



APR 23 2018

Mr. Edward Kent
California Power Holdings LLC
303 Fellowship Rd, Ste 105
Mount Laurel, NJ 08054

Re: Notice of Final Action - Title V Permit Renewal
Facility Number: C-3775
Project Number: C-1162674

Dear Mr. Kent:

The District has issued the Final Renewed Title V Permit for California Power Holdings LLC (see enclosure). The preliminary decision for this project was made on February 22, 2018. No comments were received subsequent to the District preliminary decision.

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. Errol Villegas, Permit Services Manager, at (559) 230-5900.

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

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District has made its final decision to issue the renewed Federally Mandated Operating Permit to California Power Holdings LLC at 16457 Avenue 24 1/2, Chowchilla, California.

The District's analysis of the legal and factual basis for this action, project # C-1162674, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm, the SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726, and at any other District office. For additional information, please contact the District at (559) 230-6000.

**DISTRITO PARA EL CONTROL DE LA CONTAMINACIÓN DEL AIRE
DEL VALLE DE SAN JOAQUÍN
AVISO DE DECISIÓN FINAL PARA OTORGAR
UN RENOVADO PERMISO MANDATORIO FEDERAL PARA OPERAR**

POR EL PRESENTE SE NOTIFICA que el Distrito para el Control de la Contaminación del Aire del Valle de San Joaquín ha tomado la decisión final para otorgar un renovado Permiso Mandatorio Federal Para Operar a California Power Holdings LLC en 16457 Avenue 24 1/2, Chowchilla, California.

El análisis del Distrito de los fundamentos jurídicos y fácticos de esta acción, Número del Proyecto # C-1162674, está disponible para la inspección del público en http://www.valleyair.org/notices/public_notices_idx.htm, el DISTRITO PARA EL CONTROL DE LA CONTAMINACIÓN DEL AIRE DEL VALLE DE SAN JOAQUÍN, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726, y en cualquiera de las oficinas del Distrito. Para más información en Español, por favor comuníquese con el Distrito al (559) 230-6000.

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Facility # C-3775
CALIFORNIA POWER HOLDINGS LLC
ATTN; ACCOUNTS PAYABLE
303 FELLOWSHIP RD, SUITE 105
MOUNT LAUREL, NJ 08054

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.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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Permit to Operate

FACILITY: C-3775

EXPIRATION DATE: 05/31/2022

LEGAL OWNER OR OPERATOR:
MAILING ADDRESS:

CALIFORNIA POWER HOLDINGS LLC
ATTN; ACCOUNTS PAYABLE
303 FELLOWSHIP RD, SUITE 105
MOUNT LAUREL, NJ 08054

FACILITY LOCATION:

16457 AVENUE 24 1/2
CHOWCHILLA, CA

FACILITY DESCRIPTION:

POWER GENERATION

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

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

Seyed Sadredin
Executive Director / APCO

Arnaud Marjollet
Director of Permit Services

San Joaquin Valley Air Pollution Control District

FACILITY: C-3775-0-1

EXPIRATION DATE: 05/31/2022

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: CALIFORNIA POWER HOLDINGS LLC
Location: 16457 AVENUE 24 1/2, CHOWCHILLA, CA
C-3775-0-1 Apr 19 2018 1:11PM - BUSH-T

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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-1-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3,100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SOx - 0.009 g/bhp-hr. Compliance with the NOx, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NOx (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NOx (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SOx - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-2-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3,100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 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.

56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-3-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3,100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] 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.

48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 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.

56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-4-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3,100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-5-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3,100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-6-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3,100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O2 concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O2 concentration must be made using one of the O2 measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O2, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NOx, CO, VOC, and NH3 emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NOx, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NOx emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NOx concentrations which are less than the allowed maximum. The relationship between concentration of NOx and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] 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.

48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-7-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3,100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-8-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-9-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 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.

56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-10-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] 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.

48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 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.

56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-11-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

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

12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-12-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] 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.

48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 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.

56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-13-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O2 concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O2 concentration must be made using one of the O2 measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O2, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NOx, CO, VOC, and NH3 emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] 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.

48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 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.

56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-14-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-15-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-16-9

EXPIRATION DATE: 05/31/2022

EQUIPMENT DESCRIPTION:

4,157 BHP DEUTZ GMBH MODEL TBG632V16 LEAN-BURN NATURAL GAS-FIRED IC ENGINE WITH A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND CO & VOC CATALYSTS, POWERING A 3100 KW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. All equipment, including air pollution control equipment, shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
5. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
6. The total combined operating hours of permit units C-3775-1 through -16 shall not exceed 40,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from this unit, except during start-up and shutdown periods, shall not exceed any of the following limits: NO_x (as NO₂) - 9.0 ppmvd @ 15% O₂ (equivalent to 0.10 g/bhp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/bhp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/bhp-hr), PM₁₀ - 0.029 g/bhp-hr; or SO_x - 0.009 g/bhp-hr. Compliance with the NO_x, CO, and VOC limits in this condition only shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period beginning with the engine's initial fuel firing until the unit meets the ppmv emission limits in this permit. Shutdown is defined as the period beginning with the initiation of the engine shutdown sequence and ending with cessation of operation of the engine. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During periods of start-up or shutdown, engine exhaust emissions shall not exceed any of the following limits: NO_x (as NO₂) - 6.8 lb/hr, CO - 2.56 lb/hr, or VOC - 2.05 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
10. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 15% O₂ (equivalent to 0.043 g/bhp-hr). Compliance with the NH₃ limit shall be based on the arithmetic average of three (3) 30-consecutive-minute test runs. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from this unit, on days when a start-up and/or shutdown occurs, shall not exceed any of the following limits: NO_x (as NO₂) - 42.6 lb/day, CO - 35.3 lb/day, VOC - 29.7 lb/day, PM₁₀ - 6.4 lb/day, or SO_x - 2.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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12. Compliance with the Daily Emission Limits (DEL) for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Daily Emission Limit (lb/day) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/day), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/day), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed three and a half (3.5 hrs) during the day, the permittee may demonstrate compliance with the DEL by simply keeping records of daily start-up/shutdown hours operated and daily full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Annual emissions from the IC engine shall not exceed any of the following limits: NO_x - 8,811 lb/year, CO - 11,409 lb/year, VOC - 9,760 lb/year, PM₁₀ - 2,328 lb/year, SO_x (as SO₂) - 723 lb/year, or NH₃ - 3,464 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Compliance with the Annual Emission Limits for NO_x, CO, and VOC shall be demonstrated utilizing the following calculation procedure: Annual Emission Limit (lb/year) = (a x b) + (c x (d x e ÷ f)), where a = start-up/shutdown hours operated (hr/year), b = start-up/shutdown mass emission rate (lb/hr), c = full-load hours operated (hr/year), d = full-load emission factor (g/bhp-hr), e = 4,157 bhp (max engine horsepower), and f = 453.6 g/lb (grams to pound conversion factor). Alternatively, if start-up/shutdown hours do not exceed 133 hours during the year, the permittee may demonstrate compliance with the annual limit by simply keeping records of annual start-up/shutdown hours operated and annual full-load hours operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. This engine shall be operated and maintained in proper operating condition per the manufacturer's requirements as specified on the Inspection and Monitoring (I&M) plan submitted to the District. [District Rule 4702] Federally Enforceable Through Title V Permit
16. The APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080] Federally Enforceable Through Title V Permit
17. The engine shall be in full compliance with the applicable requirements of 40 CFR 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
18. 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. After startup the emission standards applicable are specified in Table 2d of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The average CO concentration from this engine shall be less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
20. The permittee shall install equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1,350 F. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
21. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
22. The permittee shall conduct an annual compliance demonstration to show that the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. The annual compliance demonstration shall consist of measuring CO emissions using one of the CO measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ, or using appendix A to 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The annual compliance demonstration must consist of at least one test run. Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to 40 CFR 63 Subpart ZZZZ must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. Measurements to determine O₂ concentration must be made using one of the O₂ measurement methods specified in Table 4 of 40 CFR 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the average CO concentration exceeds 47 ppmvd at 15 percent O₂, the engine must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The engine must be retested within 7 days of being restarted and the average CO concentration must meet the specified level. If the retest shows that the average CO concentration continues to exceed the specified level, the engine must again be shut down as soon as safely possible, and may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the average CO concentration does not exceed the specified level. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63 Subpart ZZZZ 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 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
29. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment; and monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation 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
30. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall report to the District each instance in which the engine did not meet the emission requirements. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. The permittee shall submit the source test results, and notification of compliance status, including the performance test results, before the close of business on the 60th day following the completion of the source test or the performance test. [District Rule 1081 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. Each compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked and delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. The compliance report shall contain the results of the annual compliance demonstration, if conducted during the reporting period, and the details listed in 40 CFR 63.6650(c) and (d). [40 CFR 63 Subpart ZZZZ]
35. The compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
36. NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months (with a 30-day grace period). The source test frequency may be extended to not less than once every 24 months (with a 30-day grace period) when the engine is operated less than 4,000 hours in a 12-month period and is in compliance with the quarterly monitoring requirements of this permit. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. 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. VOC emissions shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Source testing shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. Source testing may occur more frequently than once every 12 months at the discretion of the equipment owner or operator, if such frequency is necessary to schedule source testing during normal operating periods. Any source testing conducted more frequently than required, shall reset the 12 month testing clock. [District Rule 1081] Federally Enforceable Through Title V Permit
38. At the District's discretion, source testing to determine compliance with the start-up NO_x, CO, and VOC emission limits may be required. The source test protocol shall propose a start-up test methodology, which, at a minimum, specifies that compliance with the start-up limitations will be based on the arithmetic average of a minimum of three (3) 30-consecutive-minute test runs. [District Rule 4702] Federally Enforceable Through Title V Permit
39. The following test methods shall be used for testing other than start-up testing: NO_x (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and ammonia - BAAQMD ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit
40. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
41. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Proper operation of the urea dosing system shall be confirmed daily based on visual displays at control panel, visual inspection of the urea pump and visual inspection of the urea level in the sight glass of the dosing system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Proper engine operation shall be confirmed daily through monitoring of the engine parameters on the engine control system. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The monitoring of engine exhaust temperature combined with confirmation of proper operation of the engine and of the urea dosing system shall serve as a surrogate for monitoring of NO_x emissions as required by 40 CFR 64 (Compliance Assurance Monitoring). Operation of the unit with exhaust gas temperature within the allowable range and proper operation of the engine and urea dosing system shall be indicative of NO_x concentrations which are less than the allowed maximum. The relationship between concentration of NO_x and engine exhaust temperature shall be demonstrated at each annual source test. [40 CFR Part 64] Federally Enforceable Through Title V Permit
45. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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48. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every calendar quarter (in which a source test is not performed) using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
49. The permittee shall monitor and record the stack concentration of NH₃ at least once every calendar quarter in which a source test is not performed. NH₃ monitoring shall be conducted utilizing District approved gas-detection tubes or a District approved equivalent method. 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 five days of restarting the unit unless monitoring has been performed within the last quarter. [District Rule 4102]
50. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, or the NH₃ concentrations corrected to 15% O₂, as measured by District approved gas-detection tubes, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4102 and 4702] Federally Enforceable Through Title V Permit
51. 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 Rule 4702] Federally Enforceable Through Title V Permit
52. The permittee shall maintain records of: (1) the date and time of NO_x, CO, O₂ and NH₃ measurements, (2) the O₂ concentration in percent and the measured NO_x, CO, and NH₃ concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] Federally Enforceable Through Title V Permit
53. The permittee shall maintain an engine operating log for this engine. The log shall include, on a monthly basis, the total hours of operation (start-up/shutdown and full-load hours), type and quantity of fuel used, maintenance and modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance with District Rule 4702. Quantity of fuel used shall be recorded in standard cubic feet and calculated as follows: Specific engine fuel use in standard cubic feet per month = Total facility fuel use in standard cubic feet per month x (Specific engine gross kW-hours per month) ÷ (Total facility gross kW-hours per month). [District Rule 4702] Federally Enforceable Through Title V Permit
54. The permittee shall maintain records of the total daily hours of operation, including start-up/shutdown and full-load hours. Also, if calculations are necessary to demonstrate compliance with the Daily and/or Annual Emission Limits within this permit, the permittee shall maintain the calculations performed and the date with which compliance was demonstrated. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years, and shall be made available for District inspection upon request. [District Rules 2201, 4702 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit

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