



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



JUN 20 2013

Joe Carlile  
Prologis  
1555 North Commerce Way  
Tracy, CA 95377

**Re: Notice of Preliminary Decision - Authority to Construct**  
**Facility Number: N-8881**  
**Project Number: N-1131728**

Dear Mr. Carlile:

Enclosed for your review and comment is the District's analysis of Prologis' application for Authorities to Construct for two diesel fired emergency engines, at 1555 North Commerce Way in Tracy, 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 Authorities 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 Mr. Mark Schonhoff of Permit Services at (209) 557- 6448.

Sincerely,

David Warner  
Director of Permit Services

DW:MJS

Enclosures

cc: Mike Tollstrup, CARB (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. Gattysburg Avenue  
Fresno, CA 93726-0244  
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Southern Region  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
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Newspaper notice for publication in Stockton Record and for posting on  
valleyair.org

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**NOTICE OF PRELIMINARY DECISION  
FOR THE PROPOSED ISSUANCE OF  
AUTHORITIES TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authorities to Construct to Prologis for two diesel fired emergency engines, at 1555 North Commerce Way in Tracy, CA.

The analysis of the regulatory basis for this proposed action, Project #N-1131728, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and at any District office. For additional information, please contact the District at (209) 557-6400. Written comments on this project must be submitted by July 29, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356.**

# Authority to Construct Application Review

Facility Name: Prologis  
Mailing Address: 17284 N. Commerce Way  
Tracy, CA 95377

Date: June 12, 2013

Contact Person: Kurt Fuller (Facility Contact)  
Telephone: (510) 661-4026

Contact Person: Joe Carlile (Authorized Agent)  
Telephone: (925) 460-3232

Engineer: Mark Schonhoff  
Application #: N-8881-1-0  
N-8881-2-0

Project #: N-1131728  
Deemed Complete:

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## I. Proposal

Prologis is proposing to install two diesel fired standby internal combustion (IC) engines (2,346 bhp and 385 bhp) that will power electrical generators.

## II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)  
Rule 2520 Federally Mandated Operating Permits (6/21/01)  
Rule 4001 New Source Performance Standards (4/14/99)  
Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)  
Rule 4101 Visible Emissions (2/17/05)  
Rule 4102 Nuisance (12/17/92)  
Rule 4201 Particulate Matter Concentration (12/17/92)  
Rule 4701 Stationary Internal Combustion Engines – Phase 1 (8/21/03)  
Rule 4702 Stationary Internal Combustion Engines (8/18/11)  
Rule 4801 Sulfur Compounds (12/17/92)  
CH&SC 41700 Health Risk Assessment  
CH&SC 42301.6 School Notice  
Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines  
California Environmental Quality Act (CEQA)  
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**

1555 N. Chrisman Road  
Tracy, CA

The equipment will not be located within 1,000 feet of a K-12 school.

### **IV. Process Description**

Each emergency standby engine will power an electrical generator. Other than emergency standby operation, each engine may be operated up to 50 hours per year for maintenance and testing purposes.

### **V. Equipment Listing**

#### **N-8881-1-0:**

2,346 BHP MITSUBISHI MODEL S16R-Y2PTAW-1 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

#### **N-8881-2-0:**

385 BHP JOHN DEERE MODEL 6090HF484 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

### **VI. Emission Control Technology Evaluation**

The applicant has proposed to install one Tier 2 certified diesel-fired IC engine and one Tier 3 diesel fired IC engine that will be fired on very low-sulfur diesel fuel (0.0015% by weight sulfur maximum).

#### **NO<sub>x</sub>, CO, VOC and PM<sub>10</sub>:**

The proposed engines do not meet the latest published Tier Certification requirements; However, compliance with both BACT and CARB's stationary ATCM requirements will be met as described below (see Appendix D for copies of the emissions data sheets and/or the ARB/EPA executive orders).

Although Tier 4i requirements for these categories of engines went into effect in 2011, CARB regulations and District policy allows for the availability of Tier 4i units to be accounted for. CARB's Stationary ATCM exemption §93115.3(u) says, "If the Executive Officer or District finds, based on verifiable information from the engine manufacturer, distributor, or dealer, that current model year engines meeting the current emission standards are not available or not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings, then the Executive Officer or the District may allow the sale, purchase, or installation of a new stock engine meeting the emission standards from the previous model year to meet the new stationary diesel-

fueled engine emission standards pursuant to title 13 of the California Code of Regulations or 40 CFR part 89.” The District has thoroughly investigated, with each of the common manufacturers’, the availability of Tier 4i units in this size range, and has found them to be currently unavailable. Since Tier 4i units are not available, as described above, the installation of a 2,346 bhp Tier 2 unit and a 385 bhp Tier 3 unit is acceptable, as these standards are prior published Tier in this engine’s size range.

**SOx:**

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 ≈ 35%
PM <sub>10</sub> fraction of diesel exhaust:	0.96 (CARB, 1988)

**B. Emission Factors**

**N-8881-1-0:**

EF <sub>NOx</sub> :	4.0 g/bhp-hr (engine data sheet)
EF <sub>CO</sub> :	0.45 g/bhp-hr (engine data sheet)
EF <sub>VOC</sub> :	0.42 g/bhp-hr (engine data sheet)
EF <sub>PM10</sub> :	0.13 g/bhp-hr (engine data sheet)
EF <sub>SOx</sub> =	0.0053 g/bhp-hr – see below

Sulfur Content of Diesel:	15 ppmw
Density of Diesel:	7.1 lb/gal
Fuel Use:	128 gal/hr
Engine Rating:	2,346 bhp

$$EF_{SOx} = [(15 \text{ lb S}/10^6 \text{ lb fuel})(7.1 \text{ lb fuel/gal})(128 \text{ gal/hr})(2 \text{ lb SO}_2/\text{lb S}) \times (453.6 \text{ g/lb})] / (2,346 \text{ bhp}) = 0.0053 \text{ g/bhp-hr}$$

**N-8881-2-0:**

EF<sub>NOx</sub>: 2.83 g/bhp-hr (engine data sheet)  
EF<sub>CO</sub>: 0.67 g/bhp-hr (engine data sheet)  
EF<sub>VOC</sub>: 0.075 g/bhp-hr (engine data sheet)  
EF<sub>PM10</sub>: 0.10 g/bhp-hr (engine data sheet)  
EF<sub>SOx</sub>: 0.0044 g/bhp-hr – see below

Sulfur Content of Diesel: 15 ppmw  
Density of Diesel: 7.1 lb/gal  
Fuel Use: 17.6 gal/hr  
Engine Rating: 385 bhp

$$EF_{SOx} = [(15 \text{ lb S}/10^6 \text{ lb fuel})(7.1 \text{ lb fuel/gal})(17.6 \text{ gal/hr})(2 \text{ lb SO}_2/\text{lb S}) \\ \times (453.6 \text{ g/lb})] / (385 \text{ bhp}) = 0.0044 \text{ g/bhp-hr}$$

**C. Potential to Emit (PE)**

**1. Potential to Emit**

**Premodification:**

The equipment is new, therefore, the premodification potential to emit (PE) is zero for each unit.

**Postmodification:**

**N-8881-1-0:**

$$PE_{NOx} = (4.0 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 496.5 \text{ lb/day}$$

$$PE_{NOx} = (4.0 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 1,034 \text{ lb/yr}$$

$$PE_{CO} = (0.45 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 55.9 \text{ lb/day}$$

$$PE_{CO} = (0.45 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 116 \text{ lb/yr}$$

$$PE_{VOC} = (0.42 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 52.1 \text{ lb/day}$$

$$PE_{VOC} = (0.42 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 109 \text{ lb/yr}$$

$$PE_{SOx} = (0.0053 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 0.7 \text{ lb/day}$$

$$PE_{SOx} = (0.0053 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 1 \text{ lb/yr}$$

$$PE_{PM10} = (0.13 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 16.1 \text{ lb/day}$$

$$PE_{PM10} = (0.13 \text{ g/bhp-hr})(2,346 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 34 \text{ lb/yr}$$

**N-8881-2-0:**

$$PE_{NOx} = (2.83 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 57.6 \text{ lb/day}$$

$$PE_{NOx} = (2.83 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 120 \text{ lb/yr}$$

$$PE_{CO} = (0.67 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 13.6 \text{ lb/day}$$

$$PE_{CO} = (0.67 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 28 \text{ lb/yr}$$

$$PE_{VOC} = (0.075 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 1.5 \text{ lb/day}$$

$$PE_{VOC} = (0.075 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 3 \text{ lb/yr}$$

$$PE_{SOx} = (0.0044 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 0.1 \text{ lb/day}$$

$$PE_{SOx} = (0.0044 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 0 \text{ lb/yr}$$

*The annual SOx emissions were calculated to be 0.2 lb/yr and were rounded to zero per District Policy APR-1105.*

$$PE_{PM10} = (0.10 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(24 \text{ hr/day}) = 2.0 \text{ lb/day}$$

$$PE_{PM10} = (0.10 \text{ g/bhp-hr})(385 \text{ bhp})(\text{lb}/453.6 \text{ g})(50 \text{ hr/yr}) = 4 \text{ lb/yr}$$

**D. Increase in Permitted Emissions (IPE)**

**1. Quarterly IPE**

**N-8881-1-0:**

The emission profile for this ATC will include the following:

	NOx (lb)	SOx (lb)	PM10 (lb)	CO (lb)	VOC (lb)
Annual PE	1,034	1	34	116	109
Daily PE	496.5	0.7	16.1	55.9	52.1
Δ PE (Qtr 1)	258	0	8	29	27
Δ PE (Qtr 2)	258	0	8	29	27
Δ PE (Qtr 3)	259	0	9	29	27
Δ PE (Qtr 4)	259	1	9	29	28

**N-8881-2-0:**

The emission profile for this ATC will include the following:

	NOx (lb)	SOx (lb)	PM10 (lb)	CO (lb)	VOC (lb)
Annual PE	120	0	4	28	3
Daily PE	57.6	0.1	2.0	13.6	1.5
Δ PE (Qtr 1)	30	0	1	7	0
Δ PE (Qtr 2)	30	0	1	7	1
Δ PE (Qtr 3)	30	0	1	7	1
Δ PE (Qtr 4)	30	0	1	7	1

## 2. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine whether or not Best Available Control Technology (BACT) is required for modified units. The units currently under consideration are new, therefore AIPE calculations are not necessary.

## E. Facility Emissions

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

The facility is new, therefore, SSPE1 is zero for each pollutant.

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

SSPE2 (lb/yr)					
Permit #	NOx	CO	VOC	SOx	PM10
N-8881-1-0	1,034	116	109	1	34
N-8881-2-0	120	28	3	0	4
ERC	0	0	0	0	0
Total	1,154	144	112	1	38

### 3. Stationary Source Increase in Permitted Emissions (SSIPE)

$$\text{SSIPE} = \text{SSPE2} - \text{SSPE1}$$

The SSPE1 and SSPE2 balances are from sections VII.E.1 and VII.E.2 of this document.

	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NOx	1,154	0	1,154
CO	144	0	144
VOC	112	0	112
SOx	1	0	1
PM10	38	0	38

### 4. Baseline Emissions

The equipment is new, therefore, the Baseline Emissions are zero for each pollutant.



## F. Major Source Determination

### Rule 2201 Major Source Determination:

The Major Source thresholds, the facility potentials to emit and whether or not the facility is a Major Source are presented on the following table. The Major Source thresholds are from Section 3.23.1. Since no emission reduction credits have been generated at this facility, the post-modification potential to emit is equivalent to the SSPE2.

Pollutant	Threshold (lb/yr)	Facility PE (lb/yr)	Major Source
NOx	20,000	1,154	No
CO	200,000	144	No
VOC	20,000	112	No
SOx	140,000	1	No
PM10	140,000	38	No

### Rule 2410 Major Source Determination:

The equipment currently under consideration is not a source category listed in 40 CFR Part 52.21(b)(1)(i), therefore, the applicable thresholds are those shown on the table below.

Pollutant	Threshold (tons/yr)	Current Facility PE (tons/yr)	Major Source
NOx	250	0	No
CO	250	0	No
VOC	250	0	No
SOx	250	0	No
PM	250	0	No
PM10	250	0	No
CO <sub>2e</sub>	100,000	0	No

## G. Major Modification Determination

### SB-288 Major Modification:

The purpose of SB-288 Major Modification calculations is to determine the following:

If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, §4.1.3); and

If a public notification is triggered (District Rule 2201, §5.4.1).

As shown in section VII.F of this document, the facility is not a Major Source for any pollutant. Therefore, the proposed project cannot trigger an SB-288 Major Modification.

### **Federal Major Modification:**

As shown in section VII.F of this document, the facility is not a Major Source for any pollutant. Therefore, the proposed project cannot trigger a Federal Major Modification.

## **VIII. Compliance**

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

#### **A. 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 two new emergency standby IC engines. Additionally, as shown in Section VII.G, this project does not result in an SB288 Major Modification or a Federal Major Modification. Therefore, BACT can only be triggered if the daily emissions exceed 2.0 lb/day for any pollutant.

The daily emissions from the new engines are compared to the BACT threshold levels in the following tables:

**N-8881-1-0:**

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions for unit -1-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO <sub>x</sub>	496.5	> 2.0	n/a	Yes
CO	55.9	> 2.0 and SSPE2 ≥ 200,000 lb/yr	144	No
VOC	52.1	> 2.0	n/a	Yes
SO <sub>x</sub>	0.7	> 2.0	n/a	No
PM <sub>10</sub>	16.1	> 2.0	n/a	Yes <sup>1</sup>

As shown above, BACT will be triggered for the NO<sub>x</sub>, VOC and PM10 emissions from this engine.

**N-8881-2-0:**

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions for unit -2-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO <sub>x</sub>	57.6	> 2.0	n/a	Yes
CO	13.6	> 2.0 and SSPE2 ≥ 200,000 lb/yr	144	No
VOC	1.5	> 2.0	n/a	No
SO <sub>x</sub>	0.1	> 2.0	n/a	No
PM <sub>10</sub>	2.0	> 2.0	n/a	No <sup>2</sup>

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

**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

<sup>1</sup> As shown in section VIII (Rule 4102 compliance), this unit is also subject to Toxics BACT.

<sup>2</sup> As shown in section VIII (Rule 4102 compliance), this unit is subject to Toxics BACT.

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:

**Unit N-8881-1-0:**

- NO<sub>x</sub>: Latest EPA Tier Certification level for applicable horsepower range
- VOC: Latest EPA Tier Certification level for applicable horsepower range
- PM<sub>10</sub>: 0.15 g/hp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)

The following condition will be included on the ATC to ensure compliance with the PM<sub>10</sub> BACT emissions limit:

- Emissions from this IC engine shall not exceed 0.13 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]

**Unit N-8881-2-0:**

- NO<sub>x</sub>: Latest EPA Tier Certification level for applicable horsepower range
- PM<sub>10</sub>: 0.15 g/hp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)

The following condition will be included on the ATC to ensure compliance with the PM<sub>10</sub> BACT emissions limit:

- Emissions from this IC engine shall not exceed 0.10 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]

**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**

District Rule 2201 section 5.4 requires a public notification for the affected pollutants from the following types of projects:

- a. New Major Sources
- b. Major Modifications

- c. New emission units with a PE > 100 lb/day of any one pollutant (IPE Notifications)
- d. Modifications with SSPE1 below an offset threshold and SSPE 2 above an offset threshold on a pollutant by pollutant basis (Existing Facility Offset Threshold Exceedence Notification)
- e. New stationary sources with SSPE2 exceeding offset thresholds (New Facility Offset Threshold Exceedence Notification)
- f. Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant. (SSIPE Notice)

**a. New Major Source Notice Determination:**

As shown in section VII.F of this document, the facility will not become a Major Source for any pollutant as a result of this modification. A New Major Source Determination notice is not required.

**b. Major Modification Notice:**

The facility is not currently, nor will it become a Major Source as a result of this modification. The modification is therefore not a Major Modification and a Major Modification notice is not required.

**c. PE Notification:**

A notification is required for each new emission unit with the potential to emit more than 100 pounds per day of any one affected pollutant.

As shown in section VII.C.1 of this document, the PE of NO<sub>x</sub> from unit N-8881-1-0 will exceed 100 pounds per day. Therefore, a notification is required.

**d. Existing Facility Offset Threshold Exceedence Notification**

The facility is new, therefore a public notification is not required.

**e. New Facility Offset Threshold Exceedence Notification**

The potential to emit of no pollutant will be in excess of an offset threshold, therefore, a public notification is not required.

**f. SSIPE Notification:**

A notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/yr of any affected pollutant. As shown in section VII.E.3 of this document, the SSIPE of each pollutant will be less than 20,000 pounds per year. An SSIPE notification is not required.

## 2. Public Notice

As shown above, a public notification is required because the project includes a new emission unit with the potential to emit of more than 100 lb/day of NOx.

### D. DAILY EMISSION LIMITS

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.16 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.16.1 and 3.16.2, 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. Therefore, the following conditions will be listed on the ATC to ensure compliance:

#### **N-8881-1-0:**

- Emissions from this IC engine shall not exceed any of the following limits: 4.0 g-NOx/bhp-hr, 0.45 g-CO/bhp-hr, or 0.42 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
- Emissions from this IC engine shall not exceed 0.13 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
- 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]

#### **N-8881-2-0:**

- Emissions from this IC engine shall not exceed any of the following limits: 2.83 g-NOx/bhp-hr, 0.67 g-CO/bhp-hr, or 0.075 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
- Emissions from this IC engine shall not exceed 0.10 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
- 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]

### 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**

As they apply to the equipment currently under consideration, no District rule or policy requires monitoring.

## **3. Record Keeping**

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

## **4. Reporting**

As they apply to the equipment currently under consideration, no District rule or policy requires reporting.

## **F. Ambient Air Quality Analysis**

Section 4.14.1 of this rule requires that an ambient air quality analysis (AAQA) 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 Technical Services Division of the SJVAPCD conducted the required analysis.

As shown by the AAQA summary sheet in Appendix C, the proposed equipment will not cause or make worse a violation of an air quality standard for NO<sub>x</sub>, CO, PM<sub>10</sub>, PM<sub>2.5</sub> or SO<sub>x</sub>.

## **Rule 2410 Prevention of Significant Deterioration**

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:

- NO<sub>2</sub> (as a primary pollutant)
- SO<sub>2</sub> (as a primary pollutant)
- CO
- PM
- PM<sub>10</sub>
- Greenhouse gases (GHG): CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFCs, PFCs, and SF<sub>6</sub>

The first step of this PSD applicability evaluation consists of determining whether the facility is an existing PSD Major Source. This facility is not an existing PSD Major source (See Section VII.F of this document).

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

**Potential to Emit for All Emission Units at the Facility vs PSD Major Source Thresholds:**

As a screening tool, the potential to emit from all new and modified units at the facility is compared to the PSD major source threshold and if the total potential to emit from all new and modified units at the facility 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.

<b>PSD Major Source Determination: Potential to Emit (tons/year)</b>							
	NO <sub>2</sub>	VOC	SO <sub>2</sub>	CO	PM	PM <sub>10</sub>	CO <sub>2e</sub>
Total PE from New and Modified Units	0.58	0.056	0.0005	0.072	0.019	0.019	28.2
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	No	No	No	No	No	No	No

EF<sub>GHG</sub>: 0.000187 metric tons/bhp-hr (CARB greenhouse gas emission factor)  
 Rating: 2346 bhp + 385 bhp = 2,731 bhp  
 Schedule: 50 hr/yr

$$PE_{GHG} = (0.000187 \text{ MT/bhp-hr})(2,731 \text{ bhp})(50 \text{ hr/yr})(2,205 \text{ lb/MT}) \times (\text{ton}/2000 \text{ lb}) = 28.2 \text{ tons/yr}$$

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.

**Rule 2520 Federally Mandated Operating Permits**

Since this facility's potential to emit does not exceed any Major Source thresholds of Rule 2201, this facility is not a Major Source, and Rule 2520 does not apply.

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

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

The proposed engines are subject to the requirements of this subpart. The District has not yet obtained a delegation from EPA to enforce this subpart. Therefore, requirements of this subpart are not listed in the permit at this time.



**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 Emissions (RICE)**

The proposed engines are subject to the requirements of this subpart. The District has not yet obtained a delegation from EPA to enforce this subpart. Therefore, requirements of this subpart are not listed in the permit at this time.

**Rule 4101 Visible Emissions**

As long as the equipment is properly maintained and operated, the visible emissions are not expected to exceed 20% opacity for a period or periods aggregating more than 3 minutes in any one hour. Compliance with the provisions of this rule is expected.

**Rule 4102 Nuisance**

**A. California Health & Safety Code 41700 (Health Risk Analysis)**

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 C.

<b>RMR Results</b>				
Unit	Acute Hazard Index	Chronic Hazard Index	Cancer Risk	T-BACT Required?
N-8881-1-0	N/A	N/A	2.84 in a million	Yes
N-8881-2-0	N/A	N/A	3.84 in a million	Yes

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

**Unit N-8881-1-0:**

- {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]
- Emissions from this IC engine shall not exceed 0.13 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]

- 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. [District Rules 2201 and 4702 and 17 CCR 93115]

**Unit N-8881-2-0:**

- {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]
- Emissions from this IC engine shall not exceed 0.10 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
- 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. [District Rules 2201 and 4702 and 17 CCR 93115]

**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.

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

Each 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 ATCs:

- {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 (NOx), 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 engines are 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, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

## Rule 4702 Internal Combustion Engines

The following table demonstrates how the proposed engine(s) will comply with the requirements of District Rule 4702.

<b>District Rule 4702 Requirements Emergency Standby IC Engines</b>	<b>Proposed Method of Compliance with District Rule 4702 Requirements</b>
Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes, verified through the use of a non-resettable elapsed operating time meter.	The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) limits the engine maintenance and testing to 50 hours/year. Thus, compliance is expected.
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 permits: <ul style="list-style-type: none"> <li>• {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]</li> <li>• {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]</li> </ul>
The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions.	A permit condition enforcing this requirement was shown earlier in the evaluation.
The owner/operator must 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 permits: <ul style="list-style-type: none"> <li>• {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]</li> </ul>
Records of the total hours of operation of the emergency standby engine, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation, and support documentation must be maintained. All	The following conditions will be included on the permit: <ul style="list-style-type: none"> <li>• {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of</li> </ul>

<p>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.</p>	<p>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 Rules 4701, 4702 and 17 CCR 93115]</p> <ul style="list-style-type: none"> <li>• The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]</li> <li>• {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 Rules 4701, 4702 and 17 CCR 93115]</li> </ul>
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### 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

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

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

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

The following table demonstrates how the proposed engine(s) will comply with the requirements of Title 17 CCR Section 93115.

<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>Section 96115.6(a) – Table 1 limits the emissions to the following:</p> <p><b><u>Unit N-8881-1-0:</u></b></p> <p>NMHC + NOx: 4.8 g/bhp-hr CO: 2.6 g/bhp-hr PM: 0.15 g/bhp-hr</p> <p><b><u>Unit N-8881-2-0:</u></b></p> <p>NMHC + NOx: 3.0 g/bhp-hr CO: 2.6 g/bhp-hr PM: 0.15 g/bhp-hr</p>	<p>As shown in section VII.B of this document. The emissions are expected to be:</p> <p><b><u>Unit N-8881-1-0</u></b></p> <p>NMHC + NOx: 4.42 g/bhp-hr CO: 0.45 g/bhp-hr PM: 0.13 g/bhp-hr</p> <p><b><u>Unit N-8881-2-0:</u></b></p> <p>NMHC + NOx: 2.9 g/bhp-hr CO: 0.67 g/bhp-hr PM: 0.10 g/bhp-hr</p>
<p>The engines 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 permits:</p> <ul style="list-style-type: none"> <li>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 Rule 4702 and 17 CCR 93115]</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>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</p>	<p>Permit conditions enforcing these requirements were shown earlier in the evaluation.</p>

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.	
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**California Environmental Quality Act (CEQA)**

The California Environmental Quality Act (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 San Joaquin Valley Unified Air Pollution Control District (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.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval under the District's Guideline for Expedited Application Review (GEAR). Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

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

The equipment will not be located within 1,000 feet of a K-12 school, therefore, a school notice is not required.

**IX. Recommendation**

Issue Authorities-to-Construct subject to the conditions on the attached draft Authorities to Construct.

**X. Billing Information**

Permit #	Description	Fee Schedule
N-8881-1-0	2,346 bhp	3020-10-F
N-8881-2-0	385 bhp	3020-10-C

## **Appendices**

Appendix A: Draft ATC

Appendix B: BACT Guideline and BACT Analysis

Appendix C: HRA and AAQA Summaries

Appendix D: Emission Data Sheets

## **Appendix A**

### **Draft ATC**



San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

**DRAFT**

PERMIT NO: N-8881-1-0

LEGAL OWNER OR OPERATOR: PROLOGIS  
MAILING ADDRESS: 17284 N COMMERCE WAY  
TRACY, CA 95377

LOCATION: 1555 N CHRISMAN RD  
TRACY, CA

EQUIPMENT DESCRIPTION:  
2,346 BHP MITSUBISHI MODEL S16R-Y2PTAW-1 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC  
ENGINE 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. {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]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {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]
5. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rules 4701 and 4702 and 17 CCR 93115]
6. 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]
7. Emissions from this IC engine shall not exceed any of the following limits: 4.0 g-NOx/bhp-hr, 0.45 g-CO/bhp-hr, or 0.42 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
8. Emissions from this IC engine shall not exceed 0.13 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
9. 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]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 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**

DAVID WARNER, Director of Permit Services  
N-8881-1-0 : Jan 12 2013 1:28PM -- SCHOINHOM : Joint Inspection NOT Required

10. {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]
11. {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]
12. 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 Rule 4702 and 17 CCR 93115]
13. 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 Rules 4701, 4702 and 17 CCR 93115]
14. {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]
15. U.S. EPA administers the requirements of 40 CFR Part 60 Subpart IIII and 40 CFR Part 63 Subpart ZZZZ. The owner or operator shall comply with the emission and operating limitations, testing requirements, initial and continuous compliance requirements as specified in these subparts. The owner or operator shall submit all applicable notifications, reports, and records to the administrator by the required compliance dates. [District Rules 4001 and 4002]

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-8881-2-0

LEGAL OWNER OR OPERATOR: PROLOGIS  
MAILING ADDRESS: 17284 N COMMERCE WAY  
TRACY, CA 95377

LOCATION: 1555 N CHRISMAN RD  
TRACY, CA

EQUIPMENT DESCRIPTION:  
385 BHP JOHN DEERE MODEL 6090HF484 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE  
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. {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]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {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]
5. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rules 4701 and 4702 and 17 CCR 93115]
6. 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]
7. Emissions from this IC engine shall not exceed any of the following limits: 2.83 g-NOx/bhp-hr, 0.67 g-CO/bhp-hr, or 0.075 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
8. Emissions from this IC engine shall not exceed 0.10 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115]
9. 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]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 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**  
DAVID WARNER, Director of Permit Services  
N-8881-2-0: Jun 12 2019 1:28PM -- ECHOHOM : Joint Inspection NOT Required

10. {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]
11. {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]
12. 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 Rule 4702 and 17 CCR 93115]
13. 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 Rules 4701, 4702 and 17 CCR 93115]
14. {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]
15. U.S. EPA administers the requirements of 40 CFR Part 60 Subpart IIII and 40 CFR Part 63 Subpart ZZZZ. The owner or operator shall comply with the emission and operating limitations, testing requirements, initial and continuous compliance requirements as specified in these subparts. The owner or operator shall submit all applicable notifications, reports, and records to the administrator by the required compliance dates. [District Rules 4001 and 4002]

**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: 7/10/2009**  
**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/hp-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		

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.

**BACT Determination  
Unit N-8881-1-0 (2,346 bhp)**

## Top Down BACT Analysis for the Emergency IC Engine

BACT Guideline 3.1.1 (July 10, 2009) 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 VOC 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 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
- 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(s) do not meet the definition of a nonroad engine. Therefore, only Title 17 CCR, Section 93115 and 40 CFR Part 60 Subpart IIII apply directly to the proposed emergency engine(s).

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). Please note that these levels are at least as stringent or more stringent than the emission levels in 40 CFR Subpart IIII.



<b>Table 1: Emission Standards for New Stationary Emergency Standby Diesel-Fueled CI Engines g/bhp-hr (g/kW-hr)</b>					
<b>Maximum Engine Power</b>	<b>Tier</b>	<b>Model Year(s)</b>	<b>PM</b>	<b>NMHC+NOx</b>	<b>CO</b>
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+			

Additionally, 40 CFR Subpart IIII establishes emission standards for emergency diesel IC engines. These emission standards are the same as those specified in the CARB ATCM, except for engines rated greater than or equal to 50 and less than 75 hp. For such IC engines, the CARB ATCM is more stringent.

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 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 2,346 hp. Therefore, the applicable control technology option is EPA Tier 2 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 NOx and VOC will be the use of an EPA Tier 2 certified engine. The applicant is proposing such a unit. Therefore, BACT will be satisfied.

**2. BACT Analysis for PM<sub>10</sub> Emissions:**

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

BACT Guideline 3.1.1 identifies only the following option:

- *0.15 g/bhp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)*

The latest EPA Tier Certification level for an engine of the proposed model year and horsepower rating is Tier 2. Refer to the Top-Down BACT analysis for NOx for a discussion regarding the determination of the EPA Tier level to be considered.

Please note Tier 2 or 3 IC engines do not have a PM emission standard that is more stringent than 0.15 g/hp-hr. Additionally, the ATCM requires a PM emission standard of 0.15 g/hp-hr for all new emergency diesel IC engines.

Therefore, a PM/PM10 emission standard of 0.15 g/hp-hr is required as BACT.

**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 PM10 is emissions of 0.15 g/hp-hr or less. The applicant is proposing an engine that meets this requirement. Therefore, BACT will be satisfied.

**BACT Determination  
Unit N-8881-2-0 (385 bhp)**

# San Joaquin Valley Unified Air Pollution Control District

**Best Available Control Technology (BACT) Guideline 3.1.1**  
**Last Update: 7/10/2009**  
**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/hp-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		

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 (July 10, 2009) 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> 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 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
- 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(s) do not meet the definition of a nonroad engine. Therefore, only Title 17 CCR, Section 93115 and 40 CFR Part 60 Subpart IIII apply directly to the proposed emergency engine(s).

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). Please note that these levels are at least as stringent or more stringent than the emission levels in 40 CFR Subpart IIII.

<b>Maximum Engine Power</b>	<b>Tier</b>	<b>Model Year(s)</b>	<b>PM</b>	<b>NMHC+NOx</b>	<b>CO</b>
50 ≤ HP < 75 (37 ≤ kW < 56)	2	2007	0.15 (0.20)	5.6 (7.5)	3.7 (5.0)
	4i	2008+		3.5 (4.7)	
75 ≤ HP < 100 (56 ≤ kW < 75)	2	2007	0.15 (0.20)	5.6 (7.5)	3.7 (5.0)
	3	2008+		3.5 (4.7)	
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+			

Additionally, 40 CFR Subpart IIII establishes emission standards for emergency diesel IC engines. These emission standards are the same as those specified in the CARB ATCM, except for engines rated greater than or equal to 50 and less than 75 hp. For such IC engines, the CARB ATCM is more stringent.

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 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 385 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> will be the use of an EPA Tier 3 certified engine. The applicant is proposing such a unit. Therefore, BACT will be satisfied.

### **2. BACT Analysis for PM<sub>10</sub> Emissions:**

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

BACT Guideline 3.1.1 identifies only the following option:

- *0.15 g/bhp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)*

The latest EPA Tier Certification level for an engine of the proposed model year and horsepower rating is Tier 3. Refer to the Top-Down BACT analysis for NO<sub>x</sub> for a discussion regarding the determination of the EPA Tier level to be considered.

Please note Tier 2 or 3 IC engines do not have a PM emission standard that is more stringent than 0.15 g/hp-hr. Additionally, the ATCM requires a PM emission standard of 0.15 g/hp-hr for all new emergency diesel IC engines.

Therefore, a PM/PM<sub>10</sub> emission standard of 0.15 g/hp-hr is required as BACT.

#### **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 PM10 is emissions of 0.15 g/hp-hr or less. The applicant is proposing an engine that meets this requirement. Therefore, BACT will be satisfied.

**Appendix C**  
**RMR and AAQA Summaries**

## San Joaquin Valley Air Pollution Control District Risk Management Review

To: Mark Schonhoff - Permit Services  
 From: Cheryl Lawler - Permit Services  
 Date: June 10, 2013  
 Facility Name: Prologis  
 Location: 1555 N. Chrisman Road, Tracy  
 Application #(s): N-8881-1-0 & 2-0  
 Project #: N-1131728

### A. RMR SUMMARY

RMR Summary				
Categories	Emergency Diesel ICE (Unit 1-0)	Emergency Diesel ICE (Unit 2-0)	Project Totals	Facility Totals
Prioritization Score	N/A <sup>1</sup>	N/A <sup>1</sup>	N/A <sup>1</sup>	>1
Acute Hazard Index	N/A <sup>2</sup>	N/A <sup>2</sup>	N/A <sup>2</sup>	0.00
Chronic Hazard Index	N/A <sup>2</sup>	N/A <sup>2</sup>	N/A <sup>2</sup>	0.00
Maximum Individual Cancer Risk	2.84E-06	3.80E-06	6.64E-06	6.64E-06
T-BACT Required?	Yes – PM10	Yes – PM10		
Special Permit Conditions?	Yes	Yes		

- 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 Conditions

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

#### Unit 1-0

1. The PM10 emissions rate shall not exceed 0.13 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
2. 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]
3. 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 Rule 4702 and 17 CCR 93115]

**Unit 2-0**

1. The PM<sub>10</sub> emissions rate shall not exceed **0.10 g/bhp-hr** based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
2. 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]
3. 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 Rule 4702 and 17 CCR 93115]

**B. RMR REPORT****I. Project Description**

Technical Services received a request on June 6, 2013, to perform an Ambient Air Quality Analysis (AAQA) and a Risk Management Review (RMR) for two emergency diesel IC engines.

**II. Analysis**

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

The following parameters were used for the review:

<b>Analysis Parameters Unit 1-0</b>			
<b>Source Type</b>	<b>Point</b>	<b>Location Type</b>	<b>Rural</b>
<b>BHP</b>	2346	<b>PM<sub>10</sub> g/hp-hr</b>	0.13
<b>Closest Receptor (m)</b>	30.48	<b>Quad</b>	2
<b>Max Hours per Year</b>	50	<b>Type of Closest Receptor</b>	Business

<b>Analysis Parameters Unit 2-0</b>			
<b>Source Type</b>	<b>Point</b>	<b>Location Type</b>	<b>Rural</b>
<b>BHP</b>	385	<b>PM<sub>10</sub> g/hp-hr</b>	0.10
<b>Closest Receptor (m)</b>	30.48	<b>Quad</b>	2
<b>Max Hours per Year</b>	50	<b>Type of Closest Receptor</b>	Business

Technical Services also performed modeling for criteria pollutants NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>; as well as the RMR. For Unit 1-0, the emission rates used for criteria pollutant modeling were 1034 lb/yr NO<sub>x</sub>, 1 lb/yr SO<sub>x</sub>, 34 lb/yr PM<sub>10</sub>, and 34 lb/yr PM<sub>2.5</sub>. For Unit 2-0, the emission rates used for criteria pollutant modeling were 120 lb/yr NO<sub>x</sub>, 0.2 lb/yr SO<sub>x</sub>, 4 lb/yr PM<sub>10</sub>, and 4 lb/yr PM<sub>2.5</sub>.

The results from the Criteria Pollutant Modeling are as follows:

**Criteria Pollutant Modeling Results\***

Diesel ICes	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	NA <sup>1</sup>	X	NA <sup>1</sup>	X	X
NO <sub>x</sub>	NA <sup>1</sup>	X	X	X	Pass
SO <sub>x</sub>	NA <sup>1</sup>	NA <sup>1</sup>	X	NA <sup>1</sup>	Pass
PM <sub>10</sub>	X	X	X	NA <sup>1</sup>	Pass <sup>2</sup>
PM <sub>2.5</sub>	X	X	X	NA <sup>1</sup>	Pass <sup>2</sup>

\*Results were taken from the attached PSD spreadsheet.

<sup>1</sup>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.

<sup>2</sup>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 cancer risk associated with the operation of each proposed diesel IC engine is greater than 1.0 in a million. In accordance with the District's Risk Management Policy, each engine is approved with Toxic Best Available Control Technology (T-BACT) for PM10.

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 each 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.

**Attachments:**

- RMR Request Form
- Project Email
- DICE Screening Risk Tool Results
- AAQA Results
- Facility Summary

## **Appendix D**

### **Emission Data Sheets**

N-0881-1-0

# KOHLER. POWER SYSTEMS

## 1600REOZMD 60 HZ, DIESEL INDUSTRIAL GENERATOR SET EMISSION DATA SHEET

ENGINE INFORMATION			
Model:	Mitsubishi, S16R-Y2PTAW-1	Bore:	170mm (6.69 in.)
Nameplate BPH @ 1800 RPM:	2346	Stroke:	180mm (7.09 in.)
Type:	4-Cycle, 16-V Cylinder	Displacement:	65.4 L (3989 cu. in.)
Aspiration:	Turbocharged	EPA Family:	DMVXL65.4BBB
Compression Ratio	14.5:1	EPA Certificate	DMVXL65.4BBB-005
Emission Control Device	Turbocharged and after cooled		

PERFORMANCE DATA:	Table 1			
	1/4 Standby	1/2 Standby	3/4 Standby	Full Standby
Engine bkW @ Stated Load	438.00	845.00	1313.00	1750.00
Fuel Consumption (g/kWh)	258.00	233.00	229.00	235.00
Exhaust Gas Flow (m³/s)				7.38
Exhaust Temperature (°C)				505.00

  

EXHAUST EMISSION DATA:	Table 2 EPA CERTIFICATE DATA
	HC (Total Unburned Hydrocarbons)
NOx (Oxides of Nitrogen as NO2)	5.36
CO (Carbon Monoxide)	0.60
PM (Particulate Matter)	0.17

Values are in g/kWh

TEST METHODS AND CONDITIONS	
Data was recorded during steady-state rated engine speed ( $\pm 25$ RPM) with full load ( $\pm 2\%$ ). Pressures, temperatures, and emission rates were stabilized	
Fuel Spec	Type 2-D and ASTM D975 No.2D
Fuel Temperature	37 $\pm$ 10 °C
Intake Temperature	25 °C
Barometric Pressure	100 kPa (29.6 in Hg)
Relative Humidity	30 %
Standard	ISO 8178
The emission data here were taken from a single engine under the test condition shown above. These data are subjected to instrumentation and engine to engine variability.	

Data and specifications subject to change without notice  
For further information, please contact MENA, 630-268-0750

N-0001-2-0

# KOHLER. POWER SYSTEMS

## 250REOZJE

### 60 HZ. DIESEL INDUSTRIAL GENERATOR SET EMISSION DATA SHEET

#### ENGINE INFORMATION

Model:	John Deere, 6090HF484B	Bore:	118.4mm (4.66 in.)
Nameplate BPH @ 1800 RPM:	385	Stroke:	136mm (5.35 in.)
Type:	4-Cycle, 6 Cylinder, Inline	Displacement:	9.0 L (548 cu. in.)
Aspiration:	Turbocharged, Charge Air-Cooled	EPA Family:	DJDXL09.0114
Compression Ratio	16.0:1	EPA Certificate:	DJDXL09.0114-019

#### PERFORMANCE DATA:

Engine bkW @ Stated Load  
Fuel Consumption (g/kWh)  
Exhaust Gas Flow (m<sup>3</sup>/min)  
Exhaust Temperature (°C)

1/4 Standby	1/2 Standby	3/4 Standby	Full Standby
72.50	145.00	217.50	290.00
247.10	247.80	231.50	200.10
			54.10
			625.00

#### EXHAUST EMISSION DATA:

HC (Total Unburned Hydrocarbons)  
NOx (Oxides of Nitrogen as NO2)  
CO (Carbon Monoxide)  
PM (Particular Matter)

0.1
3.8
0.9
0.14

Values are in g/kWh unless otherwise noted

#### TEST METHODS AND CONDITIONS

The EPA Certificate Data in Table 2 is a weighted average value per ISO 8528 D2.

Data and specifications subject to change without notice

For further information, please contact Todd Loes at John Deere Power Systems, 319-292-6050