MAR 19 2015
Bernard Te Velde
Lone Oak #2
13866 4th Avenue
Hanford, CA 93230

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: C-7322
Project Number: C-1070305

Dear Mr. Te Velde:

Enclosed for your review and comment is the District's analysis of Lone Oak #2's application for an Authority to Construct for an 750 kW diesel-fired turbine to provide emergency power in the event of an electrical outage, at 14523 Dinuba Ave, Helm, CA.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Ms. Andrea Ogden of Permit Services at (559) 230-5886.

Sincerely,

Annaud Marjollet
Director of Permit Services

AM:ao

Enclosures

cc: Mike Tollstrup, CARB (w/ enclosure) via email
I. Proposal

The primary business of Lone Oak #2 is the production of milk from dairy cattle. Lone Oak #2 is applying for an Authority To Construct (ATC) for a diesel-fired emergency standby turbine installed April 1, 2005 and is therefore subject to the requirements of District Rule 2201. The equipment triggers BACT for NOx and PM10 emissions.

II. Applicable Rules

Rule 1070  Inspections (12/17/92)
Rule 2020  Exemptions (12/20/07)
Rule 2201  New and Modified Stationary Source Review Rule (12/18/08)
Rule 2410  Prevention of Significant Deterioration (6/16/11)
Rule 2520  Federally Mandated Operating Permits (6/21/01)
Rule 4001  New Source Performance Standards (4/14/99)
Rule 4101  Visible Emissions (11/15/01)
Rule 4102  Nuisance (12/17/92)
Rule 4201  Particulate Matter (12/17/92)
Rule 4301  Fuel Burning Equipment (12/17/92)
Rule 4703  Stationary Gas Turbines (9/20/07)
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 14523 Dinuba Ave in Helm, CA. 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

The emergency standby turbine powers an electrical generator to provide backup power to the dairy's milking center in the event of grid power failure. Other than emergency standby operation, the turbine may be operated up to 100 hours per year for maintenance and testing purposes.

V. Equipment Listing

C-7322-7-0: 750 KW (1150 BHP) SOLAR SATURN MODEL T-10208-S (S/N: S425219) DIESEL-FIRED EMERGENCY STANDBY TURBINE POWERING AN ELECTRICAL GENERATOR

VI. Emission Control Technology Evaluation

All five criteria pollutants (NOx, SOx, PM10, CO, and VOC) are emitted from the turbine. It will be assumed the turbine is not equipped with any control devices; therefore, emissions will be considered as uncontrolled.

VII. General Calculations

A. Assumptions

Operating schedule: 100 hours/year non-emergency use
Density of diesel fuel: 7.1 lb/gal
EPA F-factor (adjusted to 60 °F): 9,051 dscf/MMBtu
Fuel heating value: 0.139 MMBtu/gal
Thermal Efficiency: 22.319% (Per Manufacturer)
B. Emission Factors

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>E.F. (lb/MMBtu)</th>
<th>E. F. (lb/kW-hr)**</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.88</td>
<td>0.01163</td>
<td>Manufacturer</td>
</tr>
<tr>
<td>SOx</td>
<td>0.002</td>
<td>0.0000212</td>
<td>Mass Balance Equation Below*</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>0.012</td>
<td>0.0001638</td>
<td>AP-42 (4/00) Table 3.1-2a</td>
</tr>
<tr>
<td>CO</td>
<td>1.617</td>
<td>0.02302</td>
<td>Manufacturer</td>
</tr>
<tr>
<td>VOC</td>
<td>0.00041</td>
<td>0.0000056</td>
<td>AP-42 (4/00) Table 3.1-2a</td>
</tr>
</tbody>
</table>

*0.000015 lb-S/lb-fuel x (7.1 lb-fuel/gal) x (2 lb-SOx/1 lb-S) x (1 gal/0.139 MMBtu) = 0.002 lb/MMBtu

**lb/kW-hr = lb/MMBtu x 1 Btu/10<sup>6</sup> MMBtu x 3,413 Btu/kW-hr x 1/Eff

**AP42 assumes an efficiency of 25% but an efficiency of 22.319% will be used since it is representative of this turbine

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since this is a new emissions unit, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

The daily and annual PE are calculated as follows:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emissions Factor (lb/kW-hr)</th>
<th>Rating (KW)</th>
<th>Daily Hours of Operation (hrs./day)</th>
<th>PE2 Total (lb/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.01163</td>
<td>750</td>
<td>24</td>
<td>209.34</td>
</tr>
<tr>
<td>SOx</td>
<td>0.0000212</td>
<td>750</td>
<td>24</td>
<td>0.3816</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>0.0001638</td>
<td>750</td>
<td>24</td>
<td>2.95</td>
</tr>
<tr>
<td>CO</td>
<td>0.02302</td>
<td>750</td>
<td>24</td>
<td>414.36</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0000056</td>
<td>750</td>
<td>24</td>
<td>0.1</td>
</tr>
</tbody>
</table>
### Annual Post Project Emissions

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emissions Factor (lb/kW-hr)</th>
<th>Rating (kW)</th>
<th>Annual Hours of Operation (hrs/yr)</th>
<th>PE2 Total (lb/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO(_x)</td>
<td>0.01163</td>
<td>750</td>
<td>100</td>
<td>872</td>
</tr>
<tr>
<td>SO(_x)</td>
<td>0.0000212</td>
<td>750</td>
<td>100</td>
<td>2</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>0.0001638</td>
<td>750</td>
<td>100</td>
<td>12</td>
</tr>
<tr>
<td>CO</td>
<td>0.02302</td>
<td>750</td>
<td>100</td>
<td>1,727</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0000056</td>
<td>750</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. The SSPE1 is shown in the table below:

<table>
<thead>
<tr>
<th>Stationary Source Potential to Emit [SSPE1] (lb/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit Unit</td>
</tr>
<tr>
<td>C-7322-1-2 Milk Parlor</td>
</tr>
<tr>
<td>C-7322-2-3 Cow Housing</td>
</tr>
<tr>
<td>C-7322-3-3 Liquid Manure</td>
</tr>
<tr>
<td>C-7322-4-2 Solid Manure</td>
</tr>
<tr>
<td>C-7322-6-1 Feed</td>
</tr>
<tr>
<td>Stationary Source Potential to Emit</td>
</tr>
</tbody>
</table>

#### 4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.
Lone Oak #2
C-7322, 1070305

<table>
<thead>
<tr>
<th>Permit Unit</th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-7322-1-2 Milk Parlor</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,240</td>
</tr>
<tr>
<td>C-7322-2-3 Cow Housing</td>
<td>0</td>
<td>0</td>
<td>41,247</td>
<td>0</td>
<td>42,762</td>
</tr>
<tr>
<td>C-7322-3-3 Liquid Manure</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10,419</td>
</tr>
<tr>
<td>C-7322-4-2 Solid Manure</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2,040</td>
</tr>
<tr>
<td>C-7322-6-1 Feed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>62,730</td>
</tr>
<tr>
<td>C-7322-7-0 Turbine</td>
<td>872</td>
<td>2</td>
<td>12</td>
<td>1,727</td>
<td>0</td>
</tr>
<tr>
<td>Stationary Source Potential to Emit</td>
<td>872</td>
<td>2</td>
<td>41,259</td>
<td>1,727</td>
<td>119,191</td>
</tr>
</tbody>
</table>

5. Major Source Determination

**Rule 2201 Major Source Determination:**

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Pursuant to Section 3.25 of District Rule 2201, a major source is a stationary source with post-project emissions or a post-project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.25.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

As determined in project C-1110898 all emissions from all permit units were fugitive except emissions from the lagoon, therefore emissions from the turbine and lagoon will be used in determining if this facility is a major source.
Rule 2201 Major Source Determination (lb/year)

<table>
<thead>
<tr>
<th></th>
<th>NOx</th>
<th>SOx</th>
<th>PM10</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility emissions pre-project</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5,097</td>
</tr>
<tr>
<td>Facility emissions – post project</td>
<td>872</td>
<td>2</td>
<td>12</td>
<td>1,727</td>
<td>5,097</td>
</tr>
<tr>
<td>Major Source Threshold</td>
<td>20,000</td>
<td>140,000</td>
<td>140,000</td>
<td>200,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Major Source?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

**Rule 2410 Major Source Determination:**

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)(i). Therefore the following PSD Major Source thresholds are applicable.

<table>
<thead>
<tr>
<th>PSD Major Source Determination (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO2</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Estimated Facility PE before Project Increase</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
</tr>
<tr>
<td>PSD Major Source?</td>
</tr>
</tbody>
</table>

As shown above, the facility is not an existing major source for PSD for at least one pollutant. Therefore the facility is not an existing major source for PSD.

6. **Baseline Emissions (BE)**

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. This project is exempt from offsets pursuant to Rule 2201, Section 4.6.9. Therefore, BE calculations are not required.

7. **SB 288 Major Modification**

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that
would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM10 (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is a new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.
I. Potential to Emit for New or Modified Emission Units vs PSD Major Source Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

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)(i). Therefore the following PSD Major Source thresholds are applicable.

| PSD Major Source Determination: Potential to Emit (tons/year) |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 | NO2             | VOC             | SO2             | CO              | PM              | PM10            |
| Total PE from New and Modified Units | 0.4             | 0               | 0               | 0.9             | 0               | 0               |
| PSD Major Source threshold | 250             | 250             | 250             | 250             | 250             | 250             |
| New PSD Major Source? | N               | N               | N               | N               | N               | N               |

As shown in the table above, the project potential to emit, by itself, does not exceed any of the PSD major source thresholds. Therefore Rule 2410 is not applicable and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District’s PAS emissions profile screen. Detailed QNEC calculations are included in Appendix D.

VIII. Compliance

Rule 1070 Inspections

This rule applies to any source operation, which emits or may emit air contaminants. This rule allows the District to perform inspections for the purpose of obtaining information necessary to determine whether air pollution sources are in compliance with applicable rules and regulations. The rule also allows the District to require record keeping, to make inspections and to conduct tests of air pollution sources.

Rule 2020 Exemptions

Prior to the passing of Senate Bill 700, agricultural operations were exempt from permits in California. With the passage of SB 700, as of January 1, 2004, agricultural operations lost their exemption per District Rule 2020 (Exemptions, Section 9 [September 17, 1998]).
and became subject to the provisions of District Rule 2010 (Permits Required), but shall not be subject to District Rule 2201 (New and Modified Stationary Source Review Rule), except for emission units that are being modified or replaced.

**Rule 2201  New and Modified Stationary Source Review Rule**

**A. Best Available Control Technology (BACT)**

1. **BACT Applicability**

   BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

   a. Any new emissions unit with a potential to emit exceeding two pounds per day,
   b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
   c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
   d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

   *Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

   a. **New emissions units – PE > 2 lb/day**

   As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new diesel-fired turbine with a PE greater than 2 lb/day for NO\textsubscript{X} CO and PM\textsubscript{10}. BACT is triggered for NO\textsubscript{X} and PM\textsubscript{10}, since the PEs are greater than 2 lbs/day. However BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 above.

   b. **Relocation of emissions units – PE > 2 lb/day**

   As discussed in Section I above, this project does not involve the relocation of emission units from one stationary source to another.

   c. **Modification of emissions units – AIPE > 2 lb/day**

   As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.
d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for any emissions. Therefore BACT is not triggered for any pollutant.

2. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (Appendix B), BACT has been satisfied with the following:

- NOx: 0.88 lb-NOx/MMBtu
- PM10: Ultra Low Sulfur Diesel

B. Offsets

Since emergency equipment is exempt from the offset requirements of Rule 2201, per Section 4.6.2, offsets are not required for this turbine, and no offset calculations are required.

C. Public Notification

1. Applicability

Public noticing is required for:
- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.
- e. Any project which results in a Title V significant permit modification

   a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

   New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.
As demonstrated in Sections VII.C.7 and VII.C.8, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE2 (lb/day)</th>
<th>Public Notice Threshold</th>
<th>Public Notice Triggered?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>209.34</td>
<td>100 lb/day</td>
<td>Yes</td>
</tr>
<tr>
<td>SOx</td>
<td>0.3816</td>
<td>100 lb/day</td>
<td>No</td>
</tr>
<tr>
<td>PM10</td>
<td>2.95</td>
<td>100 lb/day</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>414.36</td>
<td>100 lb/day</td>
<td>Yes</td>
</tr>
<tr>
<td>VOC</td>
<td>0.1</td>
<td>100 lb/day</td>
<td>No</td>
</tr>
</tbody>
</table>

Therefore, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SSPE1 (lb/year)</th>
<th>SSPE2 (lb/year)</th>
<th>Offset Threshold</th>
<th>Public Notice Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0</td>
<td>872</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>SOx</td>
<td>0</td>
<td>2</td>
<td>54,750 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>PM10</td>
<td>41,247</td>
<td>41,259</td>
<td>29,200 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>0</td>
<td>1,727</td>
<td>200,000 lb/year</td>
<td>No</td>
</tr>
<tr>
<td>VOC</td>
<td>119,191</td>
<td>119,191</td>
<td>20,000 lb/year</td>
<td>No</td>
</tr>
</tbody>
</table>

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 − SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.
As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change is not a Title V Significant Modification, and therefore public noticing is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for NOx and CO emissions in excess of 100 lb/day. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELS)

Daily Emissions Limitations (DELS) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT. Therefore, the following conditions will be listed on the ATC to ensure compliance (As calculated in Section VII B):

- Emissions from this turbine shall not exceed any of the following limits: 0.88 lb-NOx/MMBtu (0.01163 lb/kW-hr), 1.617 lb-CO/MMBtu (0.02302 lb/kW-hr), 0.012 lb-PM10/MMBtu (0.0001638 lb/kW-hr), 0.002 lb-S0x/MMBtu (0.00002121 lb/kW-hr) or 0.00041 lb-VOC/MMBtu (0.00000056 lb/kW-hr).

In addition, the DEL for SOx is established by the sulfur content of the fuel being combusted in the turbine. Therefore, the following condition will be listed on the ATC to ensure compliance:

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change is not a Title V Significant Modification, and therefore public noticing is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for NOx and CO emissions in excess of 100 lb/day. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELS)

Daily Emissions Limitations (DELS) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT. Therefore, the following conditions will be listed on the ATC to ensure compliance (As calculated in Section VII B):

- Emissions from this turbine shall not exceed any of the following limits: 0.88 lb-NOx/MMBtu (0.01163 lb/kW-hr), 1.617 lb-CO/MMBtu (0.02302 lb/kW-hr), 0.012 lb-PM10/MMBtu (0.0001638 lb/kW-hr), 0.002 lb-S0x/MMBtu (0.00002121 lb/kW-hr) or 0.00041 lb-VOC/MMBtu (0.00000056 lb/kW-hr).

In addition, the DEL for SOx is established by the sulfur content of the fuel being combusted in the turbine. Therefore, the following condition will be listed on the ATC to ensure compliance:
• {3395} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801]

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with District Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. As required by District Rule 4703 this turbine is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4703, will be discussed in Section VIII, District Rule 4703, of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix A of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NOx, CO, and SOx. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NOx, CO, or SOx.

The proposed location is in a non-attainment area for the state's PM10 as well as federal and state PM2.5 thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM10 and PM2.5.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII. C. 9. above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.
Rule 2520  Federally Mandated Operating Permits

This facility is currently not a major source, hence Rule 2520 does not apply.

Rule 4001  New Source Performance Standards (NSPS)

40 CFR 60 Subpart GG—Standards of Performance for Stationary Gas Turbines

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the lower heating value of the fuel fired.

(g) Emergency gas turbines, military gas turbines for use in other than a garrison facility, military gas turbines installed for use as military training facilities, and fire fighting gas turbines are exempt from paragraph (a) of this section.

Since this turbine is an emergency turbine the provisions of this subpart are not applicable.

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. Therefore, the following condition will be listed on the In-house PTO 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

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance.

The emissions from this operation are not expected to impose any comfort, repose, health, or safety problems to the public provided the equipment is properly maintained and operated.

The following conditions will be placed on the In-house Permit to Operate (PTO).

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
California Health & Safety Code 41700 (Health Risk Analysis)

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.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (Appendix A), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

Rule 4201 requires that particulate matter emissions shall not exceed 0.1 grain per cubic foot of gas at dry standard condition. As shown by the following calculation, the proposed turbine will be in compliance with this limit:

\[
PM \text{ emissions} = \frac{E.F. (lb/\text{MMBtu}) \times \text{MMBtu}}{9,051 \text{ dscf}} \times 7,000 \text{ grain/lb}
\]

\[
PM \text{ emissions} = \frac{0.012 \text{ lb/MBBtu} \times \text{MMBtu}}{9,051 \text{ dscf}} \times 7,000 \text{ grain/lb} = 0.01 \text{ grain/dscf}
\]

Rule 4301 Fuel Burning Equipment

Rule 4301 limits air contaminant emissions from fuel burning equipment. Section 3.1 defines fuel burning equipment as "any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer."

The turbine produces power mechanically, i.e. the products of combustion pass across the power turbine blades causing the turbine shaft to rotate. The turbine shaft is coupled to an electrical generator shaft, which is rotated to produce electricity. Because the turbine produces power by mechanical means, it does not meet the definition of fuel burning equipment; therefore, Rule 4301 does not apply to this project.

Rule 4703 Stationary Gas Turbines

The purpose of this rule is to limit oxides of nitrogen (NO\textsubscript{x}) emissions from stationary gas turbine systems.

This rule applies to all stationary gas turbine systems with ratings equal to or greater than a maximum heat input rating of more than 3,000,000 Btu/hr.

Gas Turbine is defined in section 3.8 as an internal combustion engine consisting of a compressor, a combustor, and a power turbine, that is gas and/or liquid fueled, with or without power augmentation.
Pursuant to Section 4.2, except for the requirements of Sections 6.1 and 6.2, the requirements of this rule shall not apply to emergency standby units limited by permit condition to operate less than 100 hours per calendar year for maintenance and testing purposes.

Section 3.8 defines emergency standby unit as a stationary gas turbine system that is limited by permit condition to be operated only as a mechanical or electrical power source for a facility when the primary power source for a facility has been rendered inoperable due to failure beyond the reasonable control of the operator, except due to power interruption pursuant to an interruptible power supply agreement.

Section 6.1 requires that the owner or operator of any existing stationary gas turbine system submit for approval an emissions control plan of all actions which will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 6.0 and Compliance Schedule in Section 7.0.

This unit is not subject to the NOx limits of Section 6.0 and compliance schedules in Section 7.0. Therefore, this current application satisfies the requirements of the Emission Control Plan. No further discussion is required.

Section 6.2.7 requires that the owner or operator shall maintain a stationary gas turbine system operating log for units exempt under Section 4.2 that includes, on a daily basis, the actual local start-up time and stop time, total hours of operation, and cumulative hours of operation to date for the calendar year.

The following conditions will be added to the ATC to ensure compliance.

- The permittee shall maintain an operating log that includes, on a daily basis, the actual local start-up time and stop time, total hours of operation, and cumulative hours of operation to date for the calendar year. [District Rule 4703]

- 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 4703]

**Rule 4801 Sulfur Compounds**

Rule 4801 requires 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:

\[
\text{Volume } SO_2 = (n \times R \times T) + P
\]
\[
n = \text{moles } SO_2
\]
\[
T \text{ (standard temperature)} = 60 \, ^\circ\text{F} \text{ or } 520 \, ^\circ\text{R}
\]
\[
R \text{ (universal gas constant)} = \frac{10.73 \text{psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}
\]
Since 1.0 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801.

The following condition will be listed on the ATC to ensure continued compliance:

- Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 4801 and 40 CFR 60.333]

**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.

**Greenhouse Gas (GHG) Significance Determination**

It is determined that no other agency has prepared or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, **Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency**, for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's
The determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, CEQA Determinations of Significance for Projects Subject to ARB’s GHG Cap-and-Trade Regulation, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

The GHG emissions increases associated with this project result from the combustion of fossil fuel(s), other than jet fuel, delivered from suppliers subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).
IX. Recommendation

Issue Authority To Construct C-7322-7-0 subject to the permit conditions listed on the attached draft Authority To Construct.

X. Billing Information

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Fee Schedule</th>
<th>Fee Description</th>
<th>Fee</th>
</tr>
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<tr>
<td>C-7322-7-0</td>
<td>3020-08A-B</td>
<td>750 kW</td>
<td>$766</td>
</tr>
</tbody>
</table>

XI. Appendix

A: Health Risk Assessment and Ambient Air Quality Analysis
B: Top Down BACT Analysis and BACT Guideline
C: Draft ATC (C-7322-7-0)
D: QNEC
Appendix A

Health Risk Assessment and Ambient Air Quality Analysis
A. RMR SUMMARY

<table>
<thead>
<tr>
<th>Categories</th>
<th>Emergency Diesel Turbine (Unit 7-0)</th>
<th>Project Totals</th>
<th>Facility Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritization Score</td>
<td>0.13*</td>
<td>0.13</td>
<td>&lt;1</td>
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<tr>
<td>Acute Hazard Index</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Chronic Hazard Index</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Maximum Individual Cancer Risk</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>T-BACT Required?</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Permit Conditions?</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Proposed Permit Conditions**

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

**Unit 7-0**

1. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]
B. RMR REPORT

I. Project Description

Technical Services received a request on December 16, 2014, to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for a 1150 bhp emergency standby diesel-fired turbine powering an electrical generator.

II. Analysis

Toxic emissions for this proposed unit were calculated using emission factors for Diesel or Distillate Oil Turbines derived from the 2002 EPA Stationary Combustion Turbines Emissions Database. In accordance with the District’s Risk Management Policy for Permitting New and Modified Sources (APR 1905-1, March 2, 2001), risks from the project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score for the project and facility is less than 1.0 (see RMR Summary Table); therefore, no further evaluation is required.

The following parameters were used for the reviews:

<table>
<thead>
<tr>
<th>Analysis Parameters</th>
<th>Units 7-0</th>
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</thead>
<tbody>
<tr>
<td>Type of Source</td>
<td>Point*</td>
</tr>
<tr>
<td>Stack Height (m)</td>
<td>2.13</td>
</tr>
<tr>
<td>Stack Diameter (m)</td>
<td>0.46</td>
</tr>
<tr>
<td>Stack Temp (K)</td>
<td>742</td>
</tr>
<tr>
<td>Stack Velocity (m/s)</td>
<td>18.38</td>
</tr>
<tr>
<td>Stack Diameter (m)</td>
<td>0.46</td>
</tr>
<tr>
<td>Closest Receptor (m)</td>
<td>301</td>
</tr>
<tr>
<td>Diesel Usage Rates</td>
<td>0.11</td>
</tr>
<tr>
<td>Diesel Usage Rates</td>
<td>11</td>
</tr>
</tbody>
</table>

*Modeled using AERMOD's NON-Default Beta Option for "Capped & Horizontal Stack Releasess."

Technical Services also performed modeling for criteria pollutants NOx, CO, SOx, and PM10; as well as the RMR. For Unit 7-0, the emission rates used for criteria pollutant modeling were 997 lb/yr NOx, 1973 lb/yr CO, 2 lb/yr SOx, and 14 lb/yr PM10.

The results from the Criteria Pollutant Modeling are as follows:

<table>
<thead>
<tr>
<th>Criteria Pollutant Modeling Results*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
</tr>
<tr>
<td>NOx</td>
</tr>
<tr>
<td>SOx</td>
</tr>
<tr>
<td>PM10</td>
</tr>
<tr>
<td>PM2.5</td>
</tr>
</tbody>
</table>

*Results were taken from the attached PSD spreadsheet.

1 The project is an Intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour, and 24-hour) standards is not required.

2 The criteria pollutants are below EPA’s level of significance as found in 40 CFR Part 51.165 (b)(2).
III. Conclusions

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

The prioritization score for this project is not above 1.0. In accordance with the District’s Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for the proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Fuel Consumption Worksheet
D. Prioritization score w/ toxic emissions summary
E. HARP Risk Report
F. Facility Summary
G. AAQA Parameters
Appendix B

Top Down BACT Analysis and BACT Guideline
Top-Down BACT Analysis for Permit Unit C-7322-7-0

The Environmental Protection Agency (EPA), California Air Resources Board (CARB), San Diego County Air Pollution Control District (SDCAPCD), South Coast Air Quality Management District (SCAQMD), and Bay Area Air Quality Management District (BAAQMD) BACT clearinghouses were reviewed to determine potential control technologies for this class and category of operation, but no BACT guidelines for emergency diesel-fired turbine operations were found. The SJVAPCD permit database was also searched for possible facilities within this class and category of operation.

1. **BACT Analysis for NO\textsubscript{X} Emissions:**

   a. **Step 1 - Identify all control technologies**

   The SJVUAPCD identifies the following alternatives for control of NO\textsubscript{X} emissions from emergency diesel-fired turbines:

   1) 0.88 lb-NO\textsubscript{x}/MMBtu (Achieved-in-Practice)

   2) IC Engine - Latest EPA Tier Certification level for applicable horsepower range (Alternative Basic Equipment)

   b. **Step 2 - Eliminate technologically infeasible options**

   Pursuant to FYI 98, when equipment requiring a permit is installed without an ATC, a current BACT analysis must be performed. If BACT did not exist at the time of installation, the BACT analysis is limited to the types of controls that can be applied to the specific equipment that was already installed. A Tier 2 IC Engine is not a type of control that can be applied to the specific turbine installed; therefore, an Alternate Basic Equipment cost analysis is not required.

   c. **Step 3 - Rank remaining options by control effectiveness**

   0.88 lb-NO\textsubscript{x}/MMBtu (Achieved-in-Practice)

   d. **Step 4 - Cost Effectiveness Analysis**

   The proposed alternative is the only control achieved in practice in the ranking list from Step 3. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

   e. **Step 5 - Select BACT**

   BACT for NO\textsubscript{x} emissions from this emergency standby diesel turbine is 0.88 lb-NO\textsubscript{x}/MMBtu.
2. BACT Analysis for PM10 Emissions:

a. Step 1 - Identify all control technologies

The SJVUAPCD identifies the following alternatives for control of PM10 emissions from emergency diesel turbines:

1) Ultra Low Sulfur Diesel (Achieved-in-Practice)
2) IC Engine - Latest EPA Tier Certification level for applicable horsepower range (Alternative Basic Equipment)

b. Step 2 - Eliminate technologically infeasible options

Pursuant to FYI 98, when equipment requiring a permit is installed without an ATC, a current BACT analysis must be performed. If BACT did not exist at the time of installation, the BACT analysis is limited to the types of controls that can be applied to the specific equipment that was already installed. A Tier 2 IC Engine is not a type of control that can be applied to the specific turbine installed; therefore, an Alternate Basic Equipment cost analysis is not required.

c. Step 3 - Rank remaining options by control effectiveness

Ultra Low Sulfur Diesel (Achieved-in-Practice)

d. Step 4 - Cost Effectiveness Analysis

The only remaining option is achieved-in-practice. Per District BACT policy, cost effectiveness analysis is not required for achieved-in-practice controls.

e. Step 5 - Select BACT

BACT for PM10 emissions is the use of Ultra Low Sulfur Diesel.
San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.4.11*

Emission Unit: Solar Saturn Diesel-fired Emergency Standby Turbine
Industry Type: Dairy

Equipment Rating: 750 - 950 kW
Last Update: 3/5/2015

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Achieved in Practice or contained in SIP</th>
<th>Technologically Feasible</th>
<th>Alternate Basic Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOₓ</td>
<td>0.88 lb/MMBtu</td>
<td></td>
<td>IC Engine (Latest EPA Tier Certification level for applicable horsepower range)</td>
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<tr>
<td>PM₁₀</td>
<td>Ultra Low Sulfur Diesel</td>
<td></td>
<td>IC Engine (Latest EPA Tier Certification level for applicable horsepower range)</td>
</tr>
</tbody>
</table>

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

*This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)
Appendix C

Draft Authority to Construct (C-7322-7-0)
San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-7322-7-0
LEGAL OWNER OR OPERATOR: LONE OAK #2
MAILING ADDRESS: 13866 4TH AVE
HANFORD, CA 93230

LOCATION: 14523 W DINUBA AVE
HELM, CA 93627

EQUIPMENT DESCRIPTION:
750 KW (1150 BHP) SOLAR SATURN MODEL T-10208-S (S/N: S425219) DIESEL-FIRED EMERGENCY STANDBY TURBINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. (98) No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. (14) Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. (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]
4. Emissions from this turbine shall not exceed any of the following limits: 0.88 lb-NOx/MMBtu (0.01163 lb/kW-hr), 1.617 lb-CO/MMBtu (0.02302 lb/kW-hr), 0.012 lb-PM10/MMBtu (0.0001638 lb/kW-hr), 0.002 lb-SOx/MMBtu (0.00002121 lb/kW-hr) or 0.00041 lb-VOC/MMBtu (0.00000056 lb/kW-hr). [District Rule 2201]
5. This turbine shall be equipped with an operational non-resettable elapsed operating time meter or other APCO approved alternative. [District Rules 2201 and 4703]
6. This turbine shall be operated only for testing and maintenance, required regulatory purposes, and during emergency situations. Non-emergency operation of the turbine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4703]
7. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the turbine as recommended by the manufacturer or emission control system supplier. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5960 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

Amaud Marjolle, Director of Permit Services
C-7322-7-0: Mar 11 2015 2 0PM - ODDS/Note: Joint Inspection NOT Required
Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061
8. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4703]

9. This turbine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4703]

10. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rule 4801 and 40CFR60.333]

11. The permittee shall maintain an operating log that includes, on a daily basis, the actual local start-up time and stop time, total hours of emergency and non-emergency operation, the purpose of the operation (e.g., load testing, weekly testing, rolling blackout, general area power outage, etc.), and cumulative hours of operation to date for the calendar year. [District Rule 1070 and 4703]

12. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4703]
Appendix D

QNEC
Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District’s PAS database. The QNEC shall be calculated as follows:

\[ \text{QNEC} = \text{PE2} - \text{PE1}, \]

where:

- \( \text{QNEC} \) = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- \( \text{PE2} \) = Post Project Potential to Emit for each emissions unit, lb/qtr.
- \( \text{PE1} \) = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

\[ \text{PE2}_{\text{quarterly}} = \frac{\text{PE2}_{\text{annual}}}{4 \text{ quarters/year}} \]

\[ \text{PE1}_{\text{quarterly}} = \frac{\text{PE1}_{\text{annual}}}{4 \text{ quarters/year}} \]

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PE2 (lb/qtr)</th>
<th>PE1 (lb/qtr)</th>
<th>QNEC (lb/qtr)</th>
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<tbody>
<tr>
<td>NO(_x)</td>
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<td>218</td>
</tr>
<tr>
<td>SO(_x)</td>
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<td>0.5</td>
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</tr>
<tr>
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<td>431.75</td>
</tr>
<tr>
<td>VOC</td>
<td>0</td>
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