



JUN 23 2011

Keith Corcoran  
Carollo Engineers, Inc.  
City of Hughson  
2880 Gateway Oaks Drive, Suite 300  
Sacramento, CA 95833

**Re: Notice of Preliminary Decision - Authority to Construct  
Project Number: N-1110588**

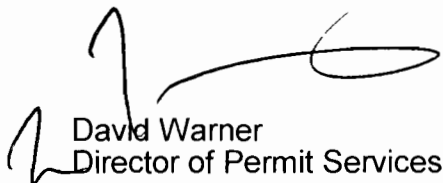
Dear Mr. Corcoran

Enclosed for your review and comment is the District's analysis of City of Hughson's application for an Authority to Construct for a diesel-fired emergency stand-by IC engine to power an electrical generator, at 6700 Leedom Road Hughson.

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. Robert Gilles of Permit Services at (209) 557-6455.

Sincerely,



David Warner  
Director of Permit Services

DW:rpg/st

Enclosures

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

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**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



**JUN 23 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-1110588**


Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of City of Hughson's application for an Authority to Construct for a diesel-fired emergency stand-by IC engine to power an electrical generator, at 6700 Leedom Road Hughson.

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.

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Modesto Bee  
Modesto Bee

**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 to City of Hughson for a diesel-fired emergency stand-by IC engine to power an electrical generator, at 6700 Leedom Road Hughson.

The analysis of the regulatory basis for this proposed action, Project #N-1110588, 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 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, .**

**San Joaquin Valley Air Pollution Control District  
Authority to Construct  
Application Review  
Diesel-Fired Emergency Standby IC Engine**

Facility Name:	City of Hughson	Date:	June 16, 2011
Mailing Address:	P.O. Box 9 Hughson, CA 95326	Engineer:	Robert Gilles
Contact Person:	Keith Corcoran	Lead Engineer:	Nick Peirce
Telephone:	(916) 565-4888		
FAX:	(916) 565-4880		
Application #:	N-5079-2-0		
Project #:	N-1110588		
Complete:	April 04, 2011		

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## **I. Proposal**

The City of Hughson is proposing to install a 1,194 bhp diesel-fired emergency standby internal combustion (IC) engine powering an electrical generator.

## **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 – Phase 2 (1/18/07)  
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

The project is located at 6700 Leedom Road in Hughson, CA.

The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### IV. Process Description

The emergency standby engine powers an electrical generator. Other than emergency standby operation, the engine may be operated up to 50 hours per year for maintenance and testing purposes.

### V. Equipment Listing

**N-5079-2-0:** 1,194 BHP DETROIT DIESEL MODEL #12V2000 G85R123-8A37 TIER 2  
CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE  
POWERING AN ELECTRICAL GENERATOR

### VI. Emission Control Technology Evaluation

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 engine meets the latest Tier Certification requirements; therefore, the engine meets the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide.

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)

The engine has certified NO<sub>x</sub> + VOC emissions of 4.10 g/bhp-hr. It will be assumed the NO<sub>x</sub> + VOC emission factor is split 95% NO<sub>x</sub> and 5% VOC (per the District's Carl Moyer program).

**B. Emission Factors**

Emission Factors		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO <sub>x</sub>	3.90	Engine Manufacturer
SO <sub>x</sub>	0.0051	Mass Balance Equation Below
PM <sub>10</sub>	0.11	Engine Manufacturer
CO	1.19	Engine Manufacturer
VOC	0.21	Engine Manufacturer

$$\frac{0.000015 \text{ lb} - S}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb} - \text{fuel}}{\text{gallon}} \times \frac{2 \text{ lb} - SO_2}{1 \text{ lb} - S} \times \frac{1 \text{ gal}}{137,000 \text{ Btu}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{2,542.5 \text{ Btu}}{\text{bhp} - \text{hr}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0051 \frac{\text{g} - SO_x}{\text{bhp} - \text{hr}}$$

**C. Calculations**

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

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

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

The daily and annual PE values are calculated as follows:

Project Emissions (PE2)						
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Annual Hours of Operation (hrs/yr)	Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO <sub>x</sub>	3.90	1,194	24	50	246.4	513
SO <sub>x</sub>	0.0051	1,194	24	50	0.3	1
PM <sub>10</sub>	0.11	1,194	24	50	6.9	14
CO	1.19	1,194	24	50	75.2	157
VOC	0.21	1,194	24	50	13.3	28

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid

ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

There is one Permit to Operate (PTO) valid for this facility prior to this proposed modification. The permitted emissions for PTO# N-5079-1-0 are summarized in the table below.

SSPE1					
Permit Unit	NO <sub>x</sub> (lb/yr)	SO <sub>x</sub> (lb/yr)	PM <sub>10</sub> (lb/yr)	CO (lb/yr)	VOC (lb/yr)
N-5079-1-0	1,381	557	33	15	31
<b>SSPE1</b>	1,381	557	33	47	31
<b>Major Source Threshold</b>	<b>20,000</b>	<b>140,000</b>	<b>140,000</b>	<b>200,000</b>	<b>20,000</b>
<b>Major Source?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

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

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

For this project the change in emissions for the facility is due to the installation of the new emergency standby IC engine, permit unit N-5079-2-0. Thus:

SSPE2					
Permit Unit	NO <sub>x</sub> (lb/yr)	SO <sub>x</sub> (lb/yr)	PM <sub>10</sub> (lb/yr)	CO (lb/yr)	VOC (lb/yr)
SSPE1	1,381	31	33	557	15
N-5079-2-0	513	1	14	157	28
<b>SSPE2 Total</b>	1,894	32	47	714	43
<b>Offset Threshold</b>	<b>20,000</b>	<b>54,750</b>	<b>29,200</b>	<b>200,000</b>	<b>20,000</b>
<b>Offsets Required?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

## 5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, “for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.”

This facility does not contain ERCs which have been banked at the source; therefore, no adjustment to SSPE2 is necessary.

Major Source Determination					
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Major Source Threshold (lb/yr)	Existing Major Source?	Becoming a Major Source?
NO <sub>x</sub>	1,381	1,894	20,000	No	No
SO <sub>x</sub>	31	32	140,000	No	No
PM <sub>10</sub>	15	47	140,000	No	No
CO	557	714	200,000	No	No
VOC	33	43	20,000	No	No

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

## 6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22

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



## 7. SB 288 Major Modification

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

As discussed in Section VII.C.5 previously, the facility is not a Major Source for any criteria pollutant. Therefore, the project does not constitute an SB 288 Major Modification.

## 8. Federal Major Modification

This facility is not a major source for any criteria pollutant. Therefore, this project cannot trigger a Federal Major Modification and no further discussion is required.

## 9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen.

QNEC = (PE2 – BE) ÷ 4, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/yr.

PE2 = Post Project Potential to Emit for each emissions unit, lb/yr.

BE = Baseline Emissions (per Rule 2201) for each emissions unit, lb/yr.

For this application:

$$\text{QNEC}_{\text{NO}_x} = (513 \text{ lb-NO}_x/\text{yr} - 0 \text{ lb-NO}_x/\text{yr}) \div 4 = 128.25 \text{ lb/qtr}$$

$$\text{QNEC}_{\text{SO}_x} = (1 \text{ lb-SO}_x/\text{yr} - 0 \text{ lb-SO}_x/\text{yr}) \div 4 = 0.25 \text{ lb/qtr}$$

$$\text{QNEC}_{\text{PM}_{10}} = (14 \text{ lb-PM}_{10}/\text{yr} - 0 \text{ lb-PM}_{10}/\text{yr}) \div 4 = 3.5 \text{ lb/qtr}$$

$$\text{QNEC}_{\text{CO}} = (157 \text{ lb-CO}/\text{yr} - 0 \text{ lb-CO}/\text{yr}) \div 4 = 39.25 \text{ lb/qtr}$$

$$\text{QNEC}_{\text{VOC}} = (28 \text{ lb-VOC}/\text{yr} - 0 \text{ lb-VOC}/\text{yr}) \div 4 = 7 \text{ lb/qtr}$$

QNEC (lb/qtr)				
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NO <sub>x</sub>	128	128	128	129
SO <sub>x</sub>	0	0	0	1
PM <sub>10</sub>	3	3	4	4
CO	39	39	39	40
VOC	7	7	7	7

## VIII. Compliance

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

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

##### 1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following<sup>1</sup>:

- a) Any new emissions unit with a potential to emit exceeding 2.0 pounds per day,
- b) The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding 2.0 pounds per day,
- c) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding 2.0 pounds per day, and/or
- d) Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

As discussed in Section I, the facility is proposing to install a new emergency standby IC engine. Additionally, as determined in Section VII.C.7, this project does not result in a 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 engine are compared to the BACT threshold levels in the following table:

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>	246.4	> 2.0	n/a	Yes
SO <sub>x</sub>	0.3	> 2.0	n/a	No
PM <sub>10</sub>	6.9	> 2.0	n/a	Yes
CO	75.2	> 2.0 and SSPE2 ≥ 200,000 lb/yr	714	No
VOC	13.3	> 2.0	n/a	Yes

As shown above, BACT will be triggered for NO<sub>x</sub>, PM<sub>10</sub>, and VOC emissions from the engine for this project.

<sup>1</sup> 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.

## 2. BACT Guideline

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

## 3. Top Down BACT Analysis

Per District Policy APR 1305, Section IX, "A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District's NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

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

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

VOC: Latest EPA Tier Certification level for applicable horsepower range

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 engine meets the latest Tier Certification requirements; therefore, the engine meets the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide.

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.

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

- Emissions from this IC engine shall not exceed 0.11 g-PM<sub>10</sub>/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 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. Therefore, no offset calculations are required.

## **C. Public Notification**

### **1. Applicability**

Public noticing is required for:

- a. Any new Major Source, which is a new facility that is also a Major Source

As shown in Section VII.C.6, this facility is not a new Major Source. Therefore, public noticing will not be required for new major source purposes.

- b. Major Modifications

As shown in Section VII.C.7, this project is not a Major Modification. Therefore, public noticing will not be required for major modification purposes.

- c. Any new emissions unit with a Potential to Emit greater than 100 lb/day for any one pollutant

As calculated in Section VII.C.2, daily emissions for all pollutants are less than 100 lb/day except for NO<sub>x</sub> emissions which are 246.2 lb/day. Public noticing requirements are triggered because the NO<sub>x</sub> potential emissions are above 100 lb/day for this new emission unit.

- d. Any project which results in the offset thresholds being surpassed

As shown in Section VII.C.4, an offset threshold will not be surpassed as a result of this project. Therefore, public noticing will not be required for offset threshold exceedance purposes.

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

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

### **2. Public Notice Action**

This project will result in NO<sub>x</sub> emissions greater than 100 lb/day, which subjects this project to notification requirements as shown above in Section VII.C.1.c of this document. Therefore, this project will be subject to the requirements of District Rule 2201 Section 5.5 which states:

The APCO shall perform the following actions:

- Within ten (10) calendar days following the preliminary decision the APCO shall publish in at least one newspaper of general circulation in the District a notice stating the preliminary decision, noting how pertinent information can be obtained, and inviting written public comment for a 30 day period following the date of publication. (Section 5.5.1)
- No later than the date of publication, the APCO shall transmit to the applicant its preliminary written decision, the analysis, and a copy of the notice submitted for publication. (Section 5.5.2)
- No later than the date of publication, the APCO shall transmit to the ARB and to any person who requests such information, its preliminary written decision, the analysis, and a copy of the notice submitted for publication. For new Major Sources, Federal Major Modifications, and SB 288 Major Modifications, the APCO shall also transmit the preliminary written decision and supporting documents to the EPA. (Section 5.5.3)
- No later than the time the notice of the preliminary decision is published, the APCO shall make available for public inspection at the District office the information submitted by the applicant and the analysis. (Section 5.5.4)
- The APCO shall provide written notice of the final action to the applicant, and the ARB, and shall publish such notice in a newspaper of general circulation, except that for an application not subject to Section 5.4, the APCO shall not be subject to this section. In such a case, the applicant shall receive notification as provided in Rule 2040 (Applications). For new Major Sources, Federal Major Modifications, and SB 288 Major Modifications, the APCO shall also transmit written notice of the final action to the EPA. (Section 5.5.5)
- No later than the time of notice of final action is published, the APCO shall make available for public inspection at the District office a copy of the notice submitted for publication and all supporting documents. (Section 5.5.6)

#### **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 the ATC to ensure compliance:

- Emissions from this IC engine shall not exceed any of the following limits: 3.90 g-NOx/bhp-hr, 1.19 g-CO/bhp-hr, or 0.21 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115]
- Emissions from this IC engine shall not exceed 0.11 g-PM<sub>10</sub>/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 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, 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**

No monitoring is required to demonstrate compliance with Rule 2201.

### **3. Recordkeeping**

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

### **4. Reporting**

No reporting is required to ensure compliance with Rule 2201.

## **Rule 2520 Federally Mandated Operating Permits**

Since this facility's potential to emit does not exceed any of the major source thresholds of Rule 2201, this facility is not a major source. Therefore, Rule 2520 does not apply.

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

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

The proposed engine at this site is 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 engine at this site is 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**

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. Therefore, the following condition will be listed on the ATC to ensure compliance:

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

#### **Rule 4102 Nuisance**

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

#### **California Health & Safety Code 41700 (Health Risk Assessment)**

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite. Therefore, a risk management review (RMR) was performed for this project.

Although this project triggers a public notice, an AAQA was not performed. Based on EPA's clarification memoranda for NO<sub>2</sub> & SO<sub>2</sub>, dated March 1, 2011, intermittent use equipment can be exempted by the reviewing agency from inclusion in analyses. The District has interpreted EPA's guidance to extend to all modeling periods for which there is a CAAQS/NAAQS. Since the number of hours allowed by the District for emergency and intermittent use equipment is less than the levels imposed by EPA, this unit will be exempted from CAAQS/NAAQS analyses. Therefore, an AAQA will not be performed and no further discussion is required.

The RMR results are summarized in the following table, and can be seen in detail in Appendix C.

RMR Results				
Unit	Acute Hazard Index	Chronic Hazard Index	Cancer Risk	T-BACT Required?
N-5079-2-0	N/A <sup>2</sup>	N/A <sup>1</sup>	1.29 in a million	Yes

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

- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
- Modified {1901} The PM10 emissions rate shall not exceed 0.11 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115]
- 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 calendar year. [District Rule 4702, 17 CCR 93115]

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 engine meets the latest Tier Certification requirements; therefore, the engine meets the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide.

The Risk Management Review was conducted assuming a maximum annual operating schedule of 100 hours per year for non-emergency purposes and it was concluded that this project generates a cancer risk of greater than 1 in a million which triggers Toxic Best Available Control Technology (TBACT). This engine will only be permitted to operate up to 50 hours per year for non emergency purposes which is consistent with Stationary ATCM requirements as shown in the District Rule 4702 discussion below. To address the TBACT requirement, the District considers TBACT to be equivalent to BACT for most occurrences when TBACT is triggered; therefore, since this engine meets BACT, as shown in Appendix B, it is considered to meet TBACT.

<sup>2</sup> 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



**Rule 4201 Particulate Matter Concentration**

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

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

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

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

**Rule 4701 Internal Combustion Engines – Phase 1**

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, the proposed emergency internal combustion engine will comply with the requirements of District Rule 4702 and no further discussion is required.

**Rule 4702 Internal Combustion Engines – Phase 2**

The following table demonstrates how the proposed engine 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
<p>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.</p>	<p>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.</p> <ul style="list-style-type: none"> <li>• This 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, 4701, and 4702 and 17 CCR 93115] N</li> </ul>
<p>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</p>	<p>The following conditions will be included on the permit:</p> <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</li> </ul>

<p>reduction program or interruptible power contract.</p>	<p>events beyond the control of the permittee. [District Rule 4702]</p> <ul style="list-style-type: none"> <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>
<p>The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions.</p>	<p>A permit condition enforcing this requirement was shown earlier in the evaluation.</p>
<p>The owner/operator must monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.</p>	<p>The following condition will be included on the permit:</p> <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>
<p>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.</p>	<p>The following conditions will be included on the permit:</p> <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 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]</li> <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 Rule 4702 and 17 CCR 93115]</li> </ul>

## Rule 4801 Sulfur Compounds

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

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

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

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

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

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

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

- 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]

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

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

### 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><b>Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators</b></p>	<p><b>Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements</b></p>
<p>Emergency engine must be fired on CARB diesel fuel, or an approved alternative diesel fuel.</p>	<p>The applicant has proposed the use of CARB certified diesel fuel. The proposed permit condition, requiring the use of CARB certified diesel fuel, was included earlier in this evaluation.</p>
<p>The engine must 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).</p>	<p>The applicant has proposed the use of a Tier 2 certified engine which is the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of this section. Additionally, the proposed diesel PM emissions rate is less than or equal to 0.15 g/bhp-hr.</p>
<p>The engine may not be operated more than 50 hours per year for maintenance and testing purposes.</p>	<p>The following condition will be included on the permit:</p> <ul style="list-style-type: none"> <li>• 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]</li> </ul>
<p>New stationary emergency standby diesel-fueled IC engines (&gt; 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).</p>	<p>The applicant has proposed the use of an engine that is Tier 2 certified, which is the latest EPA Tier Certification level for the applicable horsepower range.</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 testing; initial start-up testing hours; hours of operation for all other uses; and the type of fuel used. All records shall be retained for a minimum of 36 months.</p>	<p>Permit conditions enforcing these requirements were shown earlier in the evaluation.</p>

## California Environmental Quality Act (CEQA)

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(s) 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**

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct N-5079-2-0 subject to the permit conditions on the attached draft Authority to Construct (ATC) permit in Appendix A.

#### **X. Billing Information**

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
N-5079-2-0	3020-10-F	1,194 bhp IC engine	\$749.00

#### **Appendixes**

- A. Draft ATC
- B. BACT Guideline and BACT Analysis
- C. RMR Summary

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-5079-2-0

LEGAL OWNER OR OPERATOR: CITY OF HUGHSON  
MAILING ADDRESS: PO BOX 9  
HUGHSON, CA 95326

LOCATION: 6700 LEEDOM  
HUGHSON, CA 95326

**EQUIPMENT DESCRIPTION:**

1,194 BHP (INTERMITTENT) DETROIT DIESEL MODEL G85R123-8A37 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

**CONDITIONS**

1. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
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 Rule 4702, 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, 17 CCR 93115]
7. Emissions from this IC engine shall not exceed any of the following limits: 3.90 g-NOx/bhp-hr, 1.19 g-CO/bhp-hr, or 0.21 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115]
8. Emissions from this IC engine shall not exceed 0.11 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 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-5079-2-0 : Jun 16 2011 11:18AM - GILLESPIE : Joint Inspection NOT Required

## 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.

## Top Down BACT Analysis for the Emergency IC Engine

### 1. BACT Analysis for NO<sub>x</sub>, VOC, and PM<sub>10</sub> Emissions:

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

The SJVUAPCD BACT Clearinghouse guideline 3.1.1 identifies achieved in practice BACT for emissions from emergency diesel IC engines as follows:

Pollutant	Achieved in Practice
NO <sub>x</sub> and 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)

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

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

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

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

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

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

The applicant has proposed the only control option listed for each pollutant. Therefore, a cost effectiveness analysis is not required.

#### e. Step 5 - Select BACT

BACT for NO<sub>x</sub> and VOC emissions from this emergency standby diesel IC engine is the latest EPA Tier Certification level for the applicable horsepower range. The applicant has proposed to install a Tier 2 certified 1,194 bhp emergency standby diesel IC engine, which is the latest Tier Certification for an engine this size as shown in the attached Tier Certification table at the end of this Appendix.

BACT for PM<sub>10</sub> is 0.15 g/hp-hr, or the latest EPA Tier Certification level for the applicable horsepower range, whichever is more stringent. The applicant is proposing an engine that meets this requirement.

**Title 13 CCR 2423**  
**(December 2005)**  
**Tier Certification & Exhaust Emission Standards**  
 (grams per brake horsepower-hour)

Power Rating (hp)	Tier	Model Year	NO <sub>x</sub>	HC	NMHC +NO <sub>x</sub>	CO	PM
50 ≤ hp < 75	1	1998 – 2003	6.9	-	-	-	-
	2	2004 - 2007	-		5.6	3.7	0.3
	3	2008 - 2011			3.5		
	4*	2008 – 2012 (Interim)			3.5	3.7	0.22
75 ≤ hp < 100	1	1998 – 2003	6.9	-	-	-	-
	2	2004 – 2007	-		5.6	3.7	0.3
	3	2008 – 2011			3.5		
100 ≤ hp < 175	1	1997 – 2002	6.9	-	-	-	-
	2	2003 – 2006	-		4.9	3.7	0.22
	3	2007 – 2011			3.0		
175 ≤ hp < 300	1	1996 – 2002	6.9	1.0	-	8.5	0.4
	2	2003 – 2005	-	-	4.9	2.6	0.15
	3	2006 - 2010		3.0			
300 ≤ hp < 600	1	1996 – 2000	6.9	1.0	-	8.5	0.4
	2	2001 – 2005	-	-	4.8	2.6	0.15
	3	2006 – 2010		3.0			
600 ≤ hp ≤ 750	1	1996 – 2001	6.9	1.0	-	8.5	0.4
	2	2002 – 2005	-	-	4.8	2.6	0.15
	3	2006 – 2010		3.0			
> 750	1	2000 – 2005	6.9	1.0	-	8.5	0.4
	2	2006 – 2010	-	-	4.8	2.6	0.15

\* Manufacturers may optionally certify engine families to the interim Tier 4 for this power category through 2012.

**Appendix C**  
**RMR Summary**

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

To: Robert Gilles – Permit Services  
 From: Cheryl Lawler – Technical Services  
 Date: June 1, 2011  
 Facility Name: City of Hughson WWTP  
 Location: 6700 Leedom Road, Hughson, CA  
 Application #(s): N-5079-2-0  
 Project #: N-1110588

### A. RMR SUMMARY

RMR Summary			
Categories	Emergency Diesel ICE (Unit 2-0)	Project Totals	Facility Totals
Prioritization Score	N/A <sup>1</sup>	>1	>1
Acute Hazard Index	N/A <sup>2</sup>	N/A	N/A
Chronic Hazard Index	N/A <sup>2</sup>	N/A	N/A
Maximum Individual Cancer Risk	1.29E-06	1.29E-06	1.29E-06
T-BACT Required?	Yes – PM10		
Special Permit Conditions?	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:

#### Unit #2-0

1. Modified {1901} The PM10 emissions rate shall not exceed **0.11 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 **100 hours** per year. [District NSR Rule and District Rule 4701] N

## B. RMR REPORT

### I. Project Description

Technical Services received a request on May 17, 2011, to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for a 1194 bhp emergency diesel IC engine powering an emergency generator to be used at a Wastewater Treatment Plant in the City of Hughson.

### 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 <sub>10</sub> g/hp-hr	Receptor (m)	Quad	Hours/Year	Load%
2-0	1194	0.11	213.36	2	100	100
Location Type			Rural	Receptor Type		Residence

Although this project triggers a public notice, an AAQA was not performed. Based on EPA's clarification memoranda for NO<sub>2</sub> & SO<sub>2</sub>, dated March 1, 2011, intermittent use equipment can be exempted by the reviewing agency from inclusion in analyses. The District has interpreted EPA's guidance to extend to all modeling periods for which there is a CAAQS/NAAQS. Since the number of hours allowed by the District for emergency and intermittent use equipment is less than the levels imposed by EPA, this unit will be exempted from CAAQS/NAAQS analyses. Therefore, an AAQA will not be performed and no further discussion is required.

### III. Conclusion

The cancer risk associated with the operation of the proposed emergency diesel IC engine is **1.29E-06**, which is greater than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the engine is approved **with** Toxic Best Available Control Technology (T-BACT).

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

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