



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUN 03 2016

Commander Kevin M. Norton  
Naval Air Station Lemoore  
750 Enterprise Ave, Rm 107  
Lemoore, CA 93246

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)  
District Facility # C-2160  
Project # C-1161131**

Dear Commander Norton:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project authorizes the installation of an 80 bhp Tier 3 certified diesel-fired emergency standby IC engine powering an electrical generator.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority 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. Errol Villegas, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

  
for Arnaud Marjollet  
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email  
Dallas Belcher, Naval Air Station Lemoore (w/enclosure) via email

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061  
[www.valleyair.org](http://www.valleyair.org)

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: (661) 392-5500 FAX: (661) 392-5585



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 equipment is located at 330 Reeves Blvd (Building 42), in Lemoore, CA. The District has verified that 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 engine powers an electrical generator. Other than emergency standby operation, the engine may be operated up to 50 hours per year for maintenance and testing purposes.

### V. Equipment Listing

**C-2106-184-0:** 80 BHP (INTERMITTENT) MODEL 4024HF285B JOHN DEERE TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

### VI. Emission Control Technology Evaluation

The applicant has proposed to install a Tier 3 certified diesel-fired IC engine that is fired on very low-sulfur diesel fuel.

The proposed engine meets the latest Tier Certification requirements; therefore, the engine meets the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide (see Appendix C for a copy of the emissions data sheet from the manufacturer).

The use of very low-sulfur diesel fuel (0.0015% by weight sulfur maximum) reduces SO<sub>x</sub> emissions by over 99% from standard diesel fuel.

### VII. General Calculations

#### A. Assumptions

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	50 hours/year
Density of diesel fuel:	7.1 lb/gal
EPA F-factor (adjusted to 60 °F):	9,051 dscf/MMBtu
Fuel heating value:	137,000 Btu/gal
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr

Thermal efficiency of engine: commonly  $\approx 35\%$   
 PM<sub>10</sub> fraction of diesel exhaust: 0.96 (CARB, 1988)

**B. Emission Factors**

Emission Factors			
Pollutant	Emission Factor (g/kw-hr)	Emission Factor (g/bhp-hr)	Source
NO <sub>x</sub>	4.2	3.2	Engine Manufacturer
SO <sub>x</sub>	--	0.0051	Mass Balance Equation Below
PM <sub>10</sub>	0.20	0.15	Engine Manufacturer
CO	1.1	0.8	Engine Manufacturer
VOC	0.07	0.05	Engine Manufacturer

$$\frac{0.000015 \text{ lb-S}}{\text{lb-fuel}} \times \frac{7.1 \text{ lb-fuel}}{\text{gallon}} \times \frac{2 \text{ lb-SO}_2}{1 \text{ lb-S}} \times \frac{1 \text{ gal}}{137,000 \text{ Btu}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp-hr}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0051 \frac{\text{g-SO}_x}{\text{bhp-hr}}$$

**C. Calculations**

**1. Pre-Project Emissions (PE1)**

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

**2. Post-Project PE (PE2)**

The daily and annual PE are calculated as follows:

$$\text{Daily PE2 (lb-pollutant/day)} = \text{EF (g-pollutant/bhp-hr)} \times \text{rating (bhp)} \times \text{operation (hr/day)} / 453.6 \text{ g/lb}$$

$$\text{Annual PE2 (lb-pollutant/yr)} = \text{EF (g-pollutant/bhp-hr)} \times \text{rating (bhp)} \times \text{operation (hr/yr)} / 453.6 \text{ g/lb}$$

Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Annual Hours of Operation (hrs/yr)	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO <sub>x</sub>	3.2	80	24	50	13.5	28
SO <sub>x</sub>	0.0051	80	24	50	0.0	0
PM <sub>10</sub>	0.15	80	24	50	0.6	1
CO	0.8	80	24	50	3.4	7
VOC	0.05	80	24	50	0.2	0

### 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 ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) 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.

SSPE1 is summarized in the following table. Emissions information comes from project C-1152887, which references projects C-1123183, C-1123463, and C-1142866.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
C-2106-1-3	303	4	21	65	24
C-2106-2-3	466	6	33	100	38
C-2106-6-3	43	1	3	9	3
C-2106-7-3	233	3	17	50	19
C-2106-8-3	84	1	6	18	7
C-2106-9-4	466	6	33	100	38
C-2106-23-4	916,661	195,750	124,611	1,828,504	243,492
C-2106-70-5					
C-2106-74-4					
C-2106-25-7	8,117	34	409	319,230	3,391
C-2106-26-6	8,117	34	409	319,230	3,391
C-2106-27-6	8,117	34	409	319,230	3,391
C-2106-28-6	8,117	34	409	319,230	3,391
C-2106-39-3	0	0	0	0	14,600
C-2106-69-2	3,139	219	621	11,023	949

C-2106-117-6	0	0	6,034	0	14,130
C-2106-118-6	0	0	6,034	0	14,130
C-2106-119-6	0	0	6,034	0	14,130
C-2106-120-6	0	0	6,034	0	14,130
C-2106-121-6	0	0	6,034	0	14,130
C-2106-122-6	0	0	6,034	0	14,130
C-2106-123-6	0	0	6,034	0	14,130
C-2106-124-6	0	0	6,034	0	14,130
C-2106-125-6	0	0	6,034	0	14,130
C-2106-126-6	0	0	6,034	0	14,130
C-2106-127-6	0	0	6,034	0	14,130
C-2106-170-2	596	3	275	1,013	796
C-2106-140-6	0	0	0	0	730
C-2106-149-2	0	0	2,373	0	16,863
C-2106-151-5	0	0	6,034	0	14,130
C-2106-153-4	0	0	6,034	0	14,130
C-2106-154-4	0	0	6,034	0	14,130
C-2106-155-4	0	0	6,034	0	14,130
C-2106-156-4	0	0	6,034	0	14,130
C-2106-157-4	0	0	6,034	0	14,130
C-2106-162-2	0	0	0	0	365
C-2106-163-2	0	0	0	0	365
C-2106-165-2	0	0	0	0	365
C-2106-167-2	0	0	6,034	0	14,130
C-2106-168-2	546	0	102	546	52
C-2106-174-1	48	0	2	23	3
C-2106-175-0	73	0	0	4	0
C-2106-176-0	73	0	0	4	0
C-2106-178-0	0	0	73	0	0
C-2106-183-0	87	0	2	16	3
Pre-Project SSPE (SSPE1)	955,286	196,129	238,420	3,118,395	546,616

#### 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 ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) 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.

For this project the change in emissions for the facility is due to the installation of the new emergency standby IC engine. Thus:

SSPE2					
Permit Unit	NO <sub>x</sub> (lb/yr)	SO <sub>x</sub> (lb/yr)	PM <sub>10</sub> (lb/yr)	CO (lb/yr)	VOC (lb/yr)
SSPE1	955,286	196,129	238,420	3,118,395	546,616
C-2106-184-0	28	0	1	7	0
SSPE2 Total	955,314	196,129	238,421	3,118,402	546,616
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offset Threshold Surpassed?	No	No	No	No	No

## 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

Rule 2201 Major Source Determination (lb/year)						
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	VOC
SSPE1	955,286	196,129	238,420	238,420	3,118,395	546,616
SSPE2	955,314	196,129	238,421	238,421	3,118,402	546,616
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	Yes	Yes	Yes	Yes	Yes

As seen in the table above, the facility is an existing Major Source and will remain 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)(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	478	273	98	1,559	119	119
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	Y	Y	N	Y	N	N

As shown above, the facility is an existing PSD major source for at least one pollutant.

**6. Baseline Emissions (BE)**

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

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

**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 a major source for all pollutants, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO <sub>x</sub>	28	50,000	No
SO <sub>x</sub>	0	80,000	No
PM <sub>10</sub>	1	30,000	No
VOC	0	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with 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.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

#### Step 1

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

The project's combined total emission increases were calculated in this document above. Per the District's draft policy titled *Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 and Federal Major Modifications*, a permitting action is a Federal Major Modification if it will result in an increase in emissions in excess of the thresholds specified in section 3.18 of Rule 2201 (see Federal Major Modification Thresholds for Emission Increases table below). The draft policy further states that if the emission increases are less than or equal to 0.5 lb/day, on an average basis, then they are to be rounded to zero (consistent with District Policy APR-1130).

As shown in section VII.C.2 of this document, the total annual potential to emit for NO<sub>x</sub>, PM<sub>10</sub> and VOC emissions are 28 lb/year, 1 lb/year and 0 lb/year respectively. Therefore, the average daily emission rates can be determined using the annual potential to emit divided by a worst case operating scenario of 365 days per year.

$$\text{Average Daily PE2} = \text{Annual PE} / 365 \text{ days/yr}$$

Pollutant	Annual PE (lb/year)	Worst Case Operation (days/year)	Average Daily PE (lb/day)
NO <sub>x</sub>	28	365	0.08
VOC	0	365	0
PM <sub>10</sub>	1	365	0.00
SO <sub>x</sub>	0	365	0

As explained above, in accordance with District Policy APR-1130, the PE2 rounds to zero for each of these pollutants.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO <sub>x</sub>	0	0	No
VOC	0	0	No
PM <sub>10</sub>	0	30,000	No
PM <sub>2.5</sub>	0	20,000	No
SO <sub>x</sub>	0	80,000	No

As demonstrated in the table above, this project does not constitute a Federal Major Modification.

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

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO<sub>2</sub> (as a primary pollutant)
- SO<sub>2</sub> (as a primary pollutant)
- CO
- PM
- PM<sub>10</sub>

#### I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be an existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

**II. Project Emission Increase – Significance Determination**

**a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds**

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no further PSD analysis is needed.

<b>PSD Significant Emission Increase Determination: Potential to Emit (tons/year)</b>					
	NO2	SO2	CO	PM	PM10
Total PE from New and Modified Units	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 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 E.

**VIII. Compliance**

**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 for the following\*:

- 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 SB288 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.

As discussed in Section I, the facility is proposing to install a new emergency standby IC engine. Additionally, as determined in Sections VII.C.7 and VII.C.8, this project does not result in an SB288 Major Modification or a Federal Major Modification, respectively. Therefore, BACT can only be triggered if the daily emissions exceed 2.0 lb/day for any pollutant.

The daily emissions from the new engine are compared to the BACT threshold levels in the following table:

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions for unit -184-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO <sub>x</sub>	13.5	> 2.0	n/a	Yes
SO <sub>x</sub>	0.0	> 2.0	n/a	No
PM <sub>10</sub>	0.6	> 2.0	n/a	No
CO	3.4	> 2.0 and SSPE2 ≥ 200,000 lb/yr	> 200,000	Yes
VOC	0.2	> 2.0	n/a	No

As shown above, BACT will be triggered for NO<sub>x</sub> and CO emissions from the engine for this project.

## 2. BACT Guideline

BACT Guideline 3.1.1, which appears in Appendix B of this report, covers diesel-fired emergency IC engines.

### 3. Top Down BACT Analysis

Per District Policy APR 1305, Section IX, "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 for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

Pursuant to the attached Top-Down BACT Analysis, which appears in Appendix B of this report, BACT is satisfied with:

NO<sub>x</sub> and CO: Latest Available Tier Certification level for applicable horsepower\*

\*Note: The certification requirements for emergency engines are as follows:  
50 ≤ bhp < 75 – Tier 4; 75 ≤ bhp < 750 – Tier 3; ≥ 750 bhp – Tier 2.

Since the applicant is proposing a Tier 3 Certified 80 bhp IC engine, BACT is satisfied.

### B. Offsets

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

### C. Public Notification

#### 1. Applicability

Public noticing is required for:

a. New Major Sources, SB288 Major Modifications, and Federal Major Modifications

As shown in Sections VII.C.7 and VII.C.8, this facility is not a new Major Source, not an SB 288 Major Modification, and not a Federal Major Modification, respectively.

b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant

As calculated in Section VII.C.2, daily emissions for all pollutants are less than 100 lb/day.

c. Any project which results in the offset thresholds being surpassed

As shown in Section VII.C.4, an offset threshold will not be surpassed.

d. Any project with a Stationary Source Project Increase in Permitted Emissions (SSIPE) greater than 20,000 lb/year for any pollutant.

For this project, the proposed engine is the only emissions source that will generate an increase in Potential to Emit. Since the proposed engine emissions are well below 20,000 lb/year for all pollutants (See Section VII.C.2), the SSIPE for this project will be below the public notice threshold.

## 2. Public Notice Action

As demonstrated above, this project will not require public noticing.

## D. Daily Emissions Limits

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. 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:

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.2 g-NOx/bhp-hr, 0.8 g-CO/bhp-hr, or 0.05 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR 60 Subpart IIII]
- {4772} Emissions from this IC engine shall not exceed 0.15 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR 60 Subpart IIII]
- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR 60 Subpart IIII]

## E. Compliance Assurance

### 1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required for emergency standby IC engines to demonstrate compliance with Rule 2201.

## **2. Monitoring**

No monitoring is required to demonstrate compliance with Rule 2201.

## **3. Recordkeeping**

Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

## **4. Reporting**

No reporting is required to ensure compliance with Rule 2201.

### **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 subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
  - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

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 may construct/operate under the ATC upon submittal of the Title V administrative amendment application. The following conditions will be included on the ATC to will ensure compliance with the requirements of this rule

- {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]
- {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]

## **Rule 4001 New Source Performance Standards (NSPS)**

### **40 CFR 60 Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

#### §60.4200 - Applicability

This subpart is applicable to owners and operators of stationary compression ignited internal combustion engines that commence construction after July 11, 2005, where the engines are:

- 1) Manufactured after April 1, 2006, if not a fire pump engine.
- 2) Manufactured as a National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

Since the proposed engine will be installed after July 11, 2005 and will be manufactured after April 1, 2006, this subpart applies.

Sections 60.4201 through 60.4203 apply to engine manufacturers. Therefore, these sections will not be discussed unless they are referenced later by another section of this subpart.

#### §60.4204 – Emission Standards for Owners and Operators

Section 60.4205(b) states that owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in Section 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

Section 60.4202(a) states that Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a

maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

Section (a)(1) is not applicable as it applies to engines with a maximum engine power less than 37 KW (50 HP).

Section (a)(2) states for engines greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

The applicable standards from 40 CFR 89.112 are NMHC + NO<sub>x</sub> = 4.7 g/kw-hr, CO = 5.0 g/kw-hr, and PM = 0.40 g/kw-hr. As demonstrated in Section VII.B above, the emission standards of 40 CFR 89.112 are met. Therefore, the previously proposed conditions will ensure compliance with this requirement:

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.2 g-NO<sub>x</sub>/bhp-hr, 0.8 g-CO/bhp-hr, or 0.05 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR 60 Subpart IIII]
- {4772} Emissions from this IC engine shall not exceed 0.15 g-PM<sub>10</sub>/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR 60 Subpart IIII]

The smoke emission standard in 40 CFR 89.113 applies to compression-ignition non-road engines. An emergency-standby IC engine is not a non-road engine as defined in 40 CFR 89 Subpart A, therefore section 40 CFR 89.113 does not apply.

Section 60.4206 states that owners or operators of CI engines must meet the applicable emission standards for the entire life of said engines. The Tier 3 level emissions for the proposed engine will be listed on the permit as emission factors, ensuring that the emission standards are met over the entire life of the engine.

Section 60.4207(b) states that beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. Section 80.510(b) states that beginning June 1, 2010, except as otherwise specifically provided in this subpart, the sulfur content for all non-road diesel fuel shall not exceed 15 ppm. The proposed engine will be required by the following permit condition to use CARB certified diesel fuel, which meets all of the fuel requirements listed in Subpart IIII.

- {modified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

Section 60.4208 lists deadline dates for importing or installing stationary CI engines produced in the previous model year. None of the deadline dates affect the engine proposed in this project. Therefore, this section does not apply.

Section 60.4209 applies to emergency stationary CI engines that do not meet the applicable standards and stationary CI engines equipped with a diesel particulate filter. The proposed engine in this project does not fall under either of these two categories. Therefore, this section does not apply.

Section 60.4210 applies only to engine manufacturers. Therefore, this section will not be discussed unless it is referenced later by another section of this subpart.

Section 60.4211(a) states that owners or operators who comply with the emission standards specified in this subpart must operate and maintain the stationary CI engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. The following condition will be added to the ATC to ensure compliance:

- {modified 4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart III]

Section 60.4211(b) applies to pre-2007 model year engines. Therefore, this section does not apply.

Section 60.4211(c) states that if you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in Section 60.4204(b) or Section 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in Section 60.4205(c), you must comply by purchasing an engine certified to the emission standards in Section 60.4204(b), or Section 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications. The applicant has proposed a Tier 3 emissions level engine that complies with the emission standards in Section 60.4205(b) and will be installed according to the manufacturer's specifications. Therefore, this section is satisfied.

Section 60.4211(d) applies to owners or operators who must comply with the emission standards specified in Section 60.4204(c) or Section 60.4205(d). The proposed engine is not subject to the emission standards specified in Sections 60.4204(c) or 60.4205(d). Therefore, this section does not apply.

Section 60.4211(e) applies to owners or operators of modified or reconstructed stationary CI internal combustion engines. Therefore, this section does not apply.

Section 60.4211(f) applies to owners or operators of an emergency stationary ICE. This section states you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. The following condition will be added to the ATC to ensure compliance:

- {4777} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

Section 60.4212 applies to owners or operators of a stationary CI engine with a displacement of less than 30 liters per cylinder and required to conduct performance tests pursuant to Section 60.4211(b). Section 60.4211(b) does not apply to this engine. Therefore, performance tests are not required and this section does not apply.

Section 60.4213 applies to owners or operators of CI engines with a displacement of greater than or equal to 30 liters per cylinder. Per the CARB/EPA emissions data sheet for the proposed engine, the displacement is less than 30 liters per cylinder. Therefore, this section does not apply.

Section 60.4214(a) states owners and operators of non-emergency stationary CI engines that are greater than 3,000 hp, or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 175 hp and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section. The proposed engine is a post-2007 model year emergency engine rated less than 3,000 hp and has a displacement less than 10 liters per cylinder. Therefore, this section does not apply.

Section 60.4214(b) states that if the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. Since the engine in this project meets the applicable standards, this section does not apply.

Section 60.4214(c) applies to stationary CI engines equipped with a diesel particulate filter. Therefore, this section does not apply.

Sections 60.4215 and 60.4216 apply to engines operated outside the continental United States. Therefore, these sections do not apply.

Section 60.4217 applies to engines that use special fuels and cannot meet the emission limits that the engine was originally certified to. This section does not apply as the proposed engine is diesel-fired and meets the emission limits that the engine was originally certified to.

As demonstrated above, the proposed engine meets the requirements of this subpart.

#### **Rule 4002 National Emission Standards for Hazardous Air Pollutants**

##### **40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)**

In accordance with Section 63.6590(c) the engine in this project must meet the requirements of 40 CFR 63, Subpart ZZZZ, by meeting the requirements of 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. No further requirements apply.

As demonstrated above the proposed engine meets the requirements of 40 CFR 60 Subpart IIII. Therefore the engine meets the requirements of 40 CFR 63 Subpart ZZZZ.

#### **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 ATC 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. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {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 Assessment)**

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) 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. Therefore, a risk management review (RMR) was performed for this project. The RMR results are summarized in the following table, and can be seen in detail in Appendix D.

RMR Results				
Unit	Acute Hazard Index	Chronic Hazard Index	Cancer Risk	T-BACT Required?
C-2106-184-0	N/A	N/A	0.01 in a million	No

The following conditions will be listed on the ATC to ensure compliance with the RMR:

- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- {4772} Emissions from this IC engine shall not exceed 0.15 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart III]
- {4777} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart III]

**Rule 4201 Particulate Matter Concentration**

Rule 4201 limits particulate matter emissions from any single source operation to 0.1 g/dscf, which, as calculated below, is equivalent to a PM<sub>10</sub> emission factor of 0.4 g-PM<sub>10</sub>/bhp-hr.

$$0.1 \frac{\text{grain-PM}}{\text{dscf}} \times \frac{\text{g}}{15.43 \text{ grain}} \times \frac{1 \text{ Btu}_{in}}{0.35 \text{ Btu}_{out}} \times \frac{9,051 \text{ dscf}}{10^6 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{1 \text{ bhp-hr}} \times \frac{0.96 \text{ g-PM}_{10}}{1 \text{ g-PM}} = 0.4 \frac{\text{g-PM}_{10}}{\text{bhp-hr}}$$

The new engine has a PM<sub>10</sub> emission factor less than 0.4 g/bhp-hr. Therefore, compliance is expected and the following condition will be listed on the ATC:

- {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<sub>x</sub>), 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 PTO.

The proposed engine is also subject to District Rule 4702, Internal Combustion Engines. Since emissions limits of District Rule 4702 and all other requirements are equivalent or more stringent than District Rule 4701 requirements for emergency engines, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

### **Rule 4702 Internal Combustion Engines**

The following summarizes District Rule 4702 Requirements for emergency standby IC engines:

1. Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes. The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) limits this engine maintenance and testing to 50 hours/year; therefore, compliance is expected. The following condition will be included on the permit:
  - {4777} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
2. Properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier. The following condition will be included on the permit:
  - {modified 4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart IIII]
3. Monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier. The following condition will be included on the permit:
  - {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of

the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]

4. Install and operate a nonresettable elapsed time meter. In lieu of installing a nonresettable elapsed time meter, the operator may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO and EPA and is allowed by Permit-to-Operate condition. The operator shall properly maintain and operate the nonresettable elapsed time meter or alternative device in accordance with the manufacturer's instructions.

The following condition shall be used:

- {4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rule 4702 and 17 CCR 93115]
5. Emergency standby engines cannot be used to reduce the demand for electrical power when normal electrical power line service has not failed, or to produce power for the electrical distribution system, or in conjunction with a voluntary utility demand reduction program or interruptible power contract. The following conditions will be included on the permit:
    - {3807} 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 4702]
    - {3808} This engine 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 4702]
  6. Records of the total hours of operation, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation, and other support documentation must be maintained. All records 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 following conditions will be included on the permit:
    - {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly

testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]

- {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
- {3475} 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 and 17 CCR 93115]

### Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO<sub>2</sub>) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

n = moles SO<sub>2</sub>

T (standard temperature) = 60 °F or 520 °R

$$R \text{ (universal gas constant)} = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$$

$$\frac{0.000015 \text{ lb} - \text{S}}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb}}{\text{gal}} \times \frac{64 \text{ lb} - \text{SO}_2}{32 \text{ lb} - \text{S}} \times \frac{1 \text{ MMBtu}}{9,051 \text{ scf}} \times \frac{1 \text{ gal}}{0.137 \text{ MMBtu}} \times \frac{\text{lb} - \text{mol}}{64 \text{ lb} - \text{SO}_2} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} - \text{mol} \cdot \text{°R}} \times \frac{520 \text{°R}}{14.7 \text{ psi}} \times 1,000,000 = 1.0 \text{ ppmv}$$

Since 1.0 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {modified 4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

### California Health & Safety Code 42301.6 (School Notice)

The District has verified that this engine 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.

### Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

The following requirements apply to new engines (those installed after 1/1/05):

<p align="center"><b>Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators</b></p>	<p align="center"><b>Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements</b></p>
<p>Emergency engine(s) must be fired on CARB diesel fuel, or an approved alternative diesel fuel.</p>	<p>The applicant has proposed the use of CARB certified diesel fuel. The proposed permit condition, requiring the use of CARB certified diesel fuel, was included earlier in this evaluation.</p>
<p>The engine must meet the emission standards in Table 1 of the ATCM for the specific power rating and model year of the proposed engine.</p>	<p>The applicant has proposed the use of engine(s) that are certified to the latest EPA Tier Certification standards for the applicable horsepower range, guaranteeing compliance with the emission standards of the ATCM. Additionally, the proposed diesel PM emissions rate is less than or equal to 0.15 g/bhp-hr.</p>
<p>The engine may not be operated more than 50 hours per year for maintenance and testing purposes.</p>	<p>The following condition will be included on the permit:</p> <ul style="list-style-type: none"> <li>• {4777} 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]</li> </ul>
<p>Engines, with a PM10 emissions rate greater than 0.01 g/bhp-hr and located at schools, may not be operated for maintenance and testing whenever there is a school sponsored activity on the grounds. Additionally, engines located within 500 feet of school grounds may not be operated for maintenance and testing between 7:30 AM and 3:30 PM</p>	<p>The District has verified that this engine is not located within 500' of a school.</p>
<p>A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed upon engine installation, or by no later than January 1, 2005, on all engines subject to all or part of the requirements of sections 93115.6, 93115.7, or 93115.8(a) unless the District determines on a case-by-case basis that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history.</p>	<p>The following condition will be included on the permit:</p> <ul style="list-style-type: none"> <li>• {4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rule 4702 and 17 CCR 93115]</li> </ul>

<p>An owner or operator shall maintain monthly records of the following: emergency use hours of operation; maintenance and testing hours of operation; hours of operation for emission testing; initial start-up testing hours; hours of operation for all other uses; and the type of fuel used. All records shall be retained for a minimum of 36 months.</p>	<p>Permit conditions enforcing these requirements were shown earlier in the evaluation.</p>
---	---

**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**

District is a Lead Agency & GHG emissions increases are from the combustion of fossil fuel other than jet fuels

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 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 project 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

**IX. Recommendation**

Pending a successful 45-day EPA comment period, issue Authority to Construct C-2106-184-0 subject to the permit conditions on the attached draft Authority to Construct in Appendix A.

**X. Billing Information**

<b>Billing Schedule</b>			
<b>Permit Number</b>	<b>Fee Schedule</b>	<b>Fee Description</b>	<b>Fee Amount</b>
C-2106-184-0	3020-10-A	80 bhp IC engine	\$84

**Appendixes**

- A. Draft ATC
- B. BACT Guideline and BACT Analysis
- C. Emissions Data Sheet
- D. RMR Summary
- E. QNEC Calculations and Emissions Profile

Appendix A  
Draft ATC

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: C-2106-184-0

LEGAL OWNER OR OPERATOR: NAS LEMOORE  
MAILING ADDRESS: BUILDING 750 CODE 50800  
LEMOORE, CA 93246-5001

LOCATION: NAVAL AIR STATION LEMOORE  
750 ENTERPRISE AVE  
LEMOORE, CA 93246-5001

EQUIPMENT DESCRIPTION:  
80 BHP (INTERMITTENT) MODEL 4024HF285B JOHN DEERE TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY  
STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

**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. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. 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] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

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

**DRAFT**

Arnaud Marjollet, Director of Permit Services

C-2106-184-0 May 18 2016 3 30PM - GARCIAJ Joint Inspection NOT Required

7. This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
8. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
9. Emissions from this IC engine shall not exceed any of the following limits: 3.2 g-NOx/bhp-hr, 0.8 g-CO/bhp-hr, or 0.05 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
10. Emissions from this IC engine shall not exceed 0.15 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
12. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
13. 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 4702] Federally Enforceable Through Title V Permit
14. This engine 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 4702] Federally Enforceable Through Title V Permit
15. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
16. 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 50 hours per calendar year. [District Rules 2201, 4102, and 4702, and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
17. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit
18. 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 and 17 CCR 93115] Federally Enforceable Through Title V Permit

DRAFT

**Appendix B**  
**BACT Guideline and BACT Analysis**

# San Joaquin Valley Unified Air Pollution Control District

**Best Available Control Technology (BACT) Guideline 3.1.1**  
**Last Update: 9/10/2013**  
**Emergency Diesel IC Engine**

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Latest EPA Tier Certification level for applicable horsepower range*		
NOX	Latest EPA Tier Certification level for applicable horsepower range*		
PM10	0.15 g/bhp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)		
SOX	Very low sulfur diesel fuel (15 ppmw sulfur or less)		
VOC	Latest EPA Tier Certification level for applicable horsepower range*		

*\*Note: for emergency engines 50 <= bhp < 75, Tier 4 Interim certification is the requirement; for emergency engines 75 <= bhp < 750, Tier 3 certification is the requirement; for emergency engines => 750 bhp, Tier 2 certification is the requirement.*

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.

## Top Down BACT Analysis for the Emergency IC Engine

BACT Guideline 3.1.1 (September 10, 2013) applies to emergency diesel IC engines. In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

### 1. BACT Analysis for NO<sub>x</sub> and CO Emissions:

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

BACT Guideline 3.1.1 identifies only the following option:

- *Latest EPA Tier Certification level for applicable horsepower range*

To determine the latest applicable Tier level, the following EPA and state regulations were consulted:

- 40 CFR Part 89 – Control of Emissions from New and In-Use Nonroad Compression – Ignition Engines
- 40 CFR Part 1039 – Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines
- Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

40 CFR Parts 89 and 1039, which apply only to nonroad engines, do not directly apply because the proposed emergency engine does not meet the definition of a nonroad engine. Therefore, only Title 17 CCR, Section 93115 applies directly to the proposed emergency engine.

Title 17 CCR, Section 93115.6(a)(3)(A) (CARB stationary diesel engine ATCM) applies to emergency standby diesel-fired engines and requires that such engines be certified to the emission levels in Table 1 (below).

Table 1: Emission Standards for New Stationary Emergency Standby Diesel-Fueled CI Engines g/bhp-hr (g/kW-hr)					
Maximum Engine Power	Tier	Model Year(s)	PM	NMHC+NOx	CO
50 ≤ HP < 75 (37 ≤ kW < 56)	2	2007	0.15 (0.20)	5.6 (7.5) 3.5 (4.7)	3.7 (5.0)
	4i	2008+			
75 ≤ HP < 100 (56 ≤ kW < 75)	2	2007	0.15 (0.20)	5.6 (7.5) 3.5 (4.7)	3.7 (5.0)
	3	2008+			
100 ≤ HP < 175 (75 ≤ kW < 130)	3	2007	0.15 (0.20)	3.0 (4.0)	3.7 (5.0)
		2008+			
175 ≤ HP < 300 (130 ≤ kW < 225)	3	2007	0.15 (0.20)	3.0 (4.0)	2.6 (3.5)
		2008+			
300 ≤ HP < 600 (225 ≤ kW < 450)	3	2007	0.15 (0.20)	3.0 (4.0)	2.6 (3.5)
		2008+			
600 ≤ HP ≤ 750 (450 ≤ kW ≤ 560)	3	2007	0.15 (0.20)	3.0 (4.0)	2.6 (3.5)
		2008+			
HP > 750 (kW > 560)	2	2007	0.15 (0.20)	4.8 (6.4)	2.6 (3.5)
		2008+			

Therefore, the most stringent applicable emission standards are those listed in the CARB ATCM (Table 1).

For IC engines rated greater than or equal to 50 hp and less than 75 hp, the highest Tier required is Tier 4i. For IC engines rated greater than or equal to 75 hp and less than 750 hp, the highest Tier required is Tier 3. For engines rated equal to or greater than 750 hp, the highest Tier required is Tier 2.

Also, please note that neither the state ATCM nor the Code of Federal Regulations require the installation of IC engines meeting a higher Tier standard than those listed above for emergency applications, due to concerns regarding the effectiveness of the exhaust emissions controls during periods of short-term operation (such as testing operational readiness of an emergency engine).

The proposed engine is rated at 80 hp. Therefore, the applicable control technology option is EPA Tier 3 certification.

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

The control option listed in Step 1 is not technologically infeasible.

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

No ranking needs to be done because there is only one control option listed in Step 1.

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

The applicant has proposed the only control option remaining under consideration. Therefore, a cost effectiveness analysis is not required.

**e. Step 5 - Select BACT**

BACT for NO<sub>x</sub> and CO will be the use of an EPA Tier 3 certified engine. The applicant is proposing such a unit. Therefore, BACT will be satisfied.

Appendix C  
Emissions Data Sheet

## Rating Specific Emissions Data - John Deere Power Systems



### Rating Data

Rating	4024HF285B	
Certified Power(kW)	60	
Rated Speed	1800	
Vehicle Model Number	OEM (Gen Set-Emergency)	
Units	g/kW-hr	g/hp-hr
NOx	4.2	3.2
HC	0.07	0.05
NOx + HC	N/A	N/A
Pm	0.20	0.15
CO	1.1	0.8

### Certificate Data

Engine Model Year	2014	
EPA Family Name	EJDXL04.5141	
EPA JD Name	350HAM	
EPA Certificate Number	EJDXL04.5141-011	
CARB Executive Order		
Parent of Family	4045HFG81	
Units	g/kW-hr	
NOx	4.2	
HC	0.24	
NOx + HC	N/A	
Pm	0.22	
CO	0.6	

\* The emission data listed is measured from a laboratory test engine according to the test procedures of 40 CFR 89 or 40 CFR 1039, as applicable. The test engine is intended to represent nominal production hardware, and we do not guarantee that every production engine will have identical test results. The family parent data represents multiple ratings and this data may have been collected at a different engine speed and load. Emission results may vary due to engine manufacturing tolerances, engine operating conditions, fuels used, or other conditions beyond our control.

This information is property of Deere & Company. It is provided solely for the purpose of obtaining certification or permits of Deere powered equipment. Unauthorized distribution of this information is prohibited.

Emissions Results by Rating run on May-18-2016

# Appendix D

## RMR Summary

**REVISED**  
**San Joaquin Valley Air Pollution Control District**  
**Risk Management Review**

To: Jesse Garcia, AQE - Permit Services  
 From: Marissa Williams, AQS - Permit Services  
 Date: May 18, 2016  
 Facility Name: Nas Lemoore  
 Location: Naval Air Station Lemoore, Lemoore, CA  
 Application #(s): C-2106-184-0  
 Project #: C-1161131

---

**A. RMR SUMMARY**

<b>RMR Summary</b>			
<b>Categories</b>	<b>Diesel-Fired IC Engine (Unit 184-0)</b>	<b>Project Totals</b>	<b>Facility Totals</b>
<b>Prioritization Score</b>	N/A <sup>1</sup>	N/A <sup>1</sup>	<1.0
<b>Acute Hazard Index</b>	N/A <sup>2</sup>	N/A <sup>2</sup>	0.00
<b>Chronic Hazard Index</b>	N/A <sup>2</sup>	N/A <sup>2</sup>	0.00
<b>Maximum Individual Cancer Risk</b>	1.00E-08	1.00E-08	2.35E-06
<b>T-BACT Required?</b>	<b>No</b>		
<b>Special Permit Requirements?</b>	<b>Yes</b>		

- 1 Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.
- 2 Acute and Chronic Hazard Indices were not calculated since there is no risk factor, or the risk factor is so low that the risk has been determined to be insignificant for this type of unit.

**Proposed Permit Requirements**

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

**Unit # 184-0**

1. The PM10 emissions rate shall not exceed **0.15** g/hp-hr based on US EPA certification using ISO 8178 test procedure.
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction.
3. The engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed **50** hours per year.

## B. RMR REPORT

### I. Project Description

Technical Services received a request on April 13, 2016 to perform a Risk Management Review for a proposed installation of an 80 bhp diesel-fired emergency IC engine powering an electrical generator. On May 18, 2016, Technical Services received a request to revise the original project, as the PM<sub>10</sub> emission factor has been updated. The PM<sub>10</sub> emission factor should be 0.15 g/bhp-hr, replacing the original rate of 0.3 g/bhp-hr.

### II. Analysis

Technical Services performed a screening level health risk assessment using the District developed DICE database.

The following parameters were used for the review:

<b>Analysis Parameters Unit 184-0</b>			
<b>Source Type</b>	Point	<b>Location Type</b>	Rural
<b>BHP</b>	80	<b>PM<sub>10</sub> g/hp-hr</b>	0.15
<b>Closest Receptor (m)</b>	9967	<b>Quad</b>	Quad 2
<b>Max Hours per Year</b>	50	<b>Type of Receptor</b>	Resident

### III. Conclusion

The cancer risk associated with the operation of the proposed diesel IC engine is less than 1.0 in a million. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT) for PM<sub>10</sub>.

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 this 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. DICE worksheet
- D. Facility summary

Appendix E  
QNEC Calculations and Emissions Profile

### 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:

QNEC = PE2 - PE1, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr
- PE2 = Post-Project Potential to Emit for each emissions unit, lb/qtr
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr

Since this is a new unit, PE1 = 0 for all pollutants. Thus, QNEC = PE2 (lb/qtr).

Using the PE2 (lb/yr) values calculated in Section VII.C.2, Quarterly PE2 is calculated as follows:

$$PE2_{\text{quarterly}} = PE2 \text{ (lb/yr)} \div 4 \text{ quarters/year} = \text{QNEC}$$

QNEC		
Pollutant	PE2 Total (lb/yr)	Quarterly PE2 (lb/qtr)
NO <sub>x</sub>	28	7.0
SO <sub>x</sub>	0	0.0
PM <sub>10</sub>	1	0.3
CO	7	1.8
VOC	0	0.0

Permit #: C-2106-184-0	Last Updated
Facility: NAS LEMOORE	05/18/2016 GARCIAJ

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	28.0	0.0	1.0	7.0	0.0
Daily Emis. Limit (lb/Day)	13.5	0.0	0.6	3.4	0.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	7.0	0.0	0.0	1.0	0.0
Q2:	7.0	0.0	0.0	2.0	0.0
Q3:	7.0	0.0	0.0	2.0	0.0
Q4:	7.0	0.0	1.0	2.0	0.0
Check if offsets are triggered but exemption applies	Y	Y	Y	Y	Y
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					