



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



DEC 24 2014

Mr. Edward Kent
California Power Holdings, LLC
16457 Avenue 24 1/2
Chowchilla, CA 93610

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # C-3775
Project # C-1141624

Dear Mr. Kent:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The proposed permit modifications include an extension of the source testing frequency from 'not less than once every 12 months' to 'not less than once every 24 months', under certain conditions; a revision of the source testing condition to include a 30-day source test due date grace period; the removal of an inapplicable 40 CFR 63.6640(b) source testing requirement; and the replacement of the initial performance test conditions of 40 CFR 63.6612(a) with the annual compliance demonstration conditions of 40 CFR 63.6640(c).

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

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Executive Director/Air Pollution Control Officer

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Mr. Edward Kent
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Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, consisting of a large, stylized 'A' followed by a horizontal line that curves upwards at the end.

Arnaud Marjollet
Director of Permit Services

Enclosures

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

San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Source Test Frequency Revision

Facility Name:	California Power Holdings, LLC	Date:	December 22, 2014
Mailing Address:	16457 Avenue 24 ½	Engineer:	Jonah Aiyabei
	Chowchilla, CA 93610	Lead Engineer:	Joven Refuerzo
Contact Person:	Edward Kent		
Telephone:	(856) 206-0930		
Fax:	(856) 206-0940		
Application #(s):	C-3775-1-8 through 16-8		
Project #:	C-1141624		
Deemed Complete:	June 5, 2014		

I. Proposal

California Power Holdings, LLC is applying for Authority to Construct (ATC) permits to modify the source testing frequency for their sixteen existing full time natural gas-fired engines. The current permits (C-3773-1-7 through -16-7) are included in Appendix A. The applicant requests that the source testing frequency be extended from 'not less than once every 12 months' to 'not less than once every 24 months.' The extended source testing frequency will only apply when an engine has been operated less than 4,000 hours per year, and is in compliance with the applicable quarterly monitoring requirements. The applicant also requests that the source testing condition be revised to explicitly provide for a 30-day grace period for source test due dates, pursuant to the District's Source Test Guidelines Policy - COM 2030.

Unrelated to the source testing frequency, the applicant has requested the removal of a requirement that source testing be conducted whenever a catalyst is changed. This requirement, which is listed as condition #31 on the current Permit to Operate, is based on 40 CFR 63 Subpart ZZZZ and is not applicable to the engines at this facility. Other revisions to Subpart ZZZZ conditions have been made as explained in detail on pages 9 through 15 of this evaluation.

California Power Holdings, LLC received their Title V Permit on October 31, 2012. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the ATC permits.

II. Applicable Rules

Rule 1081	Source Sampling (12/16/93)
Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)

Rule 2410 Prevention of Significant Determination (6/16/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4701 Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Internal Combustion Engines (11/14/13)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility is located at 16457 Avenue 24 ½, in Chowchilla. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

California Power Holdings, LLC is in the business of electrical power generation. The sixteen natural gas-fired engines are used to generate electrical power (3,100 kW per engine) to meet peak demand.

The existing source testing requirement applicable to all the engines is stated in condition 36 of the permit to operate, as follows:

- NO_x, CO, VOC, and NH₃ emissions rates shall be measured (source tested) not less than once every 12 months.

The applicant has requested that the existing source testing requirement be revised as follows (additions are underlined):

- 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.

According to the information provided by the applicant, the engines at this facility are operated as an on-call must-run peaker power plant, which, except when operated for maintenance and testing, only operates when called upon by the California Independent Systems Operator (CAISO). The typical operating hours per year for the peaker plant are 500 to 1,000. The applicant states that because of this low level of actual operation, it is not always possible to

schedule a source test during normal operation. The applicant stated that, for instance, during the most recent source test in February of this year, the engines had to be fired up solely for source testing purposes since the test was due at a time when no operation of the engines was otherwise required. In addition to the cost of source testing services, the applicant incurred a cost of \$130,000 for fuel to run the engines for the source test. Operation solely for source testing purposes is obviously undesirable because of unnecessary operating cost, as well as unnecessary pollutant emissions. The applicant is requesting the extended and more flexible source testing frequency with the intention of eliminating these instances of operation solely for source testing.

The applicant will continue to adhere to the emissions monitoring schedules required by District Rule 4702 and 40 CFR 63 Subpart ZZZZ to provide continued assurance of compliance with emissions limits during periods when a source test is not conducted.

In addition, the applicant has pointed out that due to the unplanned nature of operations at this facility, flexibility in the scheduling of source tests is very important to them. As such, they would like the source testing condition to explicitly include a 30-day grace period. This grace period is currently provided through the District's Source Test Guidelines Policy - COM 2030, but the applicant is requesting that it be added to the permit condition to avoid any uncertainties. Since the grace period is already provided for in the source testing policy, its inclusion in the permit condition has no effect on compliance or source testing requirements.

Unrelated to the source testing frequency issue, the applicant has requested that the following condition (#31 on the existing permits) be removed from the permits:

- If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Y

The District has verified that the underlying requirement for this condition is not applicable to the engines at this facility. The condition is based on 40 CFR 63.6640(b), which states, in part, *"If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test."* This is applicable to engines that use parameter monitoring to demonstrate on-going compliance and are required to conduct performance tests. However the engines at this facility demonstrate on-going compliance using automatic shutdown (condition 20) rather than parameter monitoring; and are not required to conduct performance tests.

V. Equipment Listing

Pre-Project Equipment Descriptions:

Permit units C-3775-1-7 through -16-7 are identical in all aspects and will have the following equipment description:

C-3775-X-7: 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

ATC Equipment Descriptions:

Permit units C-3775-1-8 through -16-8 are identical in all aspects and will have the following equipment description:

C-3775-X-8: MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

Post Project Equipment Descriptions:

Permit units C-3775-1-8 through -16-8 are identical in all aspects and will have the following equipment description:

C-3775-X-8: 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

VI. Emission Control Technology Evaluation

The engines are equipped with Selective Catalytic Reduction (SCR) systems, CO & VOC catalysts, Positive Crankcase Ventilation (PCV) systems and air/fuel controllers.

An SCR system selectively reduces NO_x emissions by over 90% with the aid of a catalyst and a reagent (urea). In the first step, urea is injected into the exhaust gas stream upstream of a catalyst to form ammonia, (NH₃). In the second step, NO_x, NH₃, and oxygen (O₂) react on the surface of the catalyst to form molecular nitrogen (N₂) and water (H₂O).

CO and VOC emissions are reduced using an oxidation catalyst that precedes the SCR stage. The pollutant gases diffuse through the surfaces of the catalyst and react there to form water and carbon dioxide (CO₂).

The PCV system reduces crankcase VOC and PM₁₀ emissions by at least 90% over an uncontrolled crankcase vent.

VII. General Calculations

As explained in the Compliance section below, this project is not subject to District Rule 2201 (New and Modified Stationary Source Review Rule). Since Rule 2201 does not apply, the calculations normally conducted as part of an application review are not required.

VIII. Compliance

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. The following permit conditions will be listed on the proposed ATCs to ensure compliance:

- Source testing or performance testing pursuant to 40 CFR 63, 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, ZZZZ]
- 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]
- 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]
- 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]
- Compliance demonstration (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]

- 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]

Rule 2201 New and Modified Stationary Source Review Rule

Section 3.25 states that a modification is an action including at least one of the following items:

§3.25.1.1: Any change in hours of operation, production rate, or method of operation of an existing emissions unit, which would necessitate a change in permit conditions.

The current application only affects source testing requirements. The application does not include a change in hours of operation, production rate, or method of operation, which would necessitate a change in permit conditions due to this project.

§3.25.1.2: Any structural change or addition to an existing emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.

The current application does not involve any physical changes to the processing equipment or control equipment.

§3.25.1.3: An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.

As discussed above, there are no emissions increases associated with this project.

§3.25.1.4: Addition of any new emissions unit which is subject to District permitting requirements.

The current application does not include the addition of any new emissions units.

§3.25.1.5: A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

The proposed source test frequency change will not exempt the source from any applicable requirements.

As shown above, the applicant's proposal is not a modification as defined by Rule 2201. District Rule 2201 applies to new stationary sources and modifications of stationary sources. Since this is not a new stationary source and not a modification, District Rule 2201 does not apply.

Rule 2410 Prevention of Significant Deterioration

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant:

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase*	24.6	23.0	1.6	27.0	5.3	5.3
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	N	N	N	N	N	N

* Estimated facility PE was taken from project C-1071953.

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

Since this project does not include any new or modified emissions units, the total project potential to emit from all new and modified units is zero, which is below PSD significant emissions increase thresholds. This project is therefore not subject to the requirements of Rule 2410 and no further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Minor permit modifications do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions. The source testing frequency will be changing from 'once every 12 months' to 'once every 24 months', which is a relaxation in monitoring conditions. As a result, the proposed project constitutes a significant modification to the Title V permit.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

40 CFR Part 60, Subpart JJJJ applies to owners and operators of Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) that commence construction after June 12, 2006 for engines that are manufactured on or after July 1, 2007 for engines with a maximum power rating greater than or equal to 500 hp; on or after January 1, 2008 for lean burn engines with a maximum power rating greater than or equal to 500 hp and less than 1,350 hp; on or after July 1, 2008 for engines with a maximum power rating less than 500 hp; or on or after January 1, 2009 for emergency engines with a maximum power rating greater than 25 hp.

This facility's engines are rated > 500 hp and were installed prior to June 12, 2006. The requirements of this subpart are therefore not applicable.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63.

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 which is not a major source of HAP emissions.

Each engine at this facility is a stationary 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 hp, equipped with CO oxidation catalyst and are operated more than 24 hours per calendar year and are not limited use stationary RICE.

§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 engines at this facility were initially permitted and started up in 2001. Therefore they are existing stationary RICE.

§63.6595(a)(1) states that existing stationary SI RICE located at an area source of HAP emissions must comply with the applicable limitations and operating limitations no later than October 19, 2013.

§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 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year, and lists the following requirement for normal operation:

- Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.

All the engines at this facility are equipped with oxidation catalysts.

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

1. Be in compliance 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 3 and 19 on each proposed ATC requires compliance with these general requirements.

§63.6612(a) and (b) state that an initial performance test or other initial compliance demonstration must be conducted within 180 after the compliance date for this subpart.

The engines at this facility are already complying with the requirements of this subpart.

§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.

Conditions 20 on each proposed ATC ensures compliance with this requirement.

§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.

The engines at this facility have already demonstrated compliance and are equipped with equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.

Condition 22 on each proposed ATC ensures compliance with this requirement.

§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.

§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 HP 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 22 and 24 through 29 on each proposed ATC ensure compliance with these compliance demonstration requirements.

The existing conditions 22 through 27 were revised to more accurately reflect the continuous compliance demonstration requirements of §63.6640(c), which are outlined in the preceding page. The existing permit conditions were based on the requirements for the initial performance test (source test), which is only required on a one-time basis to demonstrate that the engine meets the emission standard applicable to the compliance method chosen by the permittee.

§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.

Conditions 33 on each proposed ATC ensures compliance with this requirement.

§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.

The engines at this facility demonstrate ongoing compliance by automatically shutting down if the catalyst inlet temperature exceeds 1350 °F. This method of compliance does not require the monitoring of catalyst operating parameters (i.e. inlet temperature and pressure drop). In addition, based on the compliance method chosen, the engines are not required to conduct any performance tests (i.e. source tests), but only compliance demonstrations (i.e. portable analyzer measurements). This requirement is therefore not applicable to the engines at this facility. A condition previously placed on the permit (#31 on the current PTO) enforcing this requirement has been removed.

§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.

§63.6645(h)(2) states that the operator must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

Condition 34 on each proposed ATC ensures compliance with these requirements.

§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 HP 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.

§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.

§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 35 through 37 on each proposed ATC ensure compliance with these requirements.

Condition 35 has been revised to include the due date requirements which were previously listed as a separate condition (#35 on the current PTO).

New condition 36 was added to specify contents of the compliance report.

New condition 37 was added to provide that compliance reports may also be submitted according to the reporting periods and dates already established for submission of Title V semiannual reports

§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.

§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 31 and 32 on each proposed ATC list the records that must be maintained.

New condition 32 was added to specify that 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 shall be maintained.

The existing condition 30 (on the current PTO) was removed because it is not applicable to this facility. The condition required maintenance of records of previous (i.e., superseded) versions of the performance evaluation plan, a requirement that is specific to facilities with CEMS or CPMS.

§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 57 on each proposed ATC ensures compliance with the record retention requirement.

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity.

As long as the equipment is properly maintained and operated, compliance with visible emissions limits is expected under normal operating conditions. Therefore, the following condition will be listed on proposed ATC's to ensure compliance:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected. The following conditions will be listed on the proposed ATC's to ensure compliance:

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

As previously discussed, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4201 – Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. Particulate matter emissions are not expected to exceed 0.1 grain per cubic foot of gas at dry standard conditions with use of PUC-quality natural gas.

$$PM \text{ Conc. (gr/scf)} = \frac{(PM \text{ emission rate}) \times (7000 \text{ gr/lb})}{(Air \text{ flow rate}) \times (60 \text{ min/hr})}$$

Example Calculation: (applicable to all 16 IC engines)

PM₁₀ emission rate = 0.27 lb/hr. Assuming 100% of PM is PM₁₀

$$PM \text{ Conc. (gr/scf)} = [(0.27 \text{ lb/hr}) \times (7,000 \text{ gr/lb})] \div [(15,730 \text{ ft}^3/\text{min}) \times (60 \text{ min/hr})]$$
$$PM \text{ Conc.} = 0.002 \text{ gr/scf}$$

Calculated emissions are well below the allowable emissions level. It can be assumed that emissions will not exceed the allowable 0.1 gr/scf. Therefore, compliance with Rule 4201 is expected. The following condition will be added to the ATC's to ensure compliance with this rule.

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration.
[District Rule 4201]

Rule 4701 – Internal Combustion Engines – Phase 1

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as provided in Section 4.0, the provisions of this rule apply to any internal combustion engine rated greater than 50 bhp that requires a Permit to Operate (PTO).

Pursuant to Section 2.0 of District Rule 4701, the engines at this facility are subject to District Rule 4701. In addition, the engines are also subject to District Rule 4702 - *Internal Combustion Engines*.

Since the emissions limits of District Rule 4702 and all other requirements are equivalent or more stringent than those of District Rule 4701, compliance with rule 4702 requirements will

satisfy requirements of District Rule 4701.

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.

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 and one of the following, on an engine-by-engine basis:

§5.2.2.1: On and after the compliance schedule specified in Section 7.5, the operator of a spark-ignited engine that is used exclusively in non-AO shall comply with Sections 5.2.2.1.1 through 5.2.2.1.3 on an engine-by-engine basis:

§5.2.2.1.1: NO_x, CO, and VOC emission limits pursuant to Table 2:

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

§5.2.2.1.2: SO_x control requirements of Section 5.7, pursuant to the deadlines specified in Section 7.5; and

§5.2.2.1.3: Monitoring requirements of Section 5.10, pursuant to the deadlines specified in Section 7.5.

§5.2.2.2: In lieu of complying with the NO_x emission limit requirement of Section 5.2.2.1.1, an operator may pay an annual fee to the District, as specified in Section 5.6, pursuant to Section 7.6.

§5.2.2.3: In lieu of complying with the NO_x, CO, and VOC limits of Table 2 on an engine-by-engine basis, an operator may elect to implement an alternative emission control plan pursuant to Section 8.0. An operator electing this option shall not be eligible to participate in the fee payment option outlined in Section 5.2.2.2 and Section 5.6.

The engines at this facility are 4 stroke lean-burn spark-ignited engines; and are therefore required to meet the emissions limits of 11 ppmvd NO_x, 2,000 ppmvd CO, and 750 ppmvd VOC (all measured @ 15% O₂).

The following conditions on each permit ensure compliance with the emission limits:

- 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]
- 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]

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:

§5.7.1: Operate the engine exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases; or

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

§5.7.3: Use California Reformulated Gasoline for gasoline-fired spark-ignited engines; or

§5.7.4: Use California Reformulated Diesel for compression-ignited engines; or

§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

§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.

The engines at this facility are fired exclusively on PUC-quality natural gas. The following condition on each permit ensures compliance with this requirement:

- The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801]

Section 5.8.1 requires that for each engine with a rated brake horsepower of 1,000 hp 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.

The applicant has proposed a pre-approved alternate emissions monitoring plan that specifies that the permittee perform periodic NO_x, CO, and O₂ emissions concentrations as specified in District Policy SSP-1810, dated 4/29/04. Therefore, the following condition will be placed on the permits to assure compliance with this section.

- 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]

The following condition will be added to assure quarterly monitoring of NH₃ emissions are performed.

- 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]

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.

The engines are all equipped with a nonresettable elapsed operating time meter. Therefore, the following condition will be placed on the permits to ensure continued compliance:

- This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 4702]

Section 5.8.7 requires that for each engine, the owner shall implement the Inspection and Monitoring (I&M) plan submitted to and approved by the APCO pursuant to Section 6.5.

Section 5.8.8 requires that for each engine, the owner shall collect data through the I&M plan in a form approved by the APCO.

The applicant has submitted an I&M plan and the implementation of this plan will be explained in detail in the discussion that covers Section 6.5 of 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.

The following conditions will be placed on the permits to assure compliance with this section:

- 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]
- 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]

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.

The applicant has submitted all the required information for Section 6.1 in previous permit applications.

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.

The following conditions will be placed on the permits to ensure compliance with these requirements:

- 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]
- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702]

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:

§6.3.2: 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.

§6.3.3: 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.

§6.3.4: 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. The following condition will be listed on the permits to ensure compliance with source testing requirements:

- 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]

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:

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

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

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

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

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

The following condition will be listed on the permits to ensure compliance with source testing method requirements:

- 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]

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:

§6.5.2: Procedures requiring 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.

§6.5.3: 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.

§6.5.4: 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.

§6.5.5: 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.

The alternate monitoring program previously discussed in Section 5.8 will ensure compliance with the requirements of §6.5.2 through §6.5.5.

§6.5.6: Procedures for preventive and corrective maintenance performed for the purpose of maintaining an engine in proper operating condition.

The following condition will be placed on the permits to ensure compliance with the requirements of §6.5.6:

- {3202} 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]

§6.5.7: Procedures and a schedule for using a portable NO_x analyzer to take NO_x emission readings pursuant to Section 5.8.9.

§6.5.8: 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.

The alternate monitoring program previously discussed in Section 5.8 will ensure compliance with the requirements of §6.5.7 through §6.5.8.

§6.5.9: 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.

The following condition will be placed on the permits to ensure compliance with the requirements of §6.5.9:

- 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]

Rule 4801 – Sulfur Compounds

The purpose of this rule is to limit the emissions of sulfur compounds. The limit is that sulfur compound emissions (as SO₂) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

The SO_x emission factor is determined by mass balance, assuming a worst case sulfur content of 1.0 gr-S/100 scf for PUC quality natural gas. Thus:

$$(1.0 \text{ gr-S}/100 \text{ scf} \times 1 \text{ lb-S}/7,000 \text{ gr} \times 64 \text{ lb SO}_x/32 \text{ lb-S} \times 1 \text{ scf}/1,000 \text{ Btu} \times 10^6 \text{ Btu/MMBtu}) \\ = 0.00285 \text{ lb/MMBtu}$$

The ratio of the volume of the SO_x exhaust to the entire exhaust for one MMBtu of fuel combusted is:

$$\text{Volume of SO}_x: V = \frac{n \cdot R \cdot T}{P}$$

Where:

- n = number of moles of SO_x produced per MMBtu of fuel.
- Weight of SO_x as SO₂ is 64 lb/(lb-mol)
- $n = \frac{0.00285 \text{ lb}}{\text{MMBtu}} \times \frac{1 \text{ (lb-mol)}}{64 \text{ lb}} = 0.000045 \text{ (lb-mol)}$
- $R = \frac{0.7302 \text{ ft}^3 - \text{atm}}{(\text{lb-mol}) - ^\circ R}$
- T = 500 °R
- P = 1 atm

Thus, volume of SO_x per MMBtu is:

$$V = \frac{n \cdot R \cdot T}{P}$$

$$V = \frac{0.000045 \text{ (lb-mol)} \cdot \frac{0.7302 \text{ ft}^3 - \text{atm}}{(\text{lb-mol}) - ^\circ R} \cdot 500 ^\circ R}{1 \text{ atm}}$$

$$V = 0.0163 \text{ ft}^3$$

Since the total volume of exhaust per MMBtu is 8,578 scf, the ratio of SO_x volume to exhaust volume is calculated as follows:

$$\text{SO}_x = \frac{0.0163}{8,578} = 0.0000019 = 1.9 \text{ ppmv} = 0.00019\% \text{ by volume}$$

Since 0.00019% by volume is less than 0.2% by volume, compliance with District Rule 4801 is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the changes made do not trigger Best Available Control Technology (BACT) requirements for any emission units. Furthermore, the District has determined that this project does not result in any emission increases and therefore will have no impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful public and ARB/EPA noticing period, issue Authorities to Construct C-3775-1-8 through 16-8 subject

to the permit conditions on the drafts included in Appendix B.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-3775-1-8 through 16-8	3020-8A-C	3,100 kW	\$1,533

XI. Appendices

- A: Current PTOs
- B: Draft ATCs

APPENDIX A

Current PTOs

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-1-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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: 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-2-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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: 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, 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-3775-3-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-4-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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: $\text{Specific engine fuel use in standard cubic feet per month} = \text{Total facility fuel use in standard cubic feet per month} \times (\text{Specific engine gross kW-hours per month}) \div (\text{Total facility gross kW-hours per month})$. [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
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, 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-3775-5-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, 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-3775-6-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, ZZZZ] Federally Enforceable Through Title V Permit
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33. 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
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37. Compliance demonstration (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
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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
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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

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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, 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-3775-7-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [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. Compliance demonstration (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
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, 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-3775-8-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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: 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

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37. Compliance demonstration (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
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, 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-3775-9-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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

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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
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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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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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
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, ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-10-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, 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-3775-11-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, 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-3775-12-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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

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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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, ZZZZ] Federally Enforceable Through Title V Permit
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33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [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. Compliance demonstration (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
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, ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-13-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [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. Compliance demonstration (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
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, ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-3775-14-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, 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-3775-15-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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

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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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, 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-3775-16-7

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 shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The engine shall be fired solely on PUC regulated natural gas. [District Rules 2201 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 Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
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 Part 63 Subpart ZZZZ. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
19. The CO emissions from the engine shall not exceed 47 ppmvd @ 15% O₂ (equivalent to 0.399 g-CO/bhp-hr). [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 annual compliance tests to demonstrate compliance with the CO emission requirement. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
23. Measurements to determine O₂ concentration must be made at the same time as the measurements for the CO concentration. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. The compliance test shall consist of measuring the O₂ concentration at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 3 or Method 3A or 3B of 40 CFR part 60. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. The compliance test shall consist of measuring the CO concentration at 15 percent O₂, dry basis, at the inlet and outlet of the control device with the use of an analyzer following ASTM D6522-00 (2005), Method 10 of 40 CFR part 60 Appendix A, ASTM D6522-00 (2005), Method 320 of 40 CFR part 63 Appendix A, or ASTM 66348-03. The results of the test shall consist of the average of three 1-hour or longer runs. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
26. The compliance test shall consist of measuring the moisture content at the inlet and outlet of the control device with the use of an analyzer following Method 4 of 40 CFR part 60 Appendix A, or Test Method 320 of 40 CFR part 63 Appendix A, or ASTM D 6348-03. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
27. If the results of the annual compliance demonstration show that the emissions exceed 47 ppmv @ 15% O₂, the permittee shall shut down the stationary RICE 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 meet the CO emission standards. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
28. Source testing or performance testing pursuant to 40 CFR 63, 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, 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. The permittee shall also maintain 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 keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. If the permittee changes the catalyst, a performance test shall be required to reestablish the values of the operating parameters. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
32. 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
33. 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
34. The permittee shall submit a compliance report that covers between Oct 19 and Jun 30. 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 3. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
35. The permittee shall submit a compliance report that must be postmarked and delivered no later than July 31. Each subsequent compliance report must be postmarked and delivered no later than July 31. [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. [District Rules 1081 and 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. Compliance demonstration (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
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, 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.

APPENDIX B

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-1-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS'; ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

C-3775-1-8 : Dec 23 2014 11:46AM - AIYABEIJ : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. 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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CONDITIONS CONTINUE ON NEXT PAGE

33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-2-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services
C-3775-2-8 : Dec 23 2014 12:52PM - AIYABEU : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-3-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

C-3775-3-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
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17. 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
18. 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

19. 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
20. 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
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25. 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
26. 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
27. 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
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32. 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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CONDITIONS CONTINUE ON NEXT PAGE

33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

PERMIT NO: C-3775-4-8

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjolle, Director of Permit Services

C-3775-4-8 : Dec 23 2014 12:53PM - AUYABEIJ : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. 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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CONDITIONS CONTINUE ON NEXT PAGE

33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-5-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services

C-3775-5-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NDT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

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19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. 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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CONDITIONS CONTINUE ON NEXT PAGE

33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

PERMIT NO: C-3775-6-8

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjolle, Director of Permit Services
C-3775-6-8 : Dec 23 2014 12:53PM -- ANYABEJ : Joint Inspection NOT Required

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

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19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

PERMIT NO: C-3775-7-8

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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; EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS'; ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

C-3775-7-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
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17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-8-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjolle, Director of Permit Services
C-3775-8-8 : Dec 23 2014 12:53PM - AIYABEJ : Joint Inspection NOT Required

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

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19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-9-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

Arnaud Marjollet, Director of Permit Services

C-3775-9-8 : Dec 23 2014 12:53PM -- AIYABEU : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

PERMIT NO: C-3775-10-8

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

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YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

Arnaud Marjollet, Director of Permit Services
C-3775-10-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-11-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

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YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services
C-3775-11-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
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13. 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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15. 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
16. 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
17. 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
18. 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

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19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-12-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services
C-3775-12-8 : Dec 23 2014 12:53PM - AJYABEU : Joint Inspection NDT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-13-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

C-3775-13-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-14-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

C-3775-14-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

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6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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CONDITIONS CONTINUE ON NEXT PAGE

54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

PERMIT NO: C-3775-15-8

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

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Seyed Sadredin, Executive Director APCO

Arnaud Marjollet, Director of Permit Services
C-3775-15-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
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17. 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
18. 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

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19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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54. 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
55. 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
56. 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
57. 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
58. 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

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: C-3775-16-8

LEGAL OWNER OR OPERATOR: CALIFORNIA POWER HOLDINGS LLC

MAILING ADDRESS: 16457 AVENUE 24 1/2
CHOWCHILLA, CA 93610

LOCATION: 16457 AVENUE 24 1/2
CHOWCHILLA, CA

EQUIPMENT DESCRIPTION:

MODIFICATION OF 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: EXTEND SOURCE TESTING FREQUENCY FROM 'NOT LESS THAN ONCE EVERY 12 MONTHS' TO 'NOT LESS THAN ONCE EVERY 24 MONTHS', ADD 30-DAY SOURCE TEST DUE DATE GRACE PERIOD; AND REMOVE 40 CFR 63 SUBPART ZZZZ REQUIREMENT TO SOURCE TEST UPON CHANGE OF CATALYST.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. 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
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The engine shall be fired exclusively on PUC regulated natural gas. [District Rules 2201, 4702 and 4801] Federally Enforceable Through Title V Permit

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YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services
C-3775-16-8 : Dec 23 2014 12:53PM - AIYABEU : Joint Inspection NOT Required

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. This engine shall be equipped with an operational non-resettable elapsed time meter. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Exhaust stack height shall be greater than or equal to 25 feet. [District Rule 4102]
8. 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
9. 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
10. 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
11. 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
12. 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
13. 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
14. 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
15. 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
16. 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
17. 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
18. 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

19. 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
20. 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
21. 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
22. 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
23. The CO oxidation catalyst shall be maintained per manufacturer recommendations. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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
30. 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
31. 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
32. The permittee shall maintain records of: notifications and reports submitted to comply with 40 CFR 63 Subpart ZZZZ; performance tests and performance evaluations; all required maintenance performed on the air pollution control and monitoring equipment; and maintenance conducted on the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

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33. 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
34. 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
35. 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
36. 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]
37. 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
38. 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
39. 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
40. 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
41. 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
42. 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
43. Engine exhaust gas operating temperature shall be monitored daily. [40 CFR 64] Federally Enforceable Through Title V Permit

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44. 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
45. 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. 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]
52. 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
53. 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

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54. 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
55. 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
56. 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
57. 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
58. 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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