



 <p><b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b></p> <p><i>ENGINEERING &amp; COMPLIANCE DIVISION</i></p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 20	PAGE 2
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**CONDITION**

B61.1 The operator shall only use diesel fuel containing the following specified compounds:

Compound	Weight percent
Sulfur Compounds less than	0.05

**[Rule 1303(a)(1)- BACT, 5-10-1996; Rule 1303(a)(1)- BACT, 12-6-2002; Rule 2005, 5-6-2005]**

[Devices subject to this condition: D551, D854, Dxxx]

C1.40 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

To comply with this condition, the operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

**[Rule 1304(a)- Modeling and Offset Exemption, 6-14-1996; Rule 2012, 5-6-2005]**

[Devices subject to this condition: D854, Dxxx]

C1.41 The operator shall limit the maintenance and testing to no more than 50 hour(s) in any one year.

The operation of the engine beyond the 50 hours per year allotted for engine maintenance and testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the electrical grid operator or electric utility has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage. Engine operation shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

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[Rule 1303(a)(1)- BACT, 5-10-1996; Rule 1303(a)(1)- BACT, 12-6-2002; Rule 1470, 6-1-2007]

[Devices subject to this condition: D854, Dxxx]

C1.42 The operator shall limit the maintenance and testing to no more than 4.2 hour(s) in any one month.

The operator shall maintain records in a manner approved by the District, to demonstrate compliance with this condition.

[Rule 1313(g)(1), 5-10-1996]

[Devices subject to this condition: D854, Dxxx]

E71.x The operator shall not operate this equipment until the Caterpillar ICE, Dev ID D854 is taken out of service. (Note: See Rule 1472 evaluation)

[Rule 1472, 3-7-2008]

[Devices subject to this condition: Dxxx]

H23.25 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
PM	District Rule	1470
CO	40CFR60, SUBPART	III
NOX	40CFR60, SUBPART	III
PM	40CFR60, SUBPART	III
ROG	40CFR60, SUBPART	III
HAPs	40CFR63, SUBPART	ZZZZ

[Rule 1470, 6-1-2007; **40CFR60 Subpart III, 7-11-2006; 40CFR63 Subpart ZZZZ, 1-18-2008**]

[Devices subject to this condition: D854, Dxxx]

I296.1 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the annual emissions increase for the first 12 months of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

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**[Rule 2005, 5-6-2005]**

[Devices subject to this condition: D854, Dxxx]

K67.11 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

A log of engine operations, including manual and automatic operation, documenting the total time the engine is operated each month and the specific reason for operation as:

- A. Emergency use
- B. Maintenance and testing
- C. Other (Describe the reason for the operation)

In addition, for each time the engine is manually started, the log shall include the date of engine operation, the specific reason for operation, and the totalizing hour meter reading (in hours and tenths of hours) at the beginning and end of the operation.

On or before January 15<sup>th</sup> of each year, the operator shall record the engine log:

- A. Total hours of engine operation for the previous calendar year, and
- B. Total hours of engine operation for maintenance and testing for the previous calendar year.

Engine operation log(s) shall be retained on site for a minimum of five calendar years and shall be made available to the Executive Officer or representative upon request.

**[Rule 1303(a)(1)- BACT, 5-10-1996; Rule 1303(a)(1)- BACT, 12-6-2002; Rule 1304(a)- Modeling and Offset Exemption, 6-14-1996; Rule 1470, 6-1-2007; Rule 2012, 5-6-2005; Rule 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition: D854, Dxxx]

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## **BACKGROUND**

Paramount Petroleum Corporation (Paramount) operates a petroleum refinery located at 14700 Downey Avenue in the city of Paramount in the southern portion of Los Angeles County. Paramount processes crude oil into a variety of products including specialized road and roofing asphalts, diesel fuel, jet fuel, gasoline and gasoline components. Emission sources at the refinery include combustion sources (heaters, boilers, and IC engines), fugitive components (pumps, valves, flanges, compressors, drains, etc.), cooling towers, storage tanks, flares and loading/unloading facilities. The South Coast Air Quality Management District (AQMD) identification number for the facility is 800183.

A/N 515155 was received by AQMD on October 1, 2010 for a Permit to Construct. Paramount is proposing to install a new diesel -fired internal combustion engine (ICE) driving an emergency electrical generator to sustain power at the refinery in the event of a power outage. Paramount submitted supplemental information from December 3, 2011 to December 30, 2011.

Table 1 lists permit processing tracking information and fees.

**Table 1: Permit Administration & Application Tracking Information**

<i>Application No.</i>	<i>515155</i>
Equipment Description	ICE, >500 BHP, Emergency
Date Received	10/1/2010
Deemed Complete Date	10/31/2010
Application Type	10: Permit to Construct
Application Status	20: Class I
Previous Application No.	N/A
B-CAT No.	043902
C-CAT No.	00
Fee Schedule	B
Fee Required	\$ 2,094.60
Fee Submitted	\$ 2,094.60
Title V Revision Application No.	515312

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## **COMPLIANCE RECORD REVIEW**

A review of the AQMD Compliance Database showed 32 Notices of Violation (NOV) and Notices to Comply (NC) issued to Paramount in the past five years (01/01/06 – 03/31/11). All notices are either closed or in compliance status. The Stipulated Orders for Abatement (SOFA) are closed. Paramount is on a schedule to compliance on the Variance Cases.

## **PROCESS DESCRIPTION**

The proposed diesel-fired engine is an Isuzu (Model 6WG1X) rated at 532 bhp. The ICE will drive an emergency electrical generator to sustain power at the facility in the event of a power outage. This engine has been issued a CARB-certified equipment portable registration (Registration No. 142563).

## **EMISSIONS CALCULATION**

The manufacturer's emissions data for the Isuzu (Model 6WG1X) engine is as follows:

**Table 2: MANUFACTURER'S EMISSION DATA**

<i>NO<sub>x</sub> + NMHC</i>	<i>CO</i>	<i>PM</i>
2.4668 grams/bhp-hr	0.5980 grams/bhp-hr	0.1121 grams/bhp-hr
(3.3 grams/kW-hr)	(0.8 grams/kW-hr)	(0.15 grams/kW-hr)

The overall mass emissions are summarized in Table 3. A complete summary of the emissions with calculations is found in Appendix A.

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**Table 3: EMISSIONS SUMMARY**

<i>Emittant</i>	<i>lb/hour</i>		<i>lb/day<sup>1</sup></i>		<i>30-day avg<sup>2</sup></i>		<i>lb/year<sup>3</sup></i>	
	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>	<i>R1</i>	<i>R2</i>
NOx <sup>4</sup>	3.52	3.52	14.76	14.76	0.49	0.49	175.77	175.77
ROG	0.12	0.12	0.49	0.49	0.02	0.02	5.86	5.86
CO	0.70	0.70	2.94	2.94	0.10	0.10	35.04	35.04
SOx <sup>5</sup>	0.15	0.15	0.61	0.61	0.02	0.02	7.30	7.30
PM	0.13	0.13	0.55	0.55	0.02	0.02	6.57	6.57
PM10 <sup>6</sup>	0.13	0.13	0.53	0.53	0.02	0.02	6.31	6.31

1 Assumes engine will operate 4.2 hrs/day maximum for testing

2 Assumes engine will operate 4.2 hrs/month in a 30-day month for testing

3 Engine is limited to operate 50 hours/year for maintenance and testing

4 NOx emission based on BACT limit of 3.0 grams/bhp-hr

5 SOx emission based on 500 ppm sulfur diesel, Rule 2002, Table 2, (6.24 lbs/1000 gal)

6 Default Emission Factor for PM10 = 0.96 of PM

## **RULES EVALUATION**

### **PART 1: SCAQMD REGULATIONS**

#### **Rule 212**     Standards for Approving and Issuing Public Notice (Amended Nov 14, 1997)

212 (a)     The applicant is required to show that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code of these rules. The operation of this ICE is expected to comply with this requirement.

212(c)(1)     Public notification is required if any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX may emit air contaminants located within 1000 feet from the outer boundary of a school. As shown on the map provided by Paramount, the source is not within 1000 feet of a school, public notification is therefore not required.

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212(c)(2) Public notification is required if any new or modified facility has on-site increases exceeding any of the daily maximums specified in subdivision (g) of this rule. The increase in emissions does not exceed the threshold as specified, public notification is therefore not required.

212(c)(3) Public notification is required if the maximum individual cancer risk (MICR), based on Rule 1401, exceeds one in a million (1 x 10<sup>-6</sup>), due to a project's proposed modification. The ICE is exempt from Rule 1401 according to Rule 1401(g)(1)(F), public notification is therefore not required.

212(g) This subdivision sets forth the process for federal public notification and distribution and specifies the daily maximum emissions increase as follows:

<u>Air Contaminant</u>	<u>Daily Maximum in lbs/day</u>
Volatile Organic Compounds	30
Nitrogen Oxides	40
PM10	30
Sulfur Dioxide	60
Carbon Monoxide	220
Lead	3

The increase in emissions does not exceed the daily maximum specified; public notification is therefore not required.

**Rule 401** Visible Emissions (Amended Nov. 9, 2001)  
Operation of the ICE is not expected to result in visible emissions. Therefore, compliance with this rule is expected.

**Rule 402** Nuisance (Adopted May 7, 1976)  
Operation of the ICE is not expected to result in a public nuisance. Therefore, compliance with this rule is expected.

**Rule 404** Particulate Matter – Concentration (Amended February 7, 1986)  
Based on experience with similar equipment, compliance is expected.

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**Rule 407**     Liquid and Gaseous Air Contaminants (Amended April 2, 1982)  
The provisions of this rule do not apply to emissions from stationary internal combustion engines.

**Rule 409**     Combustion Contaminants (Amended August 7, 1981)  
The provisions of this rule do not apply to emissions from internal combustion engines.

**Rule 431.2**   Sulfur Content of Liquid Fuels (Amended September 15, 2000)  
According to Rule 431.2(e)(3), the facility shall not purchase any diesel fuel with the sulfur content greater than 15 ppm by weight as supplied by the supplier. Facility Condition F14.1 requires that the facility not purchase diesel fuel with sulfur content greater than 15 ppmw. Compliance is expected.

**Reg IX**        Standards of Performance for New Stationary Sources (NSPS)

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

What This Subpart Covers

§60.4200(a)(2)(i) applies to owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after July 11, 2005 where the ICEs are manufactured after April 1, 2006 and are not fire pump engines. This ICE proposed at Paramount is subject to this subpart.

Emission Standards for Owner and Operators

§60.4205(b) requires the engine to comply with the emission standards in §60.4202. §60.4202(a)(2) requires the engine to be certified to the emission standards in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007. The 40 CFR 89.112 emission standards are the same as the District's BACT. (See discussion under Reg XIII compliance). Since the ICE complies with the District's BACT, Compliance is expected. Compliance with 40 CFR 89.113 smoke emission standards is also expected.

Fuel Requirements for Owners and Operators

§60.4207(a) and (b) requires the engine to only be fueled with diesel that meets minimum federal requirements. A facility wide condition (F14.1) ensures compliance with this requirement.

Other Requirements for Owners and Operators

§60.4209(a) requires the installation of a non-resettable hour meter.

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Compliance is expected (Condition C1.40).

Compliance Requirements

§60.4211(e) limits maintenance checks and readiness testing to 100 hours per year. Compliance is expected (Condition C1.41 limits to 50 hours).

Notification, Reports, and Records for Owners and Operators

§60.4214(b) waives NSPS initial notification under Subpart A and Subpart III for emergency stationary engines.

Compliance with all applicable requirements is expected since the Subpart III requirements are equivalent or superseded by more stringent District rules.

**Rule 1110.2** Emissions from Gaseous- and Liquid-Fueled Engines (Amended July 9, 2010)

According to Rule 1110.2(h)(2), the provisions of subdivision (d) of this rule do not apply to emergency standby engines, as approved by the Executive Officer, which operate less than 200 hours per year as determined by an elapsed operating time meter. Permit Condition C1.40 limits the operation of this engine to less than 200 hours per year; therefore the provisions of subdivision (d) of this rule do not apply to this engine.

**Reg XIII** New Source Review (NSR)

Rule 1303: Requirements (Amended Dec. 6, 2002)

1303(a) Best Available Control Technology (BACT)

BACT means the most stringent emission limitation or control technique which: (1) has been achieved in practice; or (2) is contained in any State Implementation Plan approved by the US EPA; or (3) is any other emission limitation or control technique approved by the Executive Officer and cost effective as compared to measures listed in the Air Quality Management Plan.

Manufacturer's engine emissions data as listed in Table 2 on page 6 show that this engine will comply with the most recent BACT standards for SO<sub>x</sub>, ROG, NO<sub>x</sub>, CO and PM<sub>10</sub> as outlined in the BACT Guidelines for ICE, Stationary, Emergency, Compression Ignition [Table 1. U.S. EPA Tier 3 Certification Levels Required for Compression-ignition Engines (6-6-2003)] as shown in Table 4 below.

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Compliance with the requirements of BACT is expected.

**Table 4: BACT LIMIT**

<i>Rating/Size</i>	<i>NMHC+NOx</i>	<i>SOx</i>	<i>CO</i>	<i>PM<sub>10</sub></i>
<b>U.S. EPA TIER 3</b> CERTIFICATION LEVELS REQUIRED FOR COMPRESSION-IGNITION ENGINES  <b>300&lt;HP&lt;750</b>	3.0 grams/bhp-hr	Rule 431.2	2.6 grams/bhp-hr	0.15 grams/bhp-hr
Isuzu 6WG1X <b>532 hp</b>	2.47 grams/bhp-hr	Rule 431.2	0.60 grams/bhp-hr	0.11 grams/bhp-hr

1303(b) This subdivision lists the following requirements for a Permit to Construct for any new or modified source which results in a net emission increase of any nonattainment air contaminant at a facility.

1303(b)(1) Modeling  
According to Rule 1304(a)(4), this engine is exempt from the modeling requirement because the source is exclusively used as emergency standby equipment, and does not operate more than 200 hours per year as evidenced by an engine hour meter.

1303(b)(2) Emission Offsets  
According to Rule 1304(a)(4), this engine is exempt from the offset requirement because the source is exclusively used as emergency standby equipment, and does not operate more than 200 hours per year as evidenced by an engine hour meter.

1303(b)(3) Sensitive Zone Requirements  
Since Emission Reduction Credits were not required, this section does not apply.

1303(b)(4) Facility Compliance  
The facility is currently in compliance with all applicable rules and regulations of the District.

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1303(b)(5) Major Polluting Facilities

This application is not considered a major modification according to the definition in R1302(r), since the increase in emissions is less than one lb/day. This section, therefore, does not apply.

**Reg XIV** Toxics and Other Non-Criteria Pollutants

Rule 1401: New Source Review of Toxic Air Contaminants (Amended March 4, 2005)

According to Rule 1401(g)(1)(F), the requirements of subdivision (d) of this rule do not apply to emergency internal combustion engines that are exempted under Rule 1304. This ICE is exempted under Rule 1304; therefore, the provisions of this rule do not apply.

Rule 1470: Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines (Amended June 1, 2007)

This rule applies to any person who own or operates a stationary compression ignition engines in the SCAQMD with a rated brake horsepower greater than 50.

1470(c) Requirements

1470(c)(1) Fuel and Fuel Additive Requirements

1470(c)(1)(A) This engine will use CARB diesel fuel with a sulfur content of 15 ppm or less as imposed in Facility Condition F14.1. Compliance is expected.

1470(c)(2) Operating Requirements and Emission Standards

1470(c)(2)(A) This engine is not located 500 feet or less from a school, this section does not apply.

1470(c)(2)(B) This engine will not operate in response to the notification of an impending rotating outage, this section does not apply.

1470(c)(2)(C)(i) Diesel PM Standards and Hours of Operating Requirements

New stationary emergency standby diesel-fueled engines (>50 bhp), shall:

- (I) Emit diesel PM at a rate less than or equal to 0.15 g/bhp-hr;

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or

- (II) Meet the diesel PM standard as specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (Title 13 CCR Section 2423), in effect on the date of acquisition or submittal, whichever is more stringent; and
- (III) Not operate more than 50 hours per year for maintenance and testing.

Rule 1470 (b)(11) defines the Date of Acquisition as the date the application for the District permit was submitted to the District. Since the application for a permit to construct this ICE was submitted to the District on October 1, 2010, the ICE shall therefore have to meet EPA Tier 3 PM standard in accordance with Title 13 CCR Section 2423. This Isuzu engine is an EPA Tier 3 engine with PM emission factor of 0.1121 g/bhp-hr. This engine will be limited to 50 hours per year for maintenance and testing (Condition C1.41). Compliance is expected.

1470(c)(2)(C)(ii)

Alternative standard was not requested.

1470(c)(2)(C)(iii)

Does not apply; engine will not be located 100 meters or less from a school.

1470(c)(2)(C)(iv)

New stationary emergency standby diesel-fueled CI engines (>50 bhp) must meet the HC, NO<sub>x</sub>, NMHC = NO<sub>x</sub>, and CO standards as specified in the Off-Road Compression-Ignition Engine Standards (Title 13, CCR, section 2423). In accordance to Title 13, CCR, Section 2423, table 1a, the applicable exhaust emission standards for the proposed IC engine are:

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<i>Rating/Size</i>	<i>NMHC+NOx</i>	<i>CO</i>	<i>PM<sub>10</sub></i>
<b>U.S. EPA TIER 3</b> CERTIFICATION LEVELS REQUIRED FOR COMPRESSION- IGNITION ENGINES Model Year 2006-2010  <b>300&lt;HP&lt;600</b>	3.0 grams/bhp-hr	2.6 grams/bhp-hr	0.15 grams/bhp-hr
Isuzu 6WG1X Model Year 2007 <b>532 hp</b>	2.47 grams/bhp-hr	0.60 grams/bhp-hr	0.11 grams/bhp-hr

The exhaust emissions from this Isuzu engine are below the Tier 3 limits of Title 13, CCR, section 2423, Table 1a. Compliance is expected.

1470(d) Recordkeeping, Reporting and Monitoring Requirements

1470(d)(1) The facility submitted all the required information in this section.

1470(d)(4) The facility submitted the engine manufacturer emission test data which shows compliance to subparagraph (c)(2)(C).

1470(d)(7) By permit condition C1.40, a non-resettable totalizing timer shall be installed on the engine to indicate elapsed operating time. Compliance is expected.

1470(d)(9) By permit condition K67.11, the operator of the engine will keep records according to this provision. Compliance is expected.

1470(e) Compliance Schedule and Permit Application Dates

Since this facility has less than four engines, it is not required to submit a Compliance Plan. The existing engines in this facility need to comply with the requirements of this rule according to the schedule specified in this section. Compliance is expected.

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Rule 1472: Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines (Adopted March 7, 2008)

This rule applies to facilities with three or more stationary emergency standby diesel-fueled internal combustion engines operating in the South Coast Air Quality Management District and each are rated at greater than 50 brake horsepower. Currently, there are two stationary emergency standby diesel-fueled internal combustion engines operating at the facility (Dev ID D551 and D854). According to Paramount, this new ICE will replace one of the two operating ICEs at the facility (Caterpillar ICE, Dev ID D854). Since there will still just two stationary emergency standby diesel-fueled ICEs operating at the facility, this rule does not apply. To ensure compliance, Condition E71.x is imposed to restrict the operation of this ICE until Caterpillar ICE, Dev ID D854 is taken out of service.

It is noted here that Paramount was not required to implement risk reduction plans pursuant to Rule 1402 (Control of Toxic Air Contaminant from Existing Sources).

**Reg XVII**      Prevention of Significant Deterioration (PSD)

This regulation sets forth preconstruction review requirements for stationary sources to ensure that air quality in clean air areas does not significantly deteriorate while maintaining a margin for future industrial growth.

The SCAQMD is presently considered in attainment for the following criteria pollutants: NO<sub>2</sub>, SO<sub>2</sub>, CO and Lead; thus these pollutants are subject to PSD regulations.

According to the guidance provided in Mohsen Nazemi's email dated August 14, 2007, the AQMD has signed a new Limited PSD Delegation agreement with EPA effective July 25, 2007. Therefore, effective July 25, 2007, the AQMD has PSD responsibility for all new PSD sources and all modifications to existing PSD sources where the applicant is requesting to use the existing Regulation XVII to determine PSD applicability for a modification and not the recent calculation methodology adopted by the EPA as part of the NSR Reform.

The ICE does not constitute a "significant increase" in emissions of any attained criteria pollutants; therefore, PSD applicability is not required.

**Reg XX**      Regional Clean Air Incentives Market (RECLAIM)

Paramount is a NOX and SOX RECLAIM facility. It is therefore subject to Reg XX. The proposed IC engine will cause an emission increase for NOX and SOX. Based on the maximum rating of the engine to be installed, 50 hr/yr operation and

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the NOX BACT limits proposed, the NOX and SOX emissions increases from the engine are 175.77 lbs/yr and 7.30 lbs/yr respectively (see Table 3).

Rule 2005: New Source Review (Amended May 6, 2005)

2005(c)(1) Best Available Control Technology (BACT)

The proposed NOx and SOx BACT limits are shown in Table 4, and the engine should meet the U.S. EPA Tier 3 Certification Level.

Modeling

In accordance with Rule 2005(k)(5) – Exemptions, each engine is exempt from the modeling requirements specified in 1303(c)(1)(B) if the equipment is exclusively used as emergency standby equipment, provided the source does not operate more than 200 hours per year as evidenced by an engine-hour meter (Condition C1.40).

2005(c)(2) Sufficient RECLAIM Trading Credits

The NOx and SOx emissions increases from this project are 175.77 lbs/yr and 7.30 lbs/yr, respectively. Paramount currently holds sufficient RTCs to offset the annual emissions increases for the first year of operation at a 1-to-1 ratio. (NOX: 137,146 lbs/yr; SOX: 36,774 lbs/yr)

2005(c)(4) Allocation Increase Greater than Starting Allocation

The emissions increases due to this project will not increase the facility's annual allocation to a level greater than the facility's starting allocation (NOX: 495,926 lbs/yr; SOX: 144,918 lbs/yr) plus non tradable credits (NOX: 0; SOX: 0).

2005(d) Emission Increase

NOX and SOX emissions increases from this project are 175.77 lbs/yr and 7.30 lbs/yr respectively.

2005(e) Trading Zone Restrictions

The emissions increase due to this project will not increase the facility's annual Allocation to a level greater than the facility's starting allocation (NOX: 495,926 lbs/yr; SOX: 144,918 lbs/yr) plus non tradable credits (NOX: 0; SOX: 0).

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2005(f)      Offsets  
The facility will need to hold 176 lbs/yr of NOX RTCs and 7 lbs/yr of SOX RTCs at the commencement of each compliance year.

2005(g)      Additional Federal Requirements for Major Stationary Sources  
Clean Air Act 42 U.S.C Section 751a(e): “major stationary source” includes (in addition to the sources described in section 7602 of this title) any stationary source or group of sources located within a contiguous area and under common control that emits, or has the potential to emit, at least 10 tons per year of volatile organic compounds. Paramount emits more than 10 tons of VOC; thus Paramount has applicable requirements to follow.  
(g)(1) Paramount has certified that they are in compliance.  
(g)(2) Paramount is exempted from this requirement per paragraph (g)(3)(A).

2005(h)      Public Notice  
A public notice is not required pursuant to Rule 212. However, see discussion under Regulation XXX for Title V public notice requirement.

2005(i)      Rule 1401  
See discussion under Rule 1401.

2005(j)      Compliance with State and Federal New Source Review Requirements  
The NOx and SOx emissions increases will be included in the NSR Tracking System so the emissions can be reported to the District Governing Board regarding the effectiveness of Rule 2005 in meeting the state and federal NSR requirements.

Rule 2011: Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur (SOx) Emissions (Amended May 6, 2005)

In accordance with Rule 2011(d)(1), any equipment not designated in Rule 219 as equipment not requiring a written permit, and not classified as a major SOx source in Rule 2011 9(c)(1), is a SOx process unit. The proposed emergency IC engine is subject to the monitoring, reporting and recordkeeping requirements for a SOx process unit.

In accordance with Rule 2011(d)(2)(C), the facility has accepted the SOX emission factor of 6.24 lbs/1,000 gal diesel as specified in Rule 2002 as the sole method for

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determining mass emissions.

Rule 2012: Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Nitrogen (NOx) Emissions (Amended May 6, 2005)

In accordance with Rule 2012(e)(1)(B)(i), any IC engine with  $200 \leq \text{bhp} < 1000$  and operating  $\leq 2190$  hr/yr, is a NOx process unit. The proposed emergency IC engine is subject to the monitoring, reporting and recordkeeping requirements for a NOx process unit.

In accordance with Rule 2012(e)(2)(C), the facility has accepted the NOx emission factor as specified in Rule 2002 as the sole method for determining mass emissions. In Rule 2002, Table 1 (RECLAIM NOx Emission Factors), the emission factor for ICEs, all fuels, is “Equivalent to permitted BACT limit.” The proposed engine is a Tier 3 engine. The current Tier 3 BACT limit for NOx + ROG = 3.0 gram/bhp-hr. Converting the Tier 3 NOx + ROG BACT limit emissions from grams/bhp-hr to gal diesel/hr, the RECLAIM NOx emission factor is **150 lbs NOx/1000 gal diesel** for this engine based on the highest fuel consumption rate and engine hp provided by the manufacturer.

Engine Rating: 532 bhp  
 Manufacturer’s Fuel Consumption: 23.4 gal/hr  
 NOx + ROG emission rate: 3.0 g/bhp-hr  
 NOx emission factor: 150 lbs NOx/1,000 gal diesel  
 (3.0 grams/bhp-hr) x 532 bhp x (lb /454 lbs) x (hr/x 23.4gal) x 1,000gal

**Reg XXX** Title V Permits

Rule 3001(a): Applicability (Amended November 14, 1997)

The Title V Permit system is the air pollution control permit system required to implement the federal Operating Permit Program as required by Title V of the federal Clean Air Act as amended in 1990. Paramount has been designated as a Phase One Title V facility. The final initial Title V permit under A/N 337522 was issued on February 27, 2009.

Rule 3005: Permit Revisions (Amended March 16, 2001)

The permit for this project will be issued as a “significant permit revision” of the Title V permit as defined in Rule 3000(b)(28)(I), because the permit is for the installation of new equipment subject to NSPS or NESHAP. The new ICE is subject to 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ. The revision is subject to a 45-day EPA review per Rule 3003(j)(1)(B).

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Rule 3006: Public Participation (Amended November 14, 1997)

Since the permit for this project will be issued as a “significant permit revision” of the Title V permit, it will be subject to public notice requirements of this rule.

**PART 2: STATE REGULATIONS**

**CEQA**      California Environmental Quality Act

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) submitted by Paramount indicates that the project does not have any impacts which trigger the preparation of a CEQA document; therefore a CEQA analysis is not required.

**PART 3: FEDERAL REGULATIONS**

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

Subpart ZZZZ establishes national emission and operating limitations for HAP emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission and operating limitations. The proposed IC engine is subject to the RICE regulation as “new stationary RICE located at an area source. It is noted here that Paramount has provided data to the District to show that Paramount Refinery is not a major HAP source which is defined as a source emitting 10 tpy of any single HAP or 25 tpy of all HAPs combined.

§63.6590 What parts of my plant do this subpart cover? (Amended August 20, 2010)

In accordance with §63.6590(c)(1), a new stationary RICE, that is located at an area source, must meet the requirements of this part by meeting the requirements of 40 CFR 60 Subpart IIII. No further requirements apply for such engines under this part. As evaluated under Regulation IX above, the proposed ICE meets the requirements of Federal Rule 40CFR60 Subpart IIII. Subpart ZZZZ (Condition H23.25) will be tagged to the ICE. Therefore compliance is expected.

**CONCLUSION AND RECOMMENDATION**

This equipment is expected to comply with all applicable District, State and Federal Rules and Regulations. Therefore, issuance of Permit to Construct/Operate is recommended.

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### Appendix A - Summary of Emissions

Paramount  
A/N 515155

#### Engine data

Engine hp	532	hp
Engine manufacturer	Isuzu	
Fuel type	Diesel	
Fuel rate	23.4	gal/hour
EPA non-road engine	No	
Date manufactured	2007	

#### Engine operating limits

max hr/day	4.2	hour
max hr/month	4.2	hour
max hr/year	50	hour

PM10/PM	0.96
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#### Emission factors

	R1	units	R2	units
NOx (BACT limit)	3.000	g/bhp-hr	3.000	g/bhp-hr
ROG (Manufacturer)	0.1	g/bhp-hr	0.1	g/bhp-hr
CO (Manufacturer)	0.598	g/bhp-hr	0.598	g/bhp-hr
SOx (RECLAIM)	0.125	g/bhp-hr	0.125	g/bhp-hr
PM (Manufacturer)	0.1121	g/bhp-hr	0.1121	g/bhp-hr
PM10 (Calc.)	0.108	g/bhp-hr	0.108	g/bhp-hr

#### Emission calculations

	lb/hour		lb/day max		30-day avg lb/day		lb/year	
	R1	R2	R1	R2	R1	R2	R1	R2
NOx	3.52	3.52	14.76	14.76	0.49	0.49	175.77	175.77
ROG	0.12	0.12	0.49	0.49	0.02	0.02	5.86	5.86
CO	0.70	0.70	2.94	2.94	0.10	0.10	35.04	35.04
SOx	0.15	0.15	0.61	0.61	0.02	0.02	7.30	7.30
PM	0.13	0.13	0.55	0.55	0.02	0.02	6.57	6.57
PM10	0.13	0.13	0.53	0.53	0.02	0.02	6.31	6.31

NOx emission factor = BACT limit; Rule 2002, Table 1, see discussion under Rule 2012

ROG, CO, PM emission factors from engine manufacturer data; PM10 = 0.96 \* PM

SOx emis fact = (6.24 lb / 1000 gal) \* Fuel rate / Engine bhp \* 454 g/lb;

Rule 2002, Table 2, based on 500 ppm sulfur diesel

A. Emissions as a function of gr/bhp-hr

Emissions (lb/hr) = gr/bhp-hr \* hp rating \* 1 lb/454 grams

Emissions (lb/day max) = lb/hr \* max hr/day

B. NSR 30-day and lb/year values

30-day avg (lb/day) = lb/hr \* max hr/month / 30 day

lb/year = lb/day \* max lb/year