



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



FEB 21 2018

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

Re: Notice of Preliminary Decision – Title V Permit Renewal
Facility Number: C-3775
Project Number: C-1162674

Dear Mr. Kent:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for California Power Holdings LLC at 16457 Avenue 24 1/2, Chowchilla, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the renewed Federally Mandated Operating Permit. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

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

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SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

**Proposed Title V Permit Renewal Evaluation
California Power Holdings LLC
C-3775**

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TITLE V PERMIT RENEWAL EVALUATION

Peaking Power Generating Facility

Engineer: Tim Bush
Date: January 22, 2018

Facility Number: C-3775
Facility Name: California Power Holdings LLC
Mailing Address: 1015 Briggs Rd, Suite 150
Mount Laurel, NJ 08054

Contact Name: Edward Kent
Phone: (856) 206-0930 ext 303

Responsible Official: Edward Kent
Title: Senior Vice President of Operations

Project # : C-1162674
Deemed Complete: October 25, 2016

I. PROPOSAL

California Power Holdings LLC was issued a Title V permit on October 31, 2012. As required by District Rule 2520, the applicant is requesting a permit renewal. The existing Title V permit shall be reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the initial Title V permit.

The purpose of this evaluation is to provide the legal and factual basis for all updated applicable requirements and to determine if the facility will comply with these updated requirements. It also specifically identifies all additions, deletions, and/or changes made to permit conditions or equipment descriptions.

II. FACILITY LOCATION

California Power Holdings LLC is located at 16457 Avenue 24 ½ in Chowchilla, CA.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is included as Attachment C.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant does not propose to use any model general permit templates.

V. SCOPE OF EPA AND PUBLIC REVIEW

The applicant is not requesting any model general permit templates. Therefore, all federally enforceable conditions in this current Title V permit will be subject to EPA and public review.

VI. FEDERALLY ENFORCEABLE REQUIREMENTS

A. Rules Updated or Evaluated

- District Rule 2020, Exemptions
(amended August 18, 2011 ⇒ amended December 18, 2014)
- District Rule 2201, New and Modified Stationary Source Review Rule
(amended December 18, 2008 ⇒ amended February 18, 2016)
- District Rule 2410, Prevention of Significant Deterioration
(adopted June 16, 2011)
- District Rule 4702, Internal Combustion Engines
(amended January 18, 2007 ⇒ amended November 14, 2013)
- 40 CFR Part 63, Subpart ZZZZ, National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (amended June 18, 2008 ⇒ amended January 30, 2013)
- 40 CFR Part 64, Compliance Assurance Monitoring
- 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners
(amended June 18, 2008 ⇒ amended June 25, 2013)
- 40 CFR Part 82, Subpart F, Recycling and Emission Reduction
(amended June 18, 2008 ⇒ amended December 1, 2016)

B. Rules Removed

There are no applicable rules that were removed since the initial Title V permit was issued.

C. Rules Added

- District Rule 1080, Stack Monitoring (amended December 17, 1992)
- District Rule 1081, Source Sampling (amended December 17, 1992)

D. Rules Not Updated

- District Rule 1070, Inspections (amended December 17, 1992)
- District Rule 1100, Equipment Breakdown (amended December 17, 1992)
- District Rule 1160, Emission Statements (amended November 18, 1992)
- District Rule 2010, Permits Required (amended December 17, 1992)
- District Rule 2031, Transfer of Permits (amended December 17, 1992)
- District Rule 2040, Applications (amended December 17, 1992)
- District Rule 2070, Standards for Granting Applications (amended December 17, 1992)
- District Rule 2080, Conditional Approval (amended December 17, 1992)
- District Rule 4101, Visible Emissions (amended February 17, 2005)
- District Rule 4201, Particulate Matter Concentration (amended February 17, 2005)
- District Rule 4601, Architectural Coatings (amended December 17, 2009)
- District Rule 4801, Sulfur Compounds (amended December 17, 1992)
- District Rule 8011, Fugitive Dust General Requirements (amended August 19, 2004)
- District Rule 8021, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Construction, Demolition, Excavation, and Extraction Activities (amended August 19, 2004)

- District Rule 8031, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Handling and Storage of Bulk Materials (amended August 19, 2004)
- District Rule 8041, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Carryout and Trackout (amended August 19, 2004)
- District Rule 8051, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Open Area (amended August 19, 2004)
- District Rule 8061, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Paved and Unpaved Roads (amended August 19, 2004)
- District Rule 8071, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Unpaved Vehicle/Equipment Areas (amended September 16, 2004)
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos (amended July 20, 2004)

VII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

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

For this facility, the following are not Federally Enforceable and will not be discussed in further detail:

A. Rules Added/Updated

There were no rules added or updated.

B. Rules Not Updated

District Rule 4102, Nuisance (as amended December 17, 1992)

VIII. PERMIT REQUIREMENTS

The purpose of this evaluation is to review changes to Federally Enforceable requirements; therefore, this compliance section will only address rules that have been amended or added since the issuance of the initial Title V permit or most recent renewal of the Title V permit.

A. District Rule 1080 – Stack Monitoring

The purpose of this is to grant the authority to request the installation, use maintenance, and inspection of monitoring equipment.

C-3775-1-9 through '-16-9: 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

- Condition 16 on the draft permits ensures compliance with this rule.

B. District Rule 1081 – Source Sampling

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

C-3775-1-9 through '-16-9: 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

- Conditions 28, 32, 36, 37, 39, and 40 on the draft permits ensure compliance with this rule.

C. District Rule 2020 - Exemptions

District Rule 2020 lists equipment which is specifically exempt from obtaining permits and specifies recordkeeping requirements to verify such exemptions. The amendments to this rule do not have any effect on current permit requirements and will therefore not be addressed in this evaluation.

D. District Rule 2201 - New and Modified Stationary Source Review Rule (NSR)

District Rule 2201 has been amended since this facility's initial Title V permit was issued. However, the requirements of this rule are only triggered at the time the source undergoes a modification. All applicable requirements from any NSR permit actions have already been incorporated into the current Title V permit.

E. District Rule 2410 – Prevention of Significant Deterioration (PSD)

This source has never been subject to this rule; therefore, there are no PSD permit applicable requirements to include in the Title V permit.

F. District Rule 2520 - Federally Mandated Operating Permits

No changes to this rule have occurred since issuance of the previous TV permit; however, greenhouse gas emissions will be addressed under Rule 2520 during this renewal.

Greenhouse Gas Discussion

There are no federally applicable Greenhouse Gas (GHG) requirements for this source. It should be noted that the Mandatory Greenhouse Gas Reporting rule (40 CFR Part 98) is not included in the definition of an applicable requirement within Title V (per 40 CFR 71.2). Therefore, there will be no further discussion of GHG in this evaluation.

G. District Rule 4702 – Internal Combustion Engines

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur oxides (SO_x) from internal combustion engines. This rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

C-3775-1-9 through '-16-9: 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

Section 5.2.2 requires that on and after the compliance schedule specified in Section 7.5, the operator of a spark-ignited engine > 50 bhp that is used in non-AO shall comply with all the applicable requirements of the rule. The facility will comply by meeting the emissions limit in Table 2, category 2.e.

Table 2 Emission Limits for a Spark-Ignited Internal Combustion Engine Rated at >50 bhp Used Exclusively in Non-AO (All ppmv limits are corrected to 15% oxygen on a dry basis). Emission Limits are effective according to the compliance schedule specified in Section 7.5.			
Engine Type	NO _x (ppmv)	CO (ppmv)	VOC (ppmv)
2. Lean-Burn Engines			
e. Lean-Burn Engine, not listed above	11	2000	750

- Condition 7 on the draft permits ensures compliance with this rule.

Section 5.7 requires that on and after the compliance schedule specified in Section 7.5, operators of non-AO spark-ignited engines and non-AO compression-ignited engines shall comply with one of the following requirements:

Section 5.7.1 requires the facility to operate the engine exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases; or

Section 5.7.2 limits gaseous fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or

Section 5.7.3 use California Reformulated Gasoline for gasoline-fired spark-ignited engines; or

Section 5.7.4 use California Reformulated Diesel for compression-ignited engines; or

Section 5.7.5 operate the engine on liquid fuel that contains no more than 15 ppm sulfur, as determined by the test method specified in Section 6.4.6; or

Section 5.7.6 install and properly operate an emission control system that reduces SO₂ emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6.

- Condition 3 on the draft permits ensures compliance with this rule.

Section 5.8.1 requires that for each engine with a rated brake horsepower of 1,000 bhp or greater and which is permitted to operate more than 2,000 hours per calendar year, or with an external emission control device, the owner shall either install, operate, and maintain continuous monitoring equipment for NO_x, CO, and oxygen, as identified in Rule 1080 (Stack Monitoring), or install, operate, and maintain APCO-approved alternate monitoring. The monitoring system may be a continuous emissions monitoring system (CEMS), a parametric emissions monitoring system (PEMS), or an alternative monitoring system approved by the APCO. APCO-approved alternate monitoring shall consist of one or more of the following:

- Periodic NO_x and CO emission concentrations,
- Engine exhaust oxygen concentration,
- Air-to-fuel ratio,
- Flow rate of reducing agents added to engine exhaust,
- Catalyst inlet and exhaust temperature,
- Catalyst inlet and exhaust oxygen concentration,
- Other operational characteristics.

- Condition 48 on the draft permits ensures compliance with this rule.

Section 5.8.6 requires that for each engine, including an engine subject to Section 4.2, the owner shall install and operate a nonresettable elapsed operating time meter. The owner or operator shall maintain these required meters in proper operating condition.

- Condition 4 on the draft permits ensures compliance with this rule.

Section 5.8.9 requires that for each engine, the owner shall use a portable NO_x analyzer to take NO_x emission readings to verify compliance with the emission requirements of Section 5.2 or Section 8.2 during each calendar quarter in which a source test is not performed. All emission readings shall be taken with the engine 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. All NO_x emissions readings shall be reported to the APCO in a manner approved by the APCO. NO_x emission readings taken pursuant to this section 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.

- Conditions 48 and 51 on the draft permits ensure compliance with this rule.

Section 6.1 requires that the owner of an engine subject to the requirements of Section 5.2 of this rule shall submit to the APCO an emission control plan of all actions to be taken to satisfy the emission requirements of Section 5.2 and the compliance schedules of Section 7.0. Such emission control plan shall contain a list with the following for each permitted engine:

- Permit-to-Operate number
- Engine manufacturer
- Model designation
- Rated brake horsepower
- Type of fuel and type of ignition
- Combustion type: rich-burn or lean-burn
- Total hours of operation in the previous one-year period, including typical daily operating schedule
- Fuel consumption (cubic feet for gas or gallons for liquid) for the previous one-year period
- Stack modifications to facilitate continuous in-stack monitoring and to facilitate source testing

- Type of control to be applied, including in-stack monitoring specifications
- Applicable emission limits
- Documentation showing existing emissions of NO_x, VOC, and CO, and
- Date that the engine will be in full compliance with Rule 4702.

Section 6.1.3 requires that the emission control plan shall identify the type of emission control device or technique to be applied to each engine and a construction/removal schedule, or shall provide support documentation sufficient to demonstrate that the engine is in compliance with the emission requirements of this rule.

Section 6.2 requires that except for engines subject to Section 4.0, the owner of an engine subject to the requirements of this rule shall maintain an engine operating log to demonstrate compliance with this rule. This information shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request. The engine operating log shall include, on a monthly basis, the following information:

- Total hours of operation,
- Type and quantity (cubic feet of gas or gallons of liquid) of fuel used,
- Maintenance or modifications performed,
- Monitoring data,
- Compliance source test results, and
- Any other information necessary to demonstrate compliance with this rule.

Section 6.2.2 requires that the data collected pursuant to the requirements of Section 5.6 shall be maintained for at least five years, shall be readily available, and made available to the APCO upon request.

- Conditions 53 and 55 on the draft permits ensure compliance with this rule.

Section 6.3 requires that the owner of an engine subject to the emission limits in Section 5.2 or the requirements of Section 8.2, shall:

Section 6.3.2 requires that the owner demonstrate compliance with applicable limits by the applicable date specified in Section 5.2 and at least once every 24 months thereafter, in accordance with the test methods in Section 6.4.

Section 6.3.3 requires that the owner conduct emissions source testing with the engine operating either at conditions representative of normal operations or conditions specified in the Permit-to-Operate. For emissions source testing performed pursuant to Section 6.3.2 for the purpose of determining compliance with an applicable standard or numerical limitation, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC shall be reported as methane. VOC, NO_x, and CO concentrations shall be reported in ppmv, corrected to 15 percent oxygen. For engines that comply with a percent reduction limit in Table 1, the percent reduction of NO_x emissions shall also be reported.

Section 6.3.4 requires that the owner in addition to other information, the source test protocol shall describe which critical parameters will be measured and how the appropriate range for these parameters shall be established. The range for these parameters shall be incorporated into the I&M plan.

- Condition 36 on the draft permits ensures compliance with this rule.

Section 6.4 requires that the compliance with the requirements of Section 5.0 shall be determined in accordance with the following test procedures or any other method approved by EPA and the APCO:

Section 6.4.1: Oxides of nitrogen - EPA Method 7E, or ARB Method 100.

Section 6.4.2: Carbon monoxide - EPA Method 10, or ARB Method 100.

Section 6.4.3: Stack gas oxygen - EPA Method 3 or 3A, or ARB Method 100.

Section 6.4.4: Volatile organic compounds - EPA Method 25A or 25B, or ARB Method 100.

Section 6.4.5: Operating horsepower determination - any method approved by EPA and the APCO.

- Condition 39 on the draft permits ensures compliance with this rule.

Section 6.5 requires that the owner of an engine subject to the emission limits in Section 5.2 or the requirements of Section 8.2, shall submit to the APCO for approval, an I&M plan that specifies all actions to be taken to satisfy the following requirements and the requirements of Section 5.8. The actions to be identified in the I&M plan shall include, but are not limited to, the following:

Section 6.5.2 requires the owner or operator to establish ranges for control equipment parameters, engine operating parameters, and engine exhaust oxygen concentrations that source testing has shown result in pollutant concentrations within the rule limits.

Section 6.5.3 states the procedures for monthly inspections as approved by the APCO. The applicable control equipment parameters and engine operating parameters will be inspected and monitored monthly in conformance with a regular inspection schedule listed in the I&M plan.

Section 6.5.4 states the procedures for the corrective actions on the noncompliant parameter(s) that the owner or operator will take when an engine is found to be operating outside the acceptable range for control equipment parameters, engine operating parameters, and engine exhaust NO_x, CO, VOC, or oxygen concentrations.

Section 6.5.5 states the procedures for the owner or operator to notify the APCO when an engine is found to be operating outside the acceptable range for control equipment parameters, engine operating parameters, and engine exhaust NO_x, CO, VOC, or oxygen concentrations.

- Condition 48 on the draft permits ensures compliance with this rule.

Section 6.5.6 states the procedures for preventive and corrective maintenance performed for the purpose of maintaining an engine in proper operating condition.

- Condition 15 on the draft permits ensures compliance with this rule.

Section 6.5.7 states the procedures and a schedule for using a portable NO_x analyzer to take NO_x emission readings pursuant to Section 5.8.9.

Section 6.5.8 states the procedures for collecting and recording required data and other information in a form approved by the APCO including, but not limited to, data collected through the I&M plan and the monitoring systems described in Sections 5.8.1 and 5.8.2. Data collected through the I&M plan shall have retrieval capabilities as approved by the APCO.

- Conditions 48, 50 and 51 on the draft permits ensure compliance with this rule.

Section 6.5.9 states the procedures for revising the I&M plan. The I&M plan shall be updated to reflect any change in operation. The I&M plan shall be updated prior to any planned change in operation. An engine owner that changes significant I&M plan elements must notify the District no later than seven days after the change and must submit an updated I&M plan to the APCO no later than 14 days after the change for approval. The date and time of the change to the I&M plan shall be recorded in the engine operating log. For new engines and modifications to existing engines, the I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit-to-Operate. The owner of an engine may request a change to the I&M plan at any time.

- Condition 56 on the draft permits ensures compliance with this rule.

H. 40 CFR Part 63, Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR Part 63, Subpart ZZZZ is applicable to any stationary spark-ignited reciprocating internal combustion engine at a major or area source of HAP (Hazardous Air Pollutant) emissions, except for a stationary engine being tested at a stationary engine test cell/stand. A major source of HAP emissions is a facility that has the potential to emit any single HAP at a rate of 10 tons/year or greater or any combinations of HAPs at a rate of 25 tons/year or greater. An area source of HAP emissions is a facility that is not a major source of HAP emissions.

C-3775-1-9 through '16-9: 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

Each engine at this facility is a stationary reciprocating internal combustion engine (RICE) located at an area source of HAP emissions. Therefore, these engines are subject to the requirements of this subpart. In addition, all engines at this facility are spark-ignited 4SLB stationary RICE > 500 bhp, equipped with CO oxidation catalyst and are operated more than 24 hours per calendar year and are not limited use stationary RICE.

Section 63.6590(a)(1) states that a stationary RICE is existing if the engine was first installed before June 12, 2006. In addition, this section indicates a change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

The initial permits for the engines were received and implemented in 2001. Therefore, they are existing engines.

Section 63.6603(a), states that the owner or operator of an existing 4SLB stationary RICE located at an area source of HAP emissions must comply with the requirements listed in Table 2d, and the operating limitations specified in Table 2b of this subpart. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures listed in §63.6620 and Table 4 of this subpart.

Row 9 of Table 2d applies to non-emergency, non-black start 4SLB stationary RICE > 500 bhp that are not remote stationary RICE and that operate more than 24 hours per calendar year, and lists the following requirement for normal operation:

Table 2d to Subpart ZZZZ of Part 63 - Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions		
For Each	You must meet the following requirements, except during periods of startup	During periods of startup you must
9. Non-emergency, non-black start 4SLB stationary RICE > 500 bhp that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE	

The engines are equipped with oxidation catalysts.

Section 63.6605(a) and (b) list the operator's general requirements for complying with this subpart:

1. Comply with the applicable emission limitations and operating limitations of this subpart at all times.
 2. Operate and maintain the equipment, including air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.
- Conditions 1 and 17 on the draft permits ensure compliance with this rule.

Section 63.6625(h) specifies that each engine's time spent at idle must be minimized during startup and that the startup time shall be minimized to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2d to this subpart apply.

- Condition 18 on the draft permits ensures compliance with this rule.

Section 63.6630(a) states that the operator must demonstrate initial compliance with each emission and operating limitation as specified in Table 5 of this subpart. Per Table 5 Row 13, the operator has demonstrated initial compliance with the requirements if they have:

- (i) Conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂; and
- (ii) Installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.

- Condition 20 on the draft permits ensures compliance with this rule.

Section 63.6640(a) states that the operator must demonstrate continuous compliance with each emission and operating limitations according to methods specified in Table 6. The engines at this facility are subject to Row 14 and must demonstrate on-going compliance as follows:

- (i) Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂; and either
- (ii) Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or
- (iii) Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.

Section 63.6640(c) states that the annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 bhp located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

- (1) The compliance demonstration must consist of at least one test run.
- (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
- (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
- (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
- (5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.
- (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.
- (7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

- Conditions 20 and 22 through 27 on the draft permits ensure compliance with this rule.

Section 63.6640(b) states that the operator must report each instance in which each emission limitation or operating limitation as specified in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart (as applicable) was not met. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650.

- Condition 31 on the draft permits ensures compliance with this rule.

Section 63.6640(b) also states that if the operator changes the catalyst, the operator must reestablish the values of the operating parameters measured during the initial performance test. When the operator reestablishes the values of the operating parameters, the operator must also conduct a performance test to demonstrate that the engine is meeting the required emission limitation.

- Condition 29 on the draft permits ensures compliance with this rule.

Section 63.6645(a)(2) states that the operator must submit all of the applicable notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) by the dates specified.

- Condition 32 on the draft permits ensures compliance with this rule.

Section 63.6650(a) states that the operator must submit applicable reports as specified in table 7. Row 3 of Table 7 requires operators of existing non-emergency, non-black start 4SLB and 4SRB stationary RICE > 500 bhp located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year to submit a compliance report that contains the results of the annual compliance demonstration, if conducted during the reporting period. The report must be submitted semi-annually according to the following requirements in §63.6650(b)(1) through (5):

- (1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.
- (2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

- (3) For semiannual Compliance reports, each subsequent 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.
- (4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
- (5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

Section 63.6650(c) states that the compliance report must contain the following information:

- (1) Company name and address.
- (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
- (3) Date of report and beginning and ending dates of the reporting period.
- (4) If the operator had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.
- (5) If there are no deviations from any emission or operating limitations that apply to the operator, a statement that there were no deviations from the emission or operating limitations during the reporting period.
- (6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

Section 63.6650(d) states that for each deviation from an emission or operating limitation that occurs for a stationary RICE not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the following information:

- (1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.
 - (2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
- Conditions 33 through 35 on the draft permits ensure compliance with this rule.

Section 63.6655(a) states that the operator must keep the records described below:

- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).
- (2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.
- (3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).
- (4) Records of all required maintenance performed on the air pollution control and monitoring equipment.
- (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

Section 63.6655(e)(3) states the operator must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the operator operated and maintained the stationary RICE and after-treatment control device according to the proposed maintenance plan.

- Conditions 29 and 30 on the draft permits ensure compliance with this rule.

Section 63.6660 states the operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

- Condition 55 on the draft permits ensures compliance with this rule.

I. 40 CFR Part 64 - Compliance Assurance Monitoring(CAM)

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

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

Pollutant	Major Source Threshold (lb/year)
NO _x	20,000
SO _x	140,000
PM ₁₀	140,000
CO	200,000
VOC	20,000

The facility's permits were evaluated for CAM purposes during the initial Title V permitting evaluation on October 12, 2012 using the 20,000 lb/year NO_x and VOC thresholds. There have been no modifications to the permits that would require a new CAM evaluation. Consequently, a CAM discussion is not required for these units.

J. 40 CFR Part 82, Subpart B - Servicing of Motor Vehicle Air Conditioners

The purpose of 40 CFR Part 82 Subpart B is to implement section 609 of the Clean Air Act, as amended regarding the servicing of motor vehicle air conditioners (MVACs), and to implement section 608 of the Clean Air Act regarding certain servicing, maintenance, repair and disposal of air conditioners in MVACs and MVAC-like appliances.

These regulations apply to any person performing service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner.

The amendments to this rule do not have any effect on current permit requirements and will therefore not be addressed further in this evaluation.

K. 40 CFR Part 82, Subpart F - Recycling and Emission Reduction

The purpose of 40 CFR Part 82 Subpart F is to reduce emissions of class I and class II refrigerants and their substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the service, maintenance, repair, and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I and class II ODS in accordance with Title VI of the Clean Air Act.

These regulations apply to any person servicing, maintaining, or repairing appliances. This subpart also applies to persons disposing of appliances, including small appliances and motor vehicle air conditioners. In addition, this subpart applies to refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturer of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons selling class I or class II refrigerants or offering class I or class II refrigerants for sale, and persons purchasing class I or class II refrigerants.

The amendments to this rule do not have any effect on current permit requirements and will therefore not be addressed further in this evaluation.

IX. PERMIT SHIELD

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

A. Requirements Addressed by Model General Permit Templates

The applicant does not propose to use any model general permit templates.

X. CALIFORNIA ENVIRONMENTAL QUALITY ACT

The purpose of the Title V permit renewal is to update the permit to ensure that any changes to regulations since the issuance of the initial Title V permit or most recent renewal of the Title V permit are incorporated as permit requirements.

Per the California Environmental Quality Act (CEQA) Statute §21080.24, and CEQA Guidelines §15281, the issuance, modification, amendment, or renewal of any permit by an air pollution control district or air quality management district pursuant to Title V is exempt from CEQA, unless the issuance, modification, amendment, or renewal authorizes a physical or operational change to a source or facility. There will be no physical or operational change to the source or facility nor will the Title V permit renewal authorize a physical or operational change to the source or facility. Therefore, this project, a Title V permit renewal, is subject to a ministerial action that is exempt from CEQA.

XI. PERMIT CONDITIONS

See Attachment A - Draft Renewed Title V Operating Permit.

ATTACHMENTS

- A. Draft Renewed Title V Operating Permit
- B. Previous Title V Operating Permit
- C. Detailed Summary List of Facility Permits

ATTACHMENT A

Draft Renewed Title V Operating Permit

San Joaquin Valley Air Pollution Control District

FACILITY: C-3775-0-1

EXPIRATION DATE: 05/31/2017

FACILITY-WIDE REQUIREMENTS

1. {4362} The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. {4363} The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. {4364} The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. {4365} Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. {4366} The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. {4367} A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. {4368} Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. {4369} The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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.

9. {4370} The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. {4371} The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
11. {4372} Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. {4373} If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
13. {4374} It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
14. {4375} The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
15. {4376} The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. {4377} The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
17. {4378} The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
18. {4379} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
19. {4380} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
20. {4381} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
21. {4382} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

22. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
23. {4384} No person shall manufacture, blend, repack, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. {4385} All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
25. {4386} The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. {4387} With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. {4388} If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. {4389} If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. {4390} Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
30. {4391} Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit
31. {4392} An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit
32. {4393} Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
33. {4394} Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] 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.

34. {4395} Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit
35. {4396} Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
36. {4397} The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. {4398} The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. {4399} When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. {4400} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. {4401} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 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. {98} 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

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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: 05/31/2017

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 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: 05/31/2017

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 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

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: 05/31/2017

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 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

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-3775-4-9

EXPIRATION DATE: 05/31/2017

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-3775-5-9

EXPIRATION DATE: 05/31/2017

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

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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

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

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

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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: $\text{Specific engine fuel use in standard cubic feet per month} = \frac{\text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month})}{(\text{Total facility gross kW-hours per month})}$. [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: 05/31/2017

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: $\text{Specific engine fuel use in standard cubic feet per month} = \frac{\text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month})}{(\text{Total facility gross kW-hours per month})}$. [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-3775-7-9

EXPIRATION DATE: 05/31/2017

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 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: $\text{Specific engine fuel use in standard cubic feet per month} = \frac{\text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month})}{(\text{Total facility gross kW-hours per month})}$. [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.

DRAFT

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-8-9

EXPIRATION DATE: 05/31/2017

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 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

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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: 03/31/2017

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

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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: $\text{Specific engine fuel use in standard cubic feet per month} = \frac{\text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month})}{(\text{Total facility gross kW-hours per month})}$. [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-3775-10-9

EXPIRATION DATE: 05/31/2017

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) = $(a \times b) + (c \times (d \times e \div f))$, 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) = $(a \times b) + (c \times (d \times e \div f))$, 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 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

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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-3775-11-9

EXPIRATION DATE: 05/31/2017

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

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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: 03/31/2017

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
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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 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: $\text{Specific engine fuel use in standard cubic feet per month} = \frac{\text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month})}{(\text{Total facility gross kW-hours per month})}$. [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.

DRAFT

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-13-9

EXPIRATION DATE: 05/31/2017

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

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.

DRAFT

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-14-9

EXPIRATION DATE: 03/31/2017

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

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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: 03/31/2017

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-3775-16-9

EXPIRATION DATE: 03/31/2017

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 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

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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.

ATTACHMENT B

Previous Title V Operating Permit



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



Permit to Operate

FACILITY: C-3775

EXPIRATION DATE: 05/31/2017

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.

Sayed Sadredin
Executive Director / APCO

Arnaud Marjollet
Director of Permit Services

San Joaquin Valley Air Pollution Control District

FACILITY: C-3775-0-0

EXPIRATION DATE: 05/31/2017

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 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-3775-0-0 - Feb 5 2018 8:53AM - BUSHT

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

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

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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-1-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O2 (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O2 (equivalent to 0.12 g/hp-hr), PM10 - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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

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

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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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: $\text{Specific engine fuel use in standard cubic feet per month} = \frac{\text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month})}{(\text{Total facility gross kW-hours per month})}$. [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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-2-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O2 (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O2 (equivalent to 0.12 g/hp-hr), PM10 - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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

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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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

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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
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 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 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 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 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 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

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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: $\text{Specific engine fuel use in standard cubic feet per month} = \text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month}) \div (\text{Total facility gross kW-hours per month})$. [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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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-3775-3-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-4-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-5-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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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33. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-6-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-7-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O2 (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O2 (equivalent to 0.12 g/hp-hr), PM10 - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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

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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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-8-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-9-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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
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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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

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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 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 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 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 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 64] Federally Enforceable Through Title V Permit
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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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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-3775-10-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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-3775-11-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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: $\text{Daily Emission Limit (lb/day)} = (a \times b) + (c \times (d \times e \div f))$, 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/hp-hr), e = 4,157 hp (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: $\text{Annual Emission Limit (lb/year)} = (a \times b) + (c \times (d \times e \div f))$, 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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-12-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O2 (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O2 (equivalent to 0.12 g/hp-hr), PM10 - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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

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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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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
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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-13-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O2 (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O2 (equivalent to 0.12 g/hp-hr), PM10 - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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

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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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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 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 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 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 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 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

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

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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-14-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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

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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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-15-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SOx - 0.009 g/hp-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/hp-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

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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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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 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 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 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 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 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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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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
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: $\text{Specific engine fuel use in standard cubic feet per month} = \text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month}) \div (\text{Total facility gross kW-hours per month})$. [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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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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
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-3775-16-8

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

4,157 HP 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 Rule 2201] 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/hp-hr), CO - 20.0 ppmvd @ 15% O₂ (equivalent to 0.14 g/hp-hr), VOC - 30.0 ppmvd @ 15% O₂ (equivalent to 0.12 g/hp-hr), PM₁₀ - 0.029 g/hp-hr; or SO_x - 0.009 g/hp-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/hp-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/hp-hr), e = 4,157 hp (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/hp-hr), e = 4,157 hp (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
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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. The permittee shall submit the first compliance report that covers the period from Oct 19, 2013 through Jun 30, 2014. Each subsequent 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. The first compliance report that must be postmarked and delivered no later than July 31, 2014. Each subsequent 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 first and subsequent 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

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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 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 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 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 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 64] Federally Enforceable Through Title V Permit
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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

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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
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.

ATTACHMENT C

Detailed Summary List of Facility Permits

Detailed Facility Report
For Facility=3775 and excluding Deleted Permits
Sorted by Facility Name and Permit Number2/5/18
9:03 am

CALIFORNIA POWER HOLDINGS LLC 16457 AVENUE 24 1/2 CHOWCHILLA, CA	FAC # C 3775		TYPE: TitleV	EXPIRE ON: 05/31/2017
	STATUS: A		TOXIC ID: 51892	AREA: 1 /
	TELEPHONE: 6192326564		INSP. DATE: 05/18	

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-3775-1-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-2-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-3-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-4-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-5-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-6-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-7-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-8-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-9-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-10-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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

Detailed Facility Report
For Facility=3775 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

2/5/18
9:03 am

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-3775-11-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-12-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-13-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-14-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-15-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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
C-3775-16-8	3,100 kW	3020-08A C	1	1,678.00	1,678.00	A	4,157 HP 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

Number of Facilities Reported: 1