San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUN 0 2 2011

Douglas Smith
City of Stockton
1465 S. Lincoln Street
Stockton, CA 95206

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1110422

Dear Mr. Smith:

Enclosed for your review and comment is the District's analysis of City of Stockton's application for Authority to Construct permits for two 757 hp Volvo Model TAD1641GE (Tier 2 Certified) diesel-fired emergency standby IC engines each powering electric generators, at 22 E. Weber Avenue in Stockton, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Kai Chan of Permit Services at (209) 557-6451.

Sincerely,

David Warner
Director of Permit Services

DW:kc/st

Enclosures

CC: Jacque Wallingford
Comgen Construction, Inc.
P.O. Box 5427
Stockton, CA 95205

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUN 0 2 2011

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1110422

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of City of Stockton's applications for Authority to Construct permits for two 757 hp Volvo Model TAD1641GE (Tier 2 Certified) diesel-fired emergency standby IC engines each powering electric generators, at 22 E. Weber Avenue in Stockton, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Kai Chan of Permit Services at (209) 557-6451.

Sincerely,

David Warner
Director of Permit Services

DW:kc/st

Enclosure

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

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

www.valleyair.org www.healthyairliving.com

Stockton Record
Stockton Record

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct permits to City of Stockton for two 757 hp Volvo Model TAD1641GE (Tier 2 Certified) diesel-fired emergency standby IC engines each powering electric generators, at 22 E. Weber Avenue in Stockton, CA.

The analysis of the regulatory basis for this proposed action, Project #N-1110422, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-8718.**

Authority to Construct
Application Review
Diesel Fired Emergency Standby I.C. Engines

Date: May 13, 2011

Facility Name:	City of Stockton
Mailing Address:	1465 S. Lincoln Street Stockton, CA 95206
Facility Contact:	Douglas Smith
Phone Number:	(209) 937-7144
Project Consultant:	Jacque Wallingford
Phone Number:	(209) 462-2292
Project Engineer:	Kai Chan
Lead Engineer:	Nick Peirce
Project Number:	N-1110422
Permit Numbers:	N-4899-2-0 & N-4899-3-0
Deemed Complete:	March 31, 2011

I. Proposal

City of Stockton (Stockton Police Dispatch Center) is proposing to permit two 757 hp Volvo Model TAD1641GE (Tier 2 certified) diesel-fired emergency standby internal combustion (IC) engines each powering an electric generator.

II. Applicable Rules

Rule 2010 Permits Required (12/17/92)
Rule 2201 New and Modified Stationary Source Review Rule (12/18/08)
Rule 2520 Federally Mandated Operating Permits (06/21/01)
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 Internal Combustion Engines – Phase 1 (08/21/03)
Rule 4702 Internal Combustion Engines – Phase 2 (1/18/07)
Rule 4801 Sulfur Compounds (12/17/92)
California Health & Safety Code 41700 - Health Risk Assessment
California Health & Safety Code 42301.6 - School Notice
Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines
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 will be located at 22 E. Weber Avenue in Stockton, CA. This facility and associated equipment are located within 1,000 feet of the outer boundary of Weber Institute at 302 W. Weber Avenue, which is a K-12 school. The following schools are also located within ¼ mile of the facility: (a). Stockton Alternative High School at 22 S. Van Buren Street; (b). Stockton Collegiate International Secondary School at 445 W. Weber Avenue, Ste 128. Therefore, pursuant to CH&SC 42301.6, California Health and Safety Code (School Notice), public notification is required.

IV. Process Description

The City of Stockton operates a police dispatch center at this location. The proposed 757 hp engines each power an emergency standby electric generator. Other than emergency operation, the engine may be operated up to 50 hours per year for maintenance and testing purposes.

V. Equipment Listing

N-4899-2-0 & N-4899-3-0:

757 hp Volvo Model TAD1641GE (Tier 2 certified) diesel-fired emergency standby internal combustion (IC) engine powering an electric generator.

VI. Emission Control Technology Evaluation

N-4899-2-0 & N-4899-3-0:

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

The proposed engines meet 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 B for a copy of the manufacturer's emissions data sheet).

The use of very low-sulfur (0.0015% by weight sulfur maximum) diesel fuel reduces SO_x emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

N-4899-2-0 & N-4899-3-0:

Emergency Operating Schedule:	24 hours/day
Non-Emergency Operating Schedule:	50 hours/year
Density of diesel fuel:	7.1 lb/gal
Fuel Consumption Rate:	62.5 gal/hr @ 100% load
Sulfur Content of Fuel:	0.0015% by weight

B. Emission Factors

N-4899-2-0 & N-4899-3-0:

Emission factors for the combustion of diesel fuel from the I.C. engine for NOx + VOC, CO, and PM_{10} emissions will be based on emission factors from the engine manufacturer. The SOx emission factor will be determined using mass balance with a maximum sulfur content of 0.0015% by weight.

EF_{SOx} = 0.000015 lbm S/lbm fuel × 7.1 lbm fuel/gal fuel × 453.6 g/lbm × 2 lbm SO_2 exhaust/1 lbm S in fuel × 62.5 gal/hr × 1/757 hp
= **0.008 g/hp-hr**

The applicant has only supplied an emissions factor for NO_X and VOC emissions combined. For the 757 bhp Tier 2 certified IC engine the engine manufacturer supplied a NO_X + VOC emission factor of 4.0 g/bhp-hr. It will be assumed the NOx + VOC emission factor is split 95% NOx and 5% VOC (per the District's Carl Moyer program). Therefore, the NO_X and VOC emissions factors for this engine are calculated as follows:

$EF2_{NOx}$ (g/bhp-hr) = NO_X + VOC (g/bhp-hr) x 0.95
= 4.0 g/bhp-hr x 0.95
= **3.8 g/bhp-hr**

$EF2_{VOC}$ (g/bhp-hr) = NO_X + VOC (g/bhp-hr) x 0.05
= 4.0 g/bhp-hr x 0.05
= **0.2 g/bhp-hr**

Pollutant	Emission Factors
NOx	**3.8 g/hp-hr**
CO	**0.5 g/hp-hr**
VOC	**0.2 g/hp-hr**
PM_{10}	**0.08 g/hp-hr**
SOx	**0.008 g/hp-hr**

C. Potential to Emit Calculations (PE)

1. Pre-Project Potential Emissions (PE1):

N-4899-2-0 & N-4899-3-0:

Since these are new permit units, the daily and annual pre-project potential to emit (PE1) for the emission units associated with these permit units are equal to zero.

2. Post-Project Potential to Emit (PE2):

N-4899-2-0 & N-4899-3-0:

Daily PE2:

Emissions due to the combustion of diesel fuel from each I.C. Engine:
The daily potential to emit for each emergency IC engine is based on the maximum proposed operating limit of 24 hours per day. Therefore:

Daily $PE2_{N-4899-2-0\ \&\ -3-0}$ = Emission Factor (g/hp-hr) × 757 hp × 24 hr/day × 1 lbm/453.6 g

Pollutant	Emission Factor (g/hp-hr)	Daily $PE2_{N-4899-2-0\ \&\ -3-0}$ (lb/day)
NOx	4.0	**160.2**
CO	0.5	**20.0**
VOC	0.2	**8.0**
PM_{10}	0.08	**3.2**
SOx	0.008	**0.3**

Annual PE2:

The Annual PE for each emergency IC engine is based on the maximum operating capacity of the engine for 50 hours per year (maximum non-emergency use for an emergency standby engine powering an electric generator). Therefore:

Annual $PE2_{N-4899-2-0\ \&\ -3-0}$ = Emission Factor (g/hp-hr) × 757 hp × 50 hr/year × 1 lbm/453.6g

Pollutant	Emission Factor (g/hp-hr)	Annual $PE2_{N-4899-2-0\ \&\ -3-0}$ (lb/year)
NOx	4.0	**334**
CO	0.5	**42**
VOC	0.2	**17**
PM_{10}	0.08	**7**
SOx	0.008	**1**

D. Increase in Permitted Emissions (IPE)

N-4899-2-0 & N-4899-3-0:

1. Quarterly IPE

Quarterly IPE calculations are only required to complete the emission profile for this emission unit. The following calculation is representative of the quarterly IPE calculations for all criteria pollutants:

Quarterly $IPE_{N-4899-2-0\ \&\ -3-0}$ = Annual PE2 ÷ 4 Quarters/year

Pollutant	Quarterly $IPE_{N-4899-2-0\ \&\ -3-0}$ (lb/quarter)
NOx	**83.5**
CO	**10.5**
VOC	**4.25**
PM_{10}	**1.75**
SOx	**0.25**

2. Adjusted Increase in Permitted Emissions (AIPE)

The AIPE is used to determine if BACT is required for emissions units that are being modified. These diesel fired I.C. engines are new emission units. Therefore, the BACT requirements are based on the daily PE2 values calculated above and AIPE calculations are not necessary.

E. Facility Emissions

N-4899-2-0 & N-4899-3-0:

1. 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 (lb/yr)[1]				
Permit Number	NOx	CO	VOC	PM_{10}	SOx
N-4899-1-0	59	14	2	2	2
Total	**59**	**14**	**2**	**2**	**2**
Major Source Threshold Levels	**20,000**	**200,000**	**20,000**	**140,000**	**140,000**
Existing Major Source	NO	NO	NO	NO	NO

2. 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.

[1] Except as noted, Annual PE1 for these permit units were obtained from Project #N-1030214.

	SSPE2 (lb/yr)				
Permit Number	NOx	CO	VOC	PM_{10}	SOx
N-4899-1-0	59	14	2	2	2
N-4899-2-0 (ATC)	334	42	17	7	1
N-4899-3-0 (ATC)	334	42	17	7	1
Total	**727**	**98**	**36**	**16**	**4**
Major Source Threshold Levels	**20,000**	**200,000**	**20,000**	**140,000**	**140,000**
New Major Source	NO	NO	NO	NO	NO

3. Baseline Emissions

There are no Baseline Emissions (BE) for the new emissions unit associated with this project. Therefore, BE is equal to zero for all pollutants.

4. Stationary Source Increase in Permitted Emissions (SSIPE)

SSIPE is used to determine if a project triggers public notification (District Rule 2201, Section 5.4.5). District practice is to define this as follows:

SSIPE (for any one pollutant) = SSPE2 - SSPE1

Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)
NOx	727	59	**668**
CO	98	14	**84**
VOC	36	2	**34**
PM_{10}	16	2	**14**
SOx	4	2	**2**

F. SB-288 Major Modification:

N-4899-2-0 & N-4899-3-0:

Based on the pre and post-project stationary source potential to emit calculations (less onsite Emission Reduction Credit's) in Sections VII.E.1 and VII.E2. of this document, the facility is not a Major Source for any pollutant. Therefore, the proposed project cannot trigger an SB-288 Major modification, and no further calculations are required.

H. Federal Major Modification:

N-4899-2-0 & N-4899-3-0:

Based on the post-project stationary source potential to emit calculations in Section VII.E.2. of this document, the facility is not a Major Source for any pollutant. Therefore, the proposed project cannot trigger a Major Modification and no further calculations are required.

VIII. Compliance

Rule 2201 - New and Modified Stationary Source Review Rule

N-4899-2-0 & N-4899-3-0:

A. Best Available Control Technology (BACT)

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT is required for the following actions: (1) Any new emissions unit with a potential to emit exceeding 2.0 pounds in any one day, (2) The relocation of an existing emissions unit from one stationary source to another with a potential to emit exceeding 2.0 pounds in any one day, (3) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds in any one day, and (4) Any new or modified emissions unit, in a stationary source project, which results in an SB-288 Major Modification or Federal Major Modification as defined in this rule. If the post project Stationary Source Potential to Emit (SSPE2) for Carbon Monoxide is less than 200,000 pounds per year, BACT is not required for Carbon Monoxide.

Best Available Control Technology (BACT) for Permit Units N-4899-2-0 and N-4899-3-0:

1. Applicability:

According to the daily PE calculations performed in the Section VII.C.2. above, the applicant is proposing to permit new emission units, which will result in a daily PE greater than 2.0 lb/day for NOx, CO, VOC, and PM_{10} emissions. However, the SSPE2 for CO is less than 200,000 lb/yr. Therefore, BACT will only be triggered for NOx, VOC, and PM_{10}.

2. BACT Policy:

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 steps may be simply cited from the Clearinghouse without further analysis.

The District's current BACT Clearinghouse Guideline 3.1.1, covers emergency diesel fired I.C. engines (See Appendix C). Therefore, relevant information will be cited from the referenced BACT Guideline without further analysis.

3. **Top Down BACT Analysis:**

NOx Emissions:

Step 1 - Identify all Practically Applicable Control Technologies:

The SJVUAPCD BACT Clearinghouse guideline 3.1.1 identifies the achieved in practice BACT for NOx emissions from an emergency diesel IC engine as follows:

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

No control alternatives are listed as technologically feasible BACT or alternate basic equipment for NOx emissions in this class and category of source.

To determine the latest applicable tier level, the following EPA 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

Only 40 CFR Part 60 Subpart IIII applies directly to the stationary emergency engine currently under consideration. 40 CFR Parts 89 and 1039, which apply only to nonroad engines, do not directly apply because the unit does not meet the definition of nonroad engine.

Since it is the only directly applicable EPA regulation that would set emission standards for such a unit, Subpart IIII was consulted for the purpose of determining the latest applicable tier standard. Per section 60.4205(b), the engine must meet the standard established in section 60.4202 for the same model year and horsepower rating. Section 60.4202(a)(2), requires such units to meet the standards specified in 40 CFR 89.112 and 40 CFR 89.113 for the same model year and power rating. Section 89.112 states that the applicable certification level for 2006 and later model year engines rated at over 751 bhp is Tier 2. Part 89.113 does not set a tier standard so it need not be considered at this time.

Since Subpart IIII is the only directly applicable EPA regulation and it does not reference Part 1039 (which directly applies only to manufacturers of nonroad engines), Part 1039 will not be considered.

The list of practically applicable control options is therefore:

- - *EPA Tier 2 Certified Engine*

Step 2 - Eliminate technologically infeasible options:

There are no technologically infeasible options to eliminate from step 1.

Step 3 - Rank remaining options by control effectiveness:

1) EPA Tier 2 Certified Engine (Achieved In Practice BACT).

Step 4 - Cost effectiveness analysis

A cost effective analysis must be performed for all control options in the list from Step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

The only remaining control technology alternative in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

Step 5 - Select BACT:

BACT for NOx emissions is the use of an IC engine with an EPA Tier 2 certified engine. The applicant has proposed to install a Tier 2 certified 757 hp emergency standby diesel IC engine. Therefore, BACT for NOx emissions is satisfied.

VOC Emissions:

Step 1 - Identify all control technologies:

- *EPA Tier 2 Certified Engine*

Refer to the Top-Down BACT analysis for NOx emissions for a discussion regarding the determination of the EPA tier level to be considered.

Step 2 - Eliminate technologically infeasible options:

There are no technologically infeasible options to eliminate from step 1.

Step 3 - Rank remaining options by control effectiveness:

1) EPA Tier 2 Certified Engine (Achieved In Practice BACT).

Step 4 - Cost effectiveness analysis

A cost effective analysis must be performed for all control options in the list from Step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

The only remaining control technology alternative in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

Step 5 - Select BACT:

BACT for VOC emissions is the use of an IC engine with an EPA Tier 2 certified engine. The applicant has proposed to install a Tier 2 certified 757 hp emergency standby diesel IC engine. Therefore, BACT for VOC emissions is satisfied.

PM_{10} Emissions:

Step 1 - Identify all control technologies:

- *- EPA Tier 2 Certified engine or PM_{10} emissions of 0.15 g/bhp-hr, which ever is more stringent.*

Refer to the Top-Down BACT analysis for NOx emissions for a discussion regarding the determination of the EPA tier level to be considered.

As shown in 40 CFR Part 89.112, the EPA Tier 2 standard for a unit with the proposed horsepower rating is 0.20 g/kW-hr (equivalent to 0.15 g/bhp-hr). Therefore, the options are equivalent.

The list of practically applicable control options is therefore:

- *- PM_{10} Emissions of 0.15 g/bhp-hr or less.*

Step 2 - Eliminate technologically infeasible options:

There are no technologically infeasible options to eliminate from step 1.

Step 3 - Rank remaining options by control effectiveness:

1) PM_{10} emissions of 0.15 g/bhp-hr or less (Achieved In Practice BACT).

Step 4 - Cost effectiveness analysis

A cost effective analysis must be performed for all control options in the list from Step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

The only remaining control technology alternative in the ranking list from Step 3 has been achieved in practice. Therefore, per the District's BACT Policy (dated 11/9/99) Section IX.D.2, the cost effectiveness analysis is not required.

Step 5 - Select BACT:

BACT for PM_{10} emissions is the use of an IC engine that will emit PM_{10} at 0.15 g/bhp-hr or less. The applicant has proposed to install an EPA Tier 2 certified 757 hp emergency standby diesel IC engine with PM_{10} emissions of 0.08 g/bhp-hr. Therefore, BACT for PM_{10} emissions is satisfied.

B. Offsets

1. Offset Applicability

Since emergency internal combustion engines are exempt from the offset requirements of District Rule 2201 (Section 4.6.2), offsets are not required for this engine. Therefore, offset calculations are not necessary and will not be performed for this project.

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. SB 288 and Federal 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 SSPE2 above an offset threshold on a pollutant by pollutant basis (Existing Facility Offset Threshold Exceedance Notification).
e. New stationary sources with SSPE2 exceeding offset thresholds (New Facility Offset Threshold Exceedance Notification).
f. Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant. (SSIPE Notice).

a. New Major Source

A New Major Source is a new facility, which is also a major source. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. SB-288 and Federal Major Modifications

As stated in Sections VII.F. and VII.G., this project does not trigger an SB-288 or Federal Major Modification; therefore, public noticing for SB-288 or Federal Major Modification purposes are not required.

c. PE > 100 lb/day

As indicated in Section VII.C.2., the proposed project will result in the installation of new emission units each with a Potential to Emit (PE) greater than 100 pounds during any one day only for NOx emissions. Therefore, public noticing will be required for PE > 100 lb/day purposes.

d. Existing Facility - Offset Threshold Notification

The following table compares the SSPE1 with the SSPE2 to the offset thresholds in order to determine if any offset thresholds have been reached or surpassed with this project.

Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold (lb/year)	Public Notice Required?
NOx	59	727	**20,000**	**No**
CO	14	98	**200,000**	**No**
VOC	2	36	**20,000**	**No**
PM_{10}	2	16	**29,200**	**No**
SOx	2	4	**54,750**	**No**

Therefore, public noticing is not required for this project for reaching or surpassing the offset thresholds.

e. New Facility – Offset Threshold Notification

This is an existing facility. This section does not require a public notification.

f. SSIPE > 20,000 lb/year

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.4. of this document, the SSIPE for all affected pollutants will be less than 20,000 pounds per year. Therefore, a SSIPE notification is not required.

2. Public Notice Action

As demonstrated above, this project will require public noticing. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATCs for these equipment.

D. Daily Emissions Limits

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

- - *{Edited 4259} Emissions from this IC engine shall not exceed any of the following limits: 3.8 g-NOx/bhp-hr, 0.5 g-CO/bhp-hr, or 0.2 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]*

- *{Edited 4260} Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]*

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

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

E. Compliance Assurance

The following measures shall be taken to ensure continued compliance with District Rules.

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required for emergency IC engines powering an electric generator.

2. Monitoring

There are no monitoring requirements for emergency standby IC engines powering an electric generator.

3. Record Keeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. As required by District Rule 4702 (Stationary Internal Combustion Engines - Phase 2) this IC engine is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

4. Reporting

There are no reporting requirements for emergency standby IC engines powering an electric generator.

F. Ambient Air Quality Analysis

Section 4.14.1 of Rule 2201 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 a State or National ambient air quality standard (AAQS). An AAQA will be performed for all New Source Review (NSR) public notice projects. As previously discussed this project requires that a public notice be performed prior to the issuance of an ATC. The Technical Services Division of the SJVAPCD conducted the required analysis. Refer to Appendix D of this document for the AAQA summary sheet.

The results from Criteria Pollutant Modeling are as follows:

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NOx	Pass[2]	X	X	X	Pass
SOx	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[1]	Pass[1]

1. The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
2. The project was compared the 1-hour NO_2 National Ambient Air Quality Standard that became effective on April 12, 2010, using the District's approved procedures. A completed AERMOD Non-Regulatory Option checklist is attached.

The Criteria Pollutant Modeling runs indicate that the emissions from the proposed equipment will not cause or significantly contribute to a violation of the State or National AAQS.

Rule 2520 - Federally Mandated Operating Permits

N-4899-2-0 & N-4899-3-0:

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)

N-4899-2-0 & N-4899-3-0:

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

The following table demonstrates how the proposed engines will comply with the requirements of 40 CFR Part 60 Subpart IIII.

40 CFR 60 Subpart IIII Requirements for New Emergency IC Engines Powering Generators (2007 and Later Model Year)	Proposed Method of Compliance with 40 CFR 60 Subpart IIII Requirements
Engine(s) must meet the appropriate Subpart IIII emission standards for new engines, based on the model year, size, and number of liters per cylinder.	The applicant has proposed the use of engine(s) that are certified to the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of Subpart IIII.

40 CFR 60 Subpart IIII Requirements for New Emergency IC Engines Powering Generators (2007 and Later Model Year)	Proposed Method of Compliance with 40 CFR 60 Subpart IIII Requirements
Engine(s) must be fired on 500 ppm sulfur content fuel or less, and fuel with a minimum centane index of 40 or a maximum aromatic content of 35 percent by volume. Starting in October 1, 2010, the maximum allowable sulfur fuel content will be lowered to 15 ppm.	The applicant has proposed the use of CARB certified diesel fuel, which meets all of the fuel requirements listed in Subpart IIII. A permit condition enforcing this requirement was included earlier in this evaluation.
The operator/owner must install a non-resettable hour meter prior to startup of the engine(s).	The applicant has proposed to install a non-resettable hour meter. The following condition will be included on the permit: • *{4257} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII]*
Emergency engine(s) may be operated for the purpose of maintenance and testing up to 100 hours per year. There is no limit on emergency use.	The CH&SC 41701.6 limits this engines maintenance and testing to either 30 minutes per week or 2 hours/month (Refer to the discussion below for Rule 4101). Thus, compliance is expected.
The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions.	The following condition will be included on the permit: • *{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 60 Subpart IIII]*

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)

Emergency engines are subject to this subpart if they are operated at a major or area source of Hazardous Air Pollutant (HAP) emissions. A major source of HAP emissions is a facility that has the potential to emit any single HAP at a rate of 10 tons/year or greater or any combinations of HAPs at a rate of 25 tons/year or greater. An area source of HAPs is a facility is not a major source of HAPs. The proposed engine is a new stationary RICE located at an area source of HAP emissions; therefore, these engines are subject to this Subpart.

40 CFR 63 Subpart ZZZZ requires the following engines to comply with 40 CFR 60 Subpart IIII:

1. New emergency engines located at area sources of HAPs
2. Emergency engines rated less than or equal to 500 bhp and located at major sources of HAPs

The proposed engines will be in compliance with 40 CFR 60 Subpart IIII.

Additionally, 40 CFR 63 Subpart ZZZZ requires engines rated greater than 500 bhp and located at major sources of HAPs to meet the notification requirements of §63.6645(h); however, that section only applies if an initial performance test is required. Since an initial performance test is not required for emergency engines, the notification requirement is not applicable.

The proposed engines are expected to be in compliance with 40 CFR 63 Subpart ZZZZ.

Rule 4101 - Visible Emissions

N-4899-2-0 & N-4899-3-0:

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. Based on experience with similar operations, compliance with visible emission limits is expected under normal operating conditions. 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

N-4899-2-0 & N-4899-3-0:

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 properly maintained. Therefore, the following condition will be listed on each ATC permit 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?
N-3095-13-0	N/A	N/A	0.35 in a million	No
N-3095-14-0	N/A	N/A	0.35 in a million	No

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

- - *{Edited 4260} The PM_{10} emissions rate shall not exceed 0.08 g/hp·hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]*

- - *{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 other obstruction. [District Rule 4102]*

- - *{4262} 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 Rule 4702, CH&SC 41701.6, and 40 CFR Part 60 Subpart IIII]*

Rule 4201 - Particulate Matter Concentration

N-4899-2-0 & N-4899-3-0:

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_{10} emission factor of 0.4 g-PM_{10}/bhp-hr.

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

The new engines have PM_{10} emission factor less than 0.4 g/bhp-hr. Therefore, compliance is expected and the following condition will be listed on each ATC permit to ensure compliance:

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

Rule 4701 - Internal Combustion Engines – Phase 1

N-4899-2-0 & N-4899-3-0:

Pursuant to Section 7.5.2.3 of District Rule 4702, as of June 1, 2006 District Rule 4701 is no longer applicable to diesel-fired emergency standby or emergency IC engines.

Therefore, this diesel-fired emergency IC engine will comply with the requirements of District Rule 4702 and no further discussion is required.

Rule 4702 - Internal Combustion Engines – Phase 2

N-4899-2-0 & N-4899-3-0:

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

District Rule 4702 Requirements Emergency Standby IC Engines	Proposed Method of Compliance with District Rule 4702 Requirements
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 this 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 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]
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 under Rule 4001.
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 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]

District Rule 4702 Requirements Emergency Standby IC Engines	Proposed Method of Compliance with District Rule 4702 Requirements
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 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

N-4899-2-0 & N-4899-3-0:

Rule 4801 requires that sulfur compound emissions (as SO_2) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

Volume SO_2 = (n x R x T) ÷ P
n = moles SO_2
T (standard temperature) = 60 °F or 520 °R

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

$$\frac{0.000015\,lb-S}{lb-fuel}\times\frac{7.1\,\text{lb}}{\text{gal}}\times\frac{64\,\text{lb}-SO_2}{32\,\text{lb}-\text{S}}\times\frac{1\,\text{MMBtu}}{9{,}051\,\text{scf}}\times\frac{1\,\text{gal}}{0.137\,\text{MMBtu}}\times\frac{\text{lb}-\text{mol}}{64\,\text{lb}-SO_2}\times\frac{10.73\,\text{psi}-\text{ft}^3}{\text{lb}-\text{mol}-{}^\circ\text{R}}\times\frac{520{}^\circ\text{R}}{14.7\,\text{psi}}\times 1{,}000{,}000 = 1.0\ \text{ppmv}$$

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

- - *{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]*

California Health & Safety Code 42301.6 (School Notice)

N-4899-2-0 & N-4899-3-0:

The District has verified that this site is located within 1,000 feet of the following school:

School Name: Weber Institute
Address: 302 W. Weber Avenue, Stockton, CA

Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is required. Prior to the issuance of the ATC for this equipment, notices will be provided to the parents/guardians of all students of the affected school, and will be sent to all residents within 1,000 ft of the site.

Since a school notice has been triggered (due to the above-listed school within 1,000 of the emission source), notices will also be provided to the parents/guardians of all students from all school sites within ¼ mile of the emission source. The following schools are within ¼ mile of the emission source:

School Name: Stockton Alternative High School
Address: 22 S. Van Buren Street, Stockton, CA.

School Name: Stockton Collegiate International Secondary School
Address: 445 W. Weber Avenue, Ste 128, Stockton, CA.

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

N-4899-2-0 & N-4899-3-0:

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

Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators	Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements
Emergency engine(s) must be fired on CARB diesel fuel, or an approved alternative diesel fuel.	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 under Rules 2201 and 4801.

Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators	Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements
The engine(s) must emit diesel PM at a rate less than or equal to 0.15 g/bhp-hr or must meet the diesel PM standard, as specified in the Off-road compression ignition standards for off-road engines with the same maximum rated power (Title 13 CCR, Section 2423).	The applicant has proposed the use of engines that are certified to the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of Subpart IIII. Additionally, the proposed diesel PM emissions rate is less than or equal to 0.15 g/bhp-hr.
The engine may not be operated more than 50 hours per year for maintenance and testing purposes.	The following condition will be included on the permit: • {4262} 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, CH&SC 41701.6, and 40 CFR Part 60 Subpart IIII]
New stationary emergency standby diesel-fueled CI engines (> 50 bhp) must meet the standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression Ignition Engine Standards (title 13, CCR, section 2423).	The applicant has proposed the use of engines that are certified to the latest EPA Tier Certification level for the applicable horsepower range.
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	The District has verified that the engine is not located within 500 feet of a K-12 school. Therefore, conditions prohibiting non-emergency usage of the engine during school hours will not be required on these permits.
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.	Permit conditions enforcing these requirements were shown earlier in this evaluation under Rule 4702.

California Environmental Quality Act (CEQA)

N-4899-2-0 & N-4899-3-0:

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.

Consistent with California Environmental Quality Act (CEQA) and CEQA Guidelines requirements, the San Joaquin Valley Air Pollution Control District (District) has adopted procedures and guidelines for implementing CEQA. The District's Environmental Review Guidelines (ERG) establishes procedures for avoiding unnecessary delay during the District's permitting process while ensuring that significant environmental impacts are thoroughly and consistently addressed. The ERG includes policies and procedures to be followed when processing permits for projects that are exempt under CEQA.

The State Legislature granted a number of exemptions from CEQA, including projects that require only ministerial approval. Based upon analysis of its own laws and consideration of CEQA provisions, the District has identified a limited number of District permitting activities considered to be ministerial approvals. As set forth in §4.2.1 of the ERG, projects permitted consistent with the District's *Guidelines for Expedited Application Review* (GEAR) are standard application reviews in which little or no discretion is used in issuing Authority to Construct (ATC) documents.

For the proposed project, the District performed an Engineering Evaluation (this document) and determined that the project qualifies for processing under the procedures set forth in the District's Permit Services Procedures Manual in the Guidelines for Expedited Application Review (GEAR). Thus, as discussed above, this issuance of such ATC is a ministerial approval for the District and is not subject to CEQA provisions.

On December 17, 2009, the District's Governing Board adopted the first comprehensive regional policy and guidance on addressing and mitigating GHG emission impacts caused by industrial, commercial, and residential development in the San Joaquin Valley. The adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* applies to projects for which the District has discretionary approval authority over the project and serves as the lead agency for CEQA purposes. The policy relies on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA.

Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. However, consistent with the District's objective to achieve the GHG emission reduction targets established pursuant to AB 32, BPS will be incorporated into the District's GEAR application review process. In the interim, projects meeting the existing GEAR requirements will continue to be processed as ministerial approvals.

IX. Recommendation:

Pending a successful NSR Public Noticing period and School Noticing period, issue Authority to Construct permits N-4899-2-0 and N-4899-3-0 subject to the permit conditions on the attached draft Authority to Construct permits in Appendix A.

X. Billing Information:

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
N-4899-2-0	3020-10-D	757 hp IC Engine	None
N-4899-3-0	3020-10-D	757 hp IC Engine	None

XI. Appendices:

Appendix A: Draft ATC Permits N-4899-2-0 and N-4899-3-0
Appendix B: Manufacturer's Emissions Data Sheet
Appendix C: Copy of District BACT Clearinghouse Guideline 3.1.1
Appendix D: RMR & AAQA Results Summary

APPENDIX A

Draft ATC Permits N-4899-2-0 and N-4899-3-0

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-4899-2-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CITY OF STOCKTON
MAILING ADDRESS: 1465 S LINCOLN ST
STOCKTON, CA 95206

LOCATION: 22 E WEBER ST
STOCKTON, CA

EQUIPMENT DESCRIPTION:
757 HP VOLVO MODEL TAD1641GE (TIER 2 CERTIFIED) DIESEL FIRED EMERGENCY STANDBY I.C. ENGINE POWERING AN ELECTRIC GENERATOR.

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {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. {4257} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII]
6. {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
7. {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 60 Subpart IIII]

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-4899-2-0 : May 13 2011 9:32AM – CHANK : Joint Inspection NOT Required

8. {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]
9. {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]
10. {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]
11. Emissions from this IC engine shall not exceed any of the following limits: 3.8 g-NOx/bhp-hr, 0.5 g-CO/bhp-hr, or 0.2 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
12. Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
13. {4262} 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, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
14. {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]
15. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
16. {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]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-4899-3-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: CITY OF STOCKTON
MAILING ADDRESS: 1465 S LINCOLN ST
STOCKTON, CA 95206

LOCATION: 22 E WEBER ST
STOCKTON, CA

EQUIPMENT DESCRIPTION:
757 HP VOLVO MODEL TAD1641GE (TIER 2 CERTIFIED) DIESEL FIRED EMERGENCY STANDBY I.C. ENGINE POWERING AN ELECTRIC GENERATOR.

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {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. {4257} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII]
6. {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
7. {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 60 Subpart IIII]

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

DAVID WARNER, Director of Permit Services
N-4899-3-0 : May 13 2011 9:32AM – CHANK : Joint Inspection NOT Required

8. {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]
9. {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]
10. {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]
11. Emissions from this IC engine shall not exceed any of the following limits: 3.8 g-NOx/bhp-hr, 0.5 g-CO/bhp-hr, or 0.2 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
12. Emissions from this IC engine shall not exceed 0.08 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
13. {4262} 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, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
14. {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]
15. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
16. {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]

APPENDIX B
Manufacturer's Emissions Data Sheet

GENERAC®

STATEMENT OF EXHAUST EMISSIONS
2010 VOLVO DIESEL FUELED GENERATOR

Generator Model:	**SD/MD500/Gemini**	Aspiration:	**Turbocharged/Aftercooled**
kW_e Rating:	**500, GEM: 1000****	Rated RPM:	**1800 RPM**
Engine Family:	**AVPXL16.1ACB**	EPA Certificate #:	**VPX-NRCI-10-04**
Engine Model:	**TAD1641GE**	CARB Certificate #:	**U-R-014-0118**
Rated Engine Power (BHP)*	**757**	Emission Std. Category:	**Tier 2**

*This Engine Power is declared by the Engine Manufacturer of Record and the U.S. EPA. **Two Engines

Emissions based on declared Rated BHP of specific Engine Models.
(These values are Actual Exhaust Emissions during a 5-Mode test based on declared Rated BHP.)

CO	NOx + NMHC	PM	
0.7	**5.4**	**0.11**	Grams/kW-hr
0.5	**4.0**	**0.08**	Grams/bhp-hr

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5-mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA & CARB protocols, which are typically accepted by SCAQMD and other regional authorities.
- No emission values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and must be consulted by the permit applicant/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.

INDUSTRIAL SALES
P.O. BOX 8 WAUKESHA, WI 53187 262-544-4800 FAX 262-544-4854

APPENDIX C
District BACT Clearinghouse Guideline 3.1.1

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.

APPENDIX D
RMR & AAQA Results Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Kai Chan – Permit Services
From:	Cheryl Lawler – Technical Services
Date:	March 24, 2011
Facility Name:	City of Stockton
Location:	22 W. Weber Street, Stockton
Application #(s):	N-4899-2-0 & 3-0
Project #:	N-1110422

A. RMR SUMMARY

RMR Summary				
Categories	**Emergency Diesel ICE (Unit 2-0)**	**Emergency Diesel ICE (Unit 3-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	N/A[1]	N/A[1]	>1	>1
Acute Hazard Index	N/A[2]	N/A[2]	N/A	N/A
Chronic Hazard Index	N/A[2]	N/A[2]	N/A	N/A
Maximum Individual Cancer Risk	**3.5E-07**	**3.5E-07**	7.0E-07	1.70E-06
T-BACT Required?	**No**	**No**		
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 prioritization scores 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 it has been determined to be insignificant for these types of units.

Proposed Permit Conditions

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

Units 2-0 & 3-0

1. Modified {1901} The PM10 emissions rate shall not exceed **0.08** g/hp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201]
2. {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] N
3. Modified {1344} 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 NSR Rule and District Rule 4701] N

B. RMR REPORT

I. Project Description

Technical Services received a request on March 21, 2011, to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for two 757 bhp emergency diesel IC engines powering electrical generators.

II. Analysis

Technical Services performed a screening level health risk assessment using the District's Diesel Exhaust Risk Screening spreadsheet.

The following parameters were used for the review:

Analysis Parameters						
Unit #	**bhp-hr**	**PM_{10} g/hp-hr**	**Receptor (m)**	**Quad**	**Hours/Year**	**Load%**
2-0 & 3-0	757	0.08	47.85	2	50	100
Location Type		Urban	**Receptor Type**		Business	

Technical Services also performed modeling for criteria pollutants CO, NOx, SOx, and PM_{10}; as well as the RMR. Emission rates used for criteria pollutant modeling for each engine were 0.83 lb/hr CO, 6.68 lb/hr NOx, 0.013 lb/hr SOx, and 0.13 lb/hr PM_{10}.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*
Values are in $\mu g/m^3$

Two Diesel ICEs	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[2]	X	X	X	Pass
SO_x	Pass	Pass	X	Pass[1]	Pass
PM_{10}	X	X	X	Pass[1]	Pass[1]

*Results were taken from the attached PSD spreadsheets.
[1]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).
[2]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010, using the District's approved procedures. A completed AERMOD Non-Regulatory Option checklist is attached.

III. Conclusions

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

The cancer risk associated with the operation of each proposed emergency diesel IC engine is **3.5E-07**, which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the engines are approved **without** Toxic Best Available Control Technology (T-BACT).

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

AAQA for City of Stockton (N-4899-2-0 & 3-0)
All Values are in ug/m^3

	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
ICE2	1.173E+01	5.390E-03	1.943E+00	1.266E+00	3.043E-02	2.697E-02	1.013E-02	2.152E-05	1.013E-01	1.507E-04
ICE3	1.173E+01	5.390E-03	1.943E+00	1.266E+00	3.043E-02	2.697E-02	1.013E-02	2.152E-05	1.013E-01	1.507E-04
Background	1.088E+02	3.061E+01	3.029E+03	1.864E+03	1.598E+02	1.332E+02	7.193E+01	2.664E+01	1.050E+02	3.400E+01
Facility Totals	1.323E+02	3.062E+01	3.033E+03	1.867E+03	1.599E+02	1.333E+02	7.195E+01	2.664E+01	1.052E+02	3.400E+01
AAQS	188.68	56	23000	10000	195	1300	105	80	50	30
	Pass	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Fail**	**Fail**

EPA's Significatance Level (ug/m^3)

NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
0.0	**1.0**	**2000.0**	**500.0**	**0.0**	**25.0**	**5.0**	**1.0**	**5.0**	**1.0**

AAQA Emission (g/sec)

Device	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM 24 Hour	PM Annual
ICE2	8.41E-01	4.80E-03	1.05E-01	1.05E-01	1.64E-03	1.64E-03	1.64E-03	1.44E-05	1.64E-02	1.01E-04
ICE3	8.41E-01	4.80E-03	1.05E-01	1.05E-01	1.64E-03	1.64E-03	1.64E-03	1.44E-05	1.64E-02	1.01E-04

AERMOD Non-Regulatory Option Checklist (ARM / OLM / PVMRM)

Approved	**Site Specific Parameters** Items that are required for a Case – By – Case determination are noted with an *	
	Facility Information	
	Permit ID	N-4899-2-0 & 3-0
	Name	City of Stockton
	Address	22 W. Weber Street
	City / State	Stockton, CA
Comments		
	Project Information	
	Project ID	N-1110422
	Unit ID / Mod (s)	2-0 & 3-0
	Description	Two 757 bhp Emergency Diesel ICEs
Comments		
	Modeling Information*	
	Model	EPA AERMOD Version (6.4.0)
	Operating Scenario	Emergency
	Met Data	Stockton
	Site Name	
	Years	Start: 2005 End: 2009
	Type	NWS
	Terrain	Flat
	Site Location	Zone: UTME: 314.122 UTMN: 3923.02817
	Ozone Limiting	Not Needed
	Source Parameter	See Tables Below
	Background Site	Stockton-Hazelton Street
	Name	
	Location	Zone: UTME: 651.9076 UTMN: 4201.85666
	Years	Start: 2005 End: 2009
	Location Type	Urban
	Distance From Project (km)	
Comments		
	Final Results*	
	Averaging Period / Concentration (Background + Model)	SIL: Local Hour ARM: 132.3 Tier I – Maximum 1-hour : Tier II – 8th Highest : Tier III – 98th Percentile : Tier IV – Paired Sum :
Comments		
	Conclusion* OLM was not required.	
	Supervisor Name	Ester Davila
	Supervisor Signature	Ester Davila
Comments		

Source Parameter:

Each different source that is modeled should have a separate table.

Source Parameters For Units 2-0 & 3-0			
Source Type	Point	**Location Type**	Urban
Stack Height (m)	23.16	**Max Hours per Year**	50
Stack Diameter. (m)	0.2	**Fuel Type**	Diesel
Stack Exit Velocity (m/s)	103.33		
Stack Exit Temp. (°K)	751		