

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 5	PAGE 1
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PERMIT TO CONSTRUCT / OPERATE

EMERGENCY ELECTRICAL GENERATOR – DIESEL FUELED ENGINE, TIER 3

Applicant's Name: OC WASTE & RECYCLING (OCWR), PRIMA DESHECHA

Mailing Address: 300 N. Flower Street, Suite 400
Santa Ana, CA 92703-5000

Equipment Location: 32250 La Pata Avenue (Prima Deshecha Landfill)
San Juan Capistrano, CA 92675

Facility ID NO.: 52753

Equipment Description:

INTERNAL COMBUSTION ENGINE, JOHN DEERE, 6 CYLINDERS, TURBOCHARGED/ AFTERCOOLED, MODEL NO. 6068HF285L, 197 BHP, DIESEL FUELED, DRIVING AN EMERGENCY ELECTRICAL GENERATOR (147 KW).

Permit Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED, UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITIONS AT ALL TIMES.
[RULE 204]
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR WHICH INCLUDES NO MORE THAN 50 HOURS FOR MAINTENANCE AND PERFORMANCE TESTING.
[RULE 1110.2, 1303-BACT, 1304(a) (4)-MODELING AND OFFSET EXEMPTIONS, 1470]
4. OPERATION 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 UTILITY DISTRIBUTION COMPANY 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.
[RULE 1303- BACT]

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5. THIS ENGINE SHALL NOT BE USED AS PART OF AN INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.
[RULE 1303-BACT]

6. AN OPERATIONAL NON-RESETTABLE ELAPSED TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2; 1303-BACT, 1304(a) (4)-MODELING AND OFFSET EXEMPTIONS]

7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

A. EMERGENCY USE HOURS OF OPERATION

B. MAINTENANCE AND TESTING HOURS

C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)

IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION. THE LOG SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.

[RULE 1110.2, 1303-BACT, 1304(a) (4)-MODELING AND OFFSET EXEMPTIONS, 1470]

8. THE SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THIS ENGINE SHALL NOT EXCEED 15 PPM (0.0015%) BY WEIGHT.
[RULE 431.2]

9. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULE 1470, 40 CFR PART 60 SUBPART IIII AND 40 CFR 63 SUBPART ZZZZ,
[RULE 1470, 40 CFR PART 60 SUBPART IIII, AND 40 CFR 63 SUBPART ZZZZ]

Emissions And Requirements:

10. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM:	RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
PM:	0.15 gm/bhp-hr, RULE 1303 – BACT, 1470, 40 CFR Part 60, subpart IIII
NOx +NMHC:	3.0 g/bhp-hr, RULE 1303-BACT, 1470, 40 CFR Part 60, subpart IIII
CO:	2.6 g/bhp-hr, RULE 1303-BACT, 1470, 40 CFR Part 60, subpart IIII

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Background/Process Description:

This application was submitted as a Class 1 on 10/27/09, for an emergency stand-by diesel fueled engine. This stationary engine will drive an emergency electrical generator to provide power to the management building (under construction) in the event of a power failure. The order for the engine is not placed yet so no serial number is available. Engine manufacturing date is unknown at this time.

For the proposed engine, a Tier 3 category, U.S. EPA has granted Certificate of Conformity (2009 Model Year, Engine Family 9JDXL06.8104, Certificate No. JDX-NRCI-09-16) and will meet 40 CFR Part 89 applicable requirements for nonroad engines.

On December 12, 2008, California Air Resources Board (CARB) has also certified this engine that will meet Tier 3 category emissions standards (certification copy is enclosed in folder).

This engine is also AQMD certified (A/N 462958) for which permit was granted November 21, 2006 to Deere Power Systems Group (Manufacturer, ID 92796). Certification expiration date is 12/31/2010.

This is a Title V facility and approved permit will be included under Title V permit revision, A/N 503281.

Calculations:

See certified engine emissions calculations data (Table) under A/N 462958, in folder.

Emissions Summary: (197 BHP)

	RHC	NOx	SOx	CO	PM
E.F. (g/bhp-hr)	0.11	2.76	0.005*	0.98	0.11
Emission, lb/hr	0.05	1.20	0.0	0.43	0.05

* SOx E.F. based on 15 ppmv S in diesel fuel.

NOx + NMHC = 2.87 grams/bhp-hr < 3.0 grams/bhp-hr (BACT per 10-3-2008, Rev. 4).

Rules Evaluation:

Rule 212: This is not a significant project. There is no school within 1,000 feet of the emission source. Per Section (c)(1), public notice is not required. Compliance is expected.

Rule 401: This is AQMD certified equipment. Based on experience with similar equipment, this engine is expected to comply with the visible emission limits.

Rule 402: Based on experience with similar equipment, nuisance complaints are not expected.

Rule 404: Based on experience with similar equipment, compliance with this rule is expected.

Rule 407: Exempt per Section (b)(1).

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Rule 431.2: The operator may burn diesel fuel for this equipment with sulfur content less than 500 ppmv by weight or less.

On or after June 1, 2004, the operator shall not purchase any diesel fuel for this equipment, unless the fuel is low sulfur for which the sulfur content shall not exceed 15 ppm (0.0015%) by weight as supplied by the supplier. Compliance can be expected.

Rule 1110.2: Exempt per Section (i) (2).

Rule 1303: Per Section (a)(1), this equipment must be constructed with BACT. The proposed engine is U.S. EPA and CARB certified Tier 3 family. Also, the proposed equipment is AQMD certified. Compliance is expected.

Per Rule 1304(a) (4), the equipment is exempt from offset and modeling requirements.

Rule 1401: Exempt per Section (g)(1)(F).

Rule 1401.1: Exempt since this is an existing facility, and 1401.1 (i) (A) & (B)..

Rule 1470: This is considered a new engine per definition, installed after January 1, 2005. Total PM emission for this CARB certified engine is 0.11 gm/bhp-hr. Engine shall operate less than 50 hrs./yr for maintenance and testing purposes. There are no schools within 100 meters of the source so no retrofitting is required with PM filter.
This engine shall use CARB diesel fuel (Diesel fuel No. 1-D or No. 2-D, pursuant to specifications in ASTM D975-81), that contains no more than 15 ppmv sulfur by weight. Compliance can be expected.

REG. XXX: Title V:

This is a Title V facility. Title V revision A/N 503281 is filed to incorporate this emergency ICE permit. Upon completion of EPA review and commenting period, the approved permit will be issued with TV revision.

FEDERAL REGULATIONS:

Standards of performance for new stationary source (40 CFR Part 60 subpart IIII, 40 CFR part 89)

This emergency engine, Tier 3 category, is EPA, CARB, and AQMD certified and is expected to meet applicable requirements of the regulations.

NSPS - 40CFR Part 60- Subpart IIII:

Emergency ICE is subject to emissions standards listed under Table 1, subpart IIII of Part 60 (as stated under §60.4205 and §60.4202.

Engine Power	Engine Type & Fuel	Mfrg. Date	Emissions Requirements (g/hp-hr)		
			(HC+ NOx)	CO	PM
≥130 HP	Emergency	Jan. 1, 2009	3.0	2.6	0.15

§60.4209 (a) – Engine will meet requirement for a non-resettable hour meter.

Compliance is expected.

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NESHAPS - 40CFR Part 63- Subpart ZZZZ: for stationary RICE

Emergency engine is subject to this regulation as this is a new stationary engine to be located at Area Source. No further requirement is applicable per §63.6590 (c).

Compliance is expected.

Conclusions & Recommendations:

This application is expected to comply with all applicable District rules and regulations. A Permit to Construct and Operate is recommended subject to the above listed conditions, Pg. 1 & 2, UPON COMPLETION OF PUBLIC NOTICE ISSUANCE AND EPA 45-DAY REVIEW PERIOD.