quarterly cooling water sample analysis. If any quarterly testing results indicate noncompliance, weekly testing shall be conducted until eight (8) consecutive weeks of testing have demonstrated compliance, at which time quarterly sampling may resume. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain records of cooling water sample analysis. All records shall be maintained for at least 5 years and shall be made available to the District upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4202 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-6-6

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

COOLING TOWER #2 WITH 8 CELLS AND HIGH EFFICIENCY DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. No hexavalent chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012]
2. Drift eliminator drift rate shall not exceed 0.0006%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. PM10 emission rate shall not exceed 20 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Daily PM10 emissions shall be calculated as follows: $PM10 \text{ lb/day} = \text{cooling water recirculation rate} * \text{total dissolved solids concentration in the blowdown water} * \text{design drift rate} * 0.5$. [District Rule 2201] Federally Enforceable Through Title V Permit
5. PM10 emissions shall be determined by quarterly cooling water sample analysis. If any quarterly testing results indicate noncompliance, weekly testing shall be conducted until eight (8) consecutive weeks of testing have demonstrated compliance, at which time quarterly sampling may resume. [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. The operator shall maintain records of cooling water sample analysis. All records shall be maintained for at least 5 years and shall be made available to the District upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4201 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4202 (as amended 12/17/92). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-8-5

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

587 BHP CATERPILLAR MODEL #3406 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (#1)

PERMIT UNIT REQUIREMENTS

1. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
3. The engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
4. The engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. 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 Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. 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, 5.1] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency unless UL certification would be voided. [District Rule 2201] Federally Enforceable Through Title V Permit
12. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit
13. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit
14. 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
15. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit
16. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
17. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
18. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
20. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4801 and Kern County Rule 407. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
21. Air Pollution Control Equipment/Operation: The Permittee shall use good combustion control operation on the emergency generator sets for control of NOx and CO emissions. [PSD permit (SJ 98-01), X.B.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Recordkeeping and Reporting: The Permittee shall record and maintain records of the 12 month rolling operating hours of the emergency generator set. [PSD permit (SJ 98-01), X.H.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-9-5

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

587 BHP CATERPILLAR MODEL #3406 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (#2)

PERMIT UNIT REQUIREMENTS

1. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
3. The engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
4. The engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. 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 Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. 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, 5.1] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency unless UL certification would be voided. [District Rule 2201] Federally Enforceable Through Title V Permit
12. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit
13. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit
14. 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
15. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit
16. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
17. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
18. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
20. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4801 and Kern County Rule 407. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
21. Air Pollution Control Equipment/Operation: The Permittee shall use good combustion control operation on the emergency generator sets for control of NO_x and CO emissions. [PSD permit (SJ 98-01), X.B.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Recordkeeping and Reporting: The Permittee shall record and maintain records of the 12 month rolling operating hours of the emergency generator set. [PSD permit (SJ 98-01), X.H.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-10-5

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

587 BHP CATERPILLAR MODEL #3406 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (#3)

PERMIT UNIT REQUIREMENTS

1. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
3. The engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
4. The engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. 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 Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. 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, 5.1] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency unless UL certification would be voided. [District Rule 2201] Federally Enforceable Through Title V Permit
12. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit
13. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit
14. 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
15. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit
16. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
17. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
18. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
20. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4801 and Kern County Rule 407. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
21. Air Pollution Control Equipment/Operation: The Permittee shall use good combustion control operation on the emergency generator sets for control of NOx and CO emissions. [PSD permit (SJ 98-01), X.B.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Recordkeeping and Reporting: The Permittee shall record and maintain records of the 12 month rolling operating hours of the emergency generator set. [PSD permit (SJ 98-01), X.H.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-11-5

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

587 BHP CATERPILLAR MODEL #3406 DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR (#4)

PERMIT UNIT REQUIREMENTS

1. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
3. The engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
4. The engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. 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 Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. 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, 5.1] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
11. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device of at least 90% control efficiency unless UL certification would be voided. [District Rule 2201] Federally Enforceable Through Title V Permit
12. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit
13. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit
14. 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
15. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit
16. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
17. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
18. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
20. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 4801 and Kern County Rule 407. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
21. Air Pollution Control Equipment/Operation: The Permittee shall use good combustion control operation on the emergency generator sets for control of NOx and CO emissions. [PSD permit (SJ 98-01), X.B.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. Recordkeeping and Reporting: The Permittee shall record and maintain records of the 12 month rolling operating hours of the emergency generator set. [PSD permit (SJ 98-01), X.H.2] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-13-3

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

6.4 MMBTU/HR CLAYTON MODEL EG-154-1 LNB NATURAL GAS FIRED BOILER

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
2. Emission rates shall not exceed any of the following: PM₁₀: 0.007 lb/MMBTU; NO_x (as NO₂): 12 ppmv @ 3% O₂; VOC - 30 ppmv @ 3% O₂; or CO: 50 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4301, 5.2; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit
3. Boiler natural gas consumption shall not exceed 148.8 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall maintain daily records of boiler natural gas consumption (MMBtu/day). [District Rule 2201 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Boiler shall be fired exclusively on pipeline quality natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201; District Rule 4301, 5.2.1; District Rule 4801; Kern County Rule 407; and PSD permit (SJ 98-01), X.C.1] Federally Enforceable Through Title V Permit
6. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit
7. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit
9. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit
10. Source testing shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4305 (amended August 21, 2003). [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
12. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 2201 and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
16. CO emissions for source test purposes shall be determined using EPA Method 10 or EPA Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
17. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. If the unit is fired on natural gas certified by the supplier to have a sulfur content of 0.75 grains per 100 dscf or less, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. If the unit is not fired on natural gas certified by the supplier to have a sulfur content 0.75 grains per 100 dscf or less, then the sulfur content of the natural gas being fired in the unit shall be determined using ASTM method D 3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. If the unit is not fired on natural gas certified by the supplier to have a sulfur content 0.75 grains per 100 dscf or less, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Operator shall provide that fuel h_hv be certified by third party fuel supplier or determined annually by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2520, 9.3.2; 4305, 6.2.1; and 4306, 6.2.1] Federally Enforceable Through Title V Permit
24. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit
26. Emission Limits: Emissions from the boiler servicing the wastewater treatment system shall not exceed the following limits: a) NO_x (as NO₂): 0.103 lb/hr; b) CO: 0.261 lb/hr; c) SO₂: 0.012 lb/hr. [PSD permit (SJ 98-01), X.E.5] Federally Enforceable Through Title V Permit
27. Performance Tests: Compliance with the NO_x and CO emission limits in Conditions of the PSD permit for the boiler servicing the wastewater treatment system shall be demonstrated within 90 days of initial startup and subsequently not less than once every 12 months, except as provided below. [PSD permit (SJ 98-01), X.G.5] Federally Enforceable Through Title V Permit
28. Performance Tests: Source testing to demonstrate compliance with the NO_x and CO emission limits in Conditions of the PSD permit for the boiler servicing the wastewater treatment system shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. If the Permittee fails any compliance demonstration for the NO_x and CO emission limits in Conditions of this permit when testing not less than every 36 months, then compliance with these limits shall be demonstrated not less than once every 12 months. [PSD permit (SJ 98-01), X.G.6] Federally Enforceable Through Title V Permit
29. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance the applicable requirements of District Rule 4801 and Kern County Rule 407. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the following applicable requirements: District Rules 4201 (as amended 12/17/92), 4301 (as amended 12/17/92), and 4305 (as amended 8/21/03). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
31. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance with the applicable requirements of District Rule 1081 (as amended 12/16/93). A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
32. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in Rule 4320. [District Rule 4320]
33. On and after July 1, 2012, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

34. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-3412-14-5

EXPIRATION DATE: 01/31/2023

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

EQUIPMENT DESCRIPTION:

240 BHP CLARKE-DETROIT DIESEL-ALLISON MODEL #JU6H-UF60 DIESEL-FIRED EMERGENCY IC ENGINE
POWERING A FIREWATER PUMP

PERMIT UNIT REQUIREMENTS

1. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
3. The engine's oil and filter shall be changed every 500 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
4. The engine's air filter shall be inspected every 1,000 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The engine's hoses and belts shall be inspected every 500 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of action taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

8. 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 Rule 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. 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, 5.1] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
11. The exhaust stack shall not be fitted with a rain cap or similar device which would impede vertical exhaust flow. [District Rule 4102]
12. NOx emissions shall not exceed 4.2 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The PM10 emissions rate shall not exceed 0.14 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201] Federally Enforceable Through Title V Permit
14. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 4.3 and 17 CCR 93115] Federally Enforceable Through Title V Permit
15. 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
16. This engine shall be operated only for maintenance, testing, and 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 and 17 CCR 93115] Federally Enforceable Through Title V Permit
17. 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 Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
18. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
20. Compliance with permit conditions in the Title V permit for this unit shall be deemed compliance the applicable requirements of District Rule 4801 and Kern County Rule 407. A permit shield from these requirements is granted to this unit. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
21. Air Pollution Control Equipment/Operation: The Permittee shall use good combustion control operation on the diesel fire pump engine for control of NOx and CO emissions. [PSD permit (SJ 98-01), X.B.4] Federally Enforceable Through Title V Permit
22. Recordkeeping and Reporting: The Permittee shall record and maintain records of the weekly operating hours and the 12 month rolling operating hours of the diesel fire pump. [PSD permit (SJ 98-01), X.H.2] Federally Enforceable Through Title V Permit

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