

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 10	PAGE 1
	APPL NO 522637	DATE 9/23/2011
	PROCESSED BY AS08	CHECKED BY

Permit to Construct (New Construction)

Applicant's Name Eastern Municipal Water District (EMWD)
Temecula Valley Regional Water Reclamation Facility (TVRWRF)

Mailing Address P.O. Box 8300
Perris, CA 92572

Equipment Location 42565 Avenida Alvarado
Temecula, CA 92590

Equipment Description
APPLICATION 522637, FACILITY ID 001703

INTERNAL COMBUSTION ENGINE, MTU ONSITE ENERGY/MTU DETROIT DIESEL, MODEL 16V2000G85 TB/TD (R1638A37), FOUR-STROKE CYCLE, 16 CYLINDER, 1495 BHP, DIESEL FIRED, TURBOCHARGED, WITH DIESEL PARTICULATE FILTER, RYPOS, INC., MODEL HDPF/C, DRIVING AN EMERGENCY ELECTRICAL GENERATOR.

Background/Process Description

The above application for New Construction of an emergency diesel fired internal combustion engine (ICE) to drive an electrical generator was submitted on May 18, 2011 for expedited permit processing. A previous Permit to Construct was issued for a new emergency electrical generator under A/N 503585 for a different engine make and model. The permit had been granted an extension due to funding issues. When the engine was planned to be installed it was determined that the originally planned engine for installation would no longer be available. Therefore this application was submitted in order to evaluate the correct engine to be installed at the facility. Therefore this application was submitted in order to evaluate the correct engine to be installed at the facility. This new engine (model year 2011) is certified by SCAQMD under Certified Equipment Permit Application No. 495347 to meet Tier 2 emissions. This certification was extended to December 31, 2011 per letter dated December 17, 2010. The operating schedule of the engine is 1 hours/day, 1 days/week, 50 weeks/year.

This engine is to be equipped with a Diesel Particulate Filter (DPF) that can meet Level 3, 85% control efficiency of PM per LAER/BACT and Rule 1470 requirements. The DPF that the facility plans to install is an active DPF, which self cleans by applying electrical current to heat the filter media and burn off accumulated PM. A microprocessor control measures the backpressure of the filter and automatically regenerates the filter as needed. Therefore the active DPF has less operating limitations compared to a passive DPF system.

TVRWRF supplies water to residential, commercial and agricultural areas in Riverside County. It also provides the collection and treatment of municipal sewage and produces recycled water. The facility uses primary and secondary treatment processes. The current wastewater influent throughput for the facility is 18 million gallons per day (MGD). There is no school within 1000 feet of the emission source. There have been no Notices to Comply or Notices of Violation issued in the past two years. No complaints have been filed against the above facility in the past two years.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES	PAGE
	10	2
	APPL NO	DATE
	522637	9/23/2011
	PROCESSED BY	CHECKED BY
	AS08	

Emission Calculations

Bold emissions are to be used for NSR purposes. NSR lbs/day values are calculated by: R2 lbs/hr x 11hr/day x 1day/week x 4.33 weeks/month / 30 days/month

Engine Specifications

1495 BHP

Exhaust flow rate: 7,840 acfm (per Form 400-PS)

Exhaust temperature: 1022 °F (per Form 400-PS)

$v_s = v_a \times T_s/T_a$

$7,840 \text{ acfm} \times (460 + 60)^\circ\text{R} / (460 + 1022)^\circ\text{R} = 2,751 \text{ dscfm}$

Maximum diesel consumption: 71.30 gallons/hr (per Form 400-E-13a)

CO emissions

Certified emissions: 1.2 g/bhp-hr

1.2 g/bhp-hr x 1495 BHP x lb/453.6g = 3.96 lbs/hr = 0.57 lbs/day (NSR)

40CFR60 Subpart IIII: 2.6 g/bhp-hr

2.6g/bhp-hr x 1495 bhp x lb/453.6g = 8.57 lbs/hr = 1.24 lb/day (NSR)

LAER/BACT requirement: 4.8 g/bhp-hr

4.8g/bhp-hr x 1495 bhp x lb/453.6g = 15.82 lbs/hr = 2.29 lb/day (NSR)

Rule 1470: Compliance with Title 13 CCR Section 2423, Tier 4 Interim: 2.61 g/bhp-hr

2.61g/bhp-hr x 1495 bhp x lb/453.6g = 8.60 lbs/hr = 1.24 lb/day (NSR)

NOx emissions

Certified emissions: 4.0 g/bhp-hr

4.0 g/bhp-hr x 1495 BHP x lb/453.6g = 13.18 lbs/hr = 1.90 lbs/day (NSR)

LAER/BACT & 40CFR60 Subpart IIII requirement: 4.8 g/bhp-hr (NOX + NMHC) (assume 4.5 g/bhp-hr NOx contribution)

4.5 g/bhp-hr x 1495 bhp x lb/453.6g = 14.83 lbs/hr = 2.14 lb/day (NSR)

Rule 1470: Compliance with Title 13 CCR Section 2423, Tier 4 Interim: 0.50 g/bhp-hr

0.50g/bhp-hr x 1495 bhp x lb/453.6g = 1.65 lbs/hr = 0.24 lb/day (NSR)

PM10 emissions

Certified emissions: 0.12 g/bhp-hr

0.12 g/bhp-hr x 1495 BHP x lb/453.6g = 0.40 lbs/hr = 0.06 lbs/day (NSR)

R2 = 0.40 lbs/hr x (1.0-0.85)* = 0.06 lbs/hr = 0.01 lbs/hr (NSR)

*DPF 85% control efficiency

Rule 404 requirement: Exhaust flow rate: 2,751 dscfm, 0.128 grains/dscf

0.128 grains/dscf x 2,751 dscfm x 60min/hr x 1lb/7000grains = 3.02 lbs/hr > 0.40 lbs/hr

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES	PAGE
	10	3
	APPL NO	DATE
	522637	9/23/2011
	PROCESSED BY	CHECKED BY
	AS08	

40CFR60 Subpart III: 0.15 g/bhp-hr
0.15 g/bhp-hr x 1495 bhp x lb/453.6g = 0.49 lbs/hr = 0.07 lbs/day (NSR)

LAER/BACT: Compliance with Rule 1470, 0.15g/bhp-hr & installation of a CARB certified Diesel Particulate Filter 85% control efficiency (Achieved in practice: per issuance of a Title V Em Diesel ICE permit under the Energy Unit)

Rule 1470: 0.15g/bhp-hr AND Title 13 CCR Section 2423, Tier 4 Interim: 0.075 g/bhp-hr
0.15 g/bhp-hr x 1495 BHP x lb/453.6g = 0.49 lbs/hr = 0.07 lbs/day (NSR)
0.075g/bhp-hr x 1495 bhp x lb/453.6g = 0.25 lbs/hr = 1.04 lb/day (NSR)

ROG emissions

Certified emissions: 0.15 g/bhp-hr
0.15 g/bhp-hr x 1495 BHP x lb/453.6g = 0.49 lbs/hr = 0.07 lbs/day (NSR)

LAER/BACT & 40CFR60 Subpart III requirement: 4.8 g/bhp-hr (NOX + NMHC) (assume 1.0 g/bhp-hr NOx contribution)

1.0g/bhp-hr x 1495 bhp x lb/453.6g = 3.30 lbs/hr = 0.48 lb/day (NSR)

Rule 1470: Compliance with Title 13 CCR Section 2423, Tier 4 Interim: 0.30 g/bhp-hr
0.30g/bhp-hr x 1495 bhp x lb/453.6g = 0.99 lbs/hr = 0.14 lb/day (NSR)

SOx emissions

LAER/BACT: Rule 431.2: Diesel fuel sulfur content ≤ 15 ppm (0.0015%) by weight.

AER Form B2 Emissions:

7.10 lb/1000 gallons diesel x 71.30 gallons diesel/hr = 0.51 lbs/hr = 0.07 lbs/day (NSR)

Toxic Risk Analysis

Nearest Residential Receptor Distance: 4770 ft. (1454 m)
Nearest Commercial Receptor Distance: 509 ft. (155 m)
Stack height: 16 ft. (4.88 m)
Stack inner diameter: 12 in. (0.30 m)
Rain cap: Yes
Exhaust flow rate: 7,840 acfm
Exhaust stack temperature: 1022 °F
Building height: 20 ft. (6.1 m) (per Form 400-E-13a)
Building dimensions: 20 ft. (6.1 m) x 40 ft. (12 m) (per Form 400-E-13a)

Compound	MW (lbs/lbmole)	Outlet emission (lb/hr)
Diesel PM	N/A	0.06

Tier III analysis was used since the exhaust stack does have a rain cap. Tier III risk analysis was based on the emission rates listed in the above table. Building downwash calculations were based on a building

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES	PAGE
	10	4
	APPL NO	DATE
	522637	9/23/2011
	PROCESSED BY	CHECKED BY
	AS08	

dimensions listed above. The MICR values are determined to be 3.33×10^{-8} for residential and 1.40×10^{-7} for commercial receptors. HIA and HIC were less than 1. Cancer Burden was less than 0.5.

Rules Evaluation

- Rule 212: Rule 212 (c)(1)- There is no school within 1000 feet of the facility.
Rule 212 (c)(2)- On-site emission increases does not exceed the following:
- | | |
|----------------------------|-------------|
| Volatile Organic Compounds | 30 lbs/day |
| Nitrogen Oxides | 40 lbs/day |
| PM10 | 30 lbs/day |
| Sulfur Dioxide | 60 lbs/day |
| Carbon Monoxide | 220 lbs/day |
| Lead | 3 lbs/day |
- Rule 212(c)(3)(A)(i)- MICR is below 1 in a million.
Public Notice is not required.
- Rule 401: Visible Emissions
No violations are expected, limits are listed under Rule 401(b)(1).
- Rule 402: Nuisance
Nuisance is not expected with proper operation, monitoring and maintenance. Based on previous operation of the facility for the last two years, compliance is expected.
- Rule 404: Particulate Matter
No violations are expected limits are listed under Rule 404 Table 404(a).
- Rule 407: Liquid and Gaseous Air Contaminants
Rule 407 (b)- Provisions of this rule shall not apply to emissions from stationary ICEs.
- Rule 409: Combustion Contaminants
Provisions of this rule shall not apply to emissions from ICEs.
- Rule 431.2: Sulfur Content in Liquid Fuels
Rule 431.2(e)(2)-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 is expected.
- Rule 53A: Riverside County – Specific Contaminants (Contained in Addendum to Reg IV)
Rule 53(a)- Sulfur compound emission limit, as SO₂ 50,000 ppmv. Compliance can be expected based on other similar category ICE permits issued in SCAQMD.
Rule 53(b)- Fluorine compounds to be controlled to the maximum degree technically feasible. No fluorine potential emission from this equipment. Compliance is expected.
- NSPS: Standards of Performance for New Stationary Sources
Part 60, Chapter I, Title 40 of Code of Federal Regulations, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES	PAGE
	10	5
	APPL NO	DATE
	522637	9/23/2011
	PROCESSED BY	CHECKED BY
	AS08	

60.4200(a)(2)(i)-Applicability: applicable. Commenced construction after 7/11/2005 and manufactured after 4/1/2006 and are not fire pump engines. Engines to be manufactured in 2011.

60.4200(b)- This ICE is not being tested at an engine test cell/stand.

60.4205(b)- 2007 model year and later emergency stationary CI ICE with displacement of less than 30 L/cylinder that are not fire pump engines must comply with emission standards for new nonroad CI engines in 60.4202 for all pollutants, for the same model year and maximum engine power of their 2007 model year and later emergency stationary CI ICE. The displacement is 30.5 L; the number of cylinders is 16 for this engine.

60.4202(a)(2)- For engines \geq 50 HP, the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 & 40 CFR 89.113 for all pollutants beginning in model year 2007.

89.112(a)- NMHC + NO_x: 4.8 g/BHP-hr; CO: 2.6 g/BHP-hr; and PM 0.15 g/BHP-hr.

89.113(a)- Exhaust opacity from compression-ignition nonroad engines for which this subpart is applicable must not exceed:

89.113(a)(1)- 20 percent during the acceleration mode;

89.113(a)(2)- 15 percent during the lugging mode; and

89.113(a)(3)- 50 percent during the peaks in either the acceleration or lugging modes.

60.4207(b)- Beginning October 1, 2010 stationary CI ICE with displacement < 30 L/cylinder must use diesel fuel that meets the requirements of 40CR 80.510(b) for nonroad diesel fuel.

40CFR 80.510(b)- Beginning June 1, 2010 . Except as otherwise specifically provided in this subpart, all NonRoad (NR) diesel fuel is subject to the following per-gallon standards:

40CFR 80.510(b)(1)(i)- 15 ppm maximum Sulfur content for NR diesel fuel.

40CFR 80.510(b)(2)(i)- A minimum cetane index of 40; or

40CFR 80.510(b)(2)(ii)- A maximum aromatic content of 35 volume percent.

60.4208(a)- May not install stationary CI ICE that do not meet the applicable requirements for 2007 model year engines.

60.4209(a)- Emergency stationary CI ICE must install a non-resettable hour meter prior to startup of the engine.

60.4211(c)- Purchasing an engine certified to emission standards in 60.4205(b).

60.4211(f)- Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 10	PAGE 6
	APPL NO 522637	DATE 9/23/2011
	PROCESSED BY AS08	CHECKED BY

60.4212(a)- Performance test must be conducted according to the in-use testing procedures in 40CFR 039 subpart F.

60.4212(c)- Stationary CI ICE that are complying with emission standards for new CI in 40CFR89.112 must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard from:

NTE = 1.25 x STD, STD is the standard specified for that pollutant in 40CFR89.112. May follow testing procedures in 60.4213.

60.4214(b)- If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in Table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

Table 5 Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

HP ≥ 175: Starting model year 2011

60.4214(c)- If equipped with a diesel particulate filter, must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

Compliance is expected.

NESHAPS: Part 63, Chapter I, Title 40 of Code of Federal Regulations, Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

63.6585(a)- Applicability: Applicable.

63.6590(a)(2)(iii)- New stationary RICE: stationary RICE located at an area source of HAP emissions if commenced construction on or after June 12, 2006. To be manufactured in 2011.

63.6590(c) - An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR 60 subpart IIII for CI engines. No further requirements apply for such engines under this part.

63.6590(c)(1)-A new or reconstructed stationary RICE located at an area source. Compliance is expected.

Rule 1110.2: Emissions From Gaseous and Liquid-Fueled Engines

Rule 1110.2(d)- Equipment is exempt under Rule 1110.2(h)(2).

Rule 1110.2(h)(2)- Subdivision (d) shall not apply to: Emergency standby engines, which have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.

Rule 1110.2(e)(3)- Stationary Engine CEMS

Rule 1110.2(e)(3)(B)- CEMS is not required.

Rule 1110.2(e)(4)(A)- I&M plan has been submitted. Determination has not yet been made for this application.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 10	PAGE 7
	APPL NO 522637	DATE 9/23/2011
	PROCESSED BY AS08	CHECKED BY

Rule 1110.2(e)(5)(B)- These engines are exempt from Rule 1110.2(d) requirements, therefore Rule 1110.2(e)(5)(B) does not apply.

Rule 1110.2(f)(1)- These engines are exempt from Rule 1110.2(d)(1) requirements, therefore Rule 1110.2(f)(1) does not apply.

Rule 1110.2(f)(3)- All data, logs, test reports and other information required by this rule shall be maintained for at least five years and made available for inspection.

Compliance with all applicable requirements of this Rule can be expected.

Rule 1147 NOx Reductions From Miscellaneous Sources
Rule 1147(a)- Applicability: not applicable to internal combustion engines subject to District Rule 1110.2.

Reg XIII: Rule 1303(a)- BACT applies, since there is an increase of emissions > 1.0 lbs/day. LAER/BACT (A/N C-1010958 under SJVAPCD): PM10: CARB certified Diesel Particulate Filter with 85% control efficiency (Achieved in Practice: per issuance of a Title V Em Diesel ICE permit under the Energy Unit).
BACT stationary, emergency CI ICE ≥ 750 HP: CO: 2.6 g/bhp-hr, NOx + NMHC: 4.8 g/bhp-hr, PM 0.15 g/bhp-hr & compliance with Rule 1470 (see evaluation below).
BACT: 1) An emergency engine is an engine which operates as a temporary replacement for primary mechanical or electrical power sources during periods of fuel or energy shortage or while a primary power source is under repair. This includes fire pumps, emergency electrical generation and other emergency uses.
3) AQMD restricts operation of emergency compression-ignition engines to 50 hours per year, or less if required by Rule 1470, for maintenance and testing and a maximum of 200 hours per year total operation. For engines used to drive standby generators, operation beyond 50 hours per year for maintenance and testing is 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 control area that is subject to the rotating outage. A new stationary compression-ignition engine will also be subject to a proposed federal NSPS- 40 CFR Part 60, Subpart IIII.
4) Limits with an associated “after” date are required for an engine for which the application is deemed complete after that date. Limits without an associated “after” date are required now. The engine must be certified by U.S. EPA or CARB to meet the Tier 1, 2 or 3 emission requirements of 40 CFR Part 89 – Control of Emissions from New and In-use Nonroad Compression-Ignition Engines shown in the table– or otherwise demonstrate that it meets the Tier 1, 2 or 3 emission limits. If, because of the averaging, banking, and trading program, there is no new engine from any manufacturer that meets the above standards, then the engine must meet the family emission limits established by the manufacturer and approved by U.S. EPA. The PM limits apply only to filterable PM.

Rule 1303(a)(2)- The proposed engine is AQMD certified Tier 2 engine model, to be manufactured in 2011. The Certified Equipment Permit A/N 495347 was extended to expire on 12/31/2011. It is considered as BACT. Compliance is expected.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES	PAGE
	10	8
	APPL NO	DATE
	522637	9/23/2011
	PROCESSED BY	CHECKED BY
	AS08	

Rule 1303(b)(1)- Modeling is not required, emergency equipment is exempt under Rule 1304(a)(4).

Rule 1304(a)(4)-The source is exclusively used as emergency standby equipment for nonutility electrical power generation or any other emergency equipment as approved by the Executive Officer or designee, provided the source does not operate more than 200 hours per year as evidences by an engine-hour meter or equivalent method.

Rule 1303(b)(2)- Offsets are not required; emergency equipment is exempt under Rule 1304(a)(4), see above. Furthermore, since the facility is an essential public service, any required offsets shall be provided through priority reserve.
Compliance is expected.

Rule 1401: Toxic Air Contaminants
Rule 1401(d)(1)(A)- MICR less than 1.0×10^{-6} .
Rule 1401(d)(1)(C)- Cancer burden is less than 0.5.
Rule 1401(d)(2) and Rule 1401(d)(3)- HIC and HIA values are estimated to be less than 1 respectively.
Compliance is expected

Rule 1401.1: Rule 1401.1(b)- Equipment is exempt since it is located at an existing facility.

Rule 1470: Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines
Rule 1470(c)(1)(A)- This engine shall use CARB diesel fuel (Diesel fuel No. 2-Ultra Low Sulfur), that contains no more than 15 ppmv sulfur by weight.
Rule 1470(c)(2)(A)- This is considered a new engine per definition, installed after January 1, 2005. There are no schools located 500 feet or less from the engine.
Rule 1470(c)(2)(B)- Compliance is expected, see permit conditions.
Rule 1470(c)(2)(C)(i)(I)- Emit diesel PM at a rate ≤ 0.15 g/bhp-hr. Total PM10 emission for this SCAQMD certified engine is based on EF of 0.12 gm/bhp-hr.
Rule 1470(c)(2)(C)(i)(II)- Meet diesel PM standard as in Title 13 CCR Section 2423 (evaluated below) for off-road engines with the same maximum power in effect on the dated of acquisition or submittal as defined in (b) whichever is more stringent.
Rule 1470(c)(2)(C)(i)(III)- Shall not operate more than 50 hours per year for maintenance and testing purposes. This subclause does not limit engine operation for emergency use and for emission testing to show compliance with (c)(2)(C) . See permit conditions.
Rule 1470(c)(2)(C)(iv)(I)- Meet diesel standard as in Title 13 CCR Section 2423 (evaluated below) for off-road engines with the same maximum power. CI engine meets Tier 2 standards.
Rule 1470(c)(2)(C)(v)- District shall determine appropriate number of hours of operation for demonstrating compliance with District rules and initial start-up testing. Hours of operation used solely for testing and demonstration for compliance with District rules and for initial start-up testing shall not be included as part of the engine's cumulative annual hours specified in clauses (c)(2)(C)(i) and (c)(2)(C)(iii).
Rule 1470(c)(7)- This engine shall not be part of an ISC or DRP see permit conditions.
Rule 1470(d)(7)(A)- A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed on all engines subject to (c)(2) through (c)(9), unless

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 10	PAGE 9
	APPL NO 522637	DATE 9/23/2011
	PROCESSED BY AS08	CHECKED BY

District determines on a case-by case basis a different minimum display capacity is appropriate.

Rule 1470(d)(B)- All DPFs installed pursuant to (c)(2) thorough (c)(9) must be installed with a back pressure monitor to notify the owner/operator when the high backpressure limit is approached.

Rule 1470(d)(9)(A)- Keep a monthly log of usage that shall list and documents the nature of use in: i) emergency use hours of operation; ii) maintenance and testing hours of operation; iii) hours of operation for emission testing to show compliance with (c)(2)(C) & (c)(3)(C); iv) initial start-up hours; v) hours of operation for all uses other than those in (d)(9)(A)(i)-(iv); vi) hours of operation to comply with NFPA 25; vii) hours of operation to demonstrate compliance with District rules.

Rule 1470(d)(9)(B)- Log entries shall be retained for at least 3 years from date of entry. Log entries made within 2 years of the most recent entry shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to District staff within 5 working days from request. Compliance with Rule 1470 is expected.

CARB Diesel PM ATCM 93115 (effective May 19, 2011) (near identical to SCAQMD Rule 1470 above, therefore the Rule evaluation of this ATCM is omitted).

Title 13 CCR Section 2423: Exhaust Emission Standards and Test Procedures – Off-Road Compression Ignition Engines.

2423(a)- Applicability: Applicable.

2423(b)(1)(B)- Exhaust emissions shall not exceed the following with respect to Table 1b steady-state testing, transient testing, and after application of the criteria in Table 1c, not to exceed testing, as applicable:

Table 1b Exhaust Emissions: Tier 4 Interim GEN > 900KW: PM (Interim Model Year 2011-2014): 0.10 g/KW-hr (~0.075g/BHP-hr), NMHC (Interim Model Year 2011-2014): 0.40 g/KW/hr (~0.30g/BHP-hr), NOx: 0.67 g/KW-hr (~0.50g/BHP-hr), and CO: 3.5 g/KW-hr (~2.61g/BHP-hr).

Table 1c Not To Exceed (NTE) Testing limits: PM: 0.125 g/KW-hr (~0.093g/BHP-hr), NMHC: 0.60 g/KW/hr (~0.45g/BHP-hr), NOx: 1.01 g/KW-hr (~0.75g/BHP-hr), and CO: 4.375 g/KW-hr (~3.26g/BHP-hr).

This engine does not comply with NOx and PM emissions standards per CCR Section 2423 for Tier 4 Interim generators > 900 KW. The facility has already contacted the District's legal staff by signing the Declaration (enclosed in this folder) to seek an Order of Abatement (OA). The operator will be allowed to install and operate this engine pursuant to the OA (to be issued) and Declaration until (exact date to be determined) the Proposed Amended Rule (PAR) 1470 is adopted by the Governing Board. The OA is expected to be in effect until December 31, 2011. Under the terms and conditions specified in the OA, the affected party shall comply with all applicable requirements once Proposed Amended Rule 1470 is approved by the Governing Board. (see the attachment for background information on PAR 1470 and Order of Abatement)

Rule 1472: Requirements for Facilities with Multiple Stationary Emergency Standby Diesel ICES

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 10	PAGE 10
	APPL NO 522637	DATE 9/23/2011
	PROCESSED BY AS08	CHECKED BY

This engine qualifies for Initial Notification of Exemption from Filing a Compliance Plan pursuant to (d)(1)(C)(i).

Rule 1472(d)(1)(B)- Each emergency diesel ICE emits diesel PM less than 0.15 g/bhp-hr.

Rule 1472(d)(1)(C)(i)- There are no engine groups, since there are not three or more engines that are within 150 meters of one another.

Rule 1472(d)(2)(A)- The initial notification of exemption shall be submitted in writing on or before the applicable compliance plan submittal date pursuant to subdivision (g) and shall stipulate which criteria of paragraph (d)(1) applies to the facility and demonstrate how at least one of the criteria is met.

Rule 1472(d)(2)(B)- Facilities eligible to submit an initial notification and complying with subparagraph (d)(2)(A) are not subject to compliance plan requirements of paragraphs (d)(3) through (d)(6).

Reg. XXX: The installation of a stationary emergency diesel fueled IC engines is considered a Title V Significant permit revision under Rule 3000(b)(31), since it results in new or additional NSPS or NESHAP requirements and will be subject to an EPA review (Rule 3003 (j)), even though the proposed cumulative emission increases of non-RECLAIM pollutants do not exceed the emissions in Table 5-4 of the Draft Title V TDG March 2005. A public notice is required. An EPA 45 day review and a public notice will be imposed. Compliance is expected.

Conclusions & Recommendations

The equipment is in compliance with the Rules and Regulations of the SCAQMD. A Permit to Construct is recommended for application 522637. For Permit Conditions please see Sample Permit. A revised Title V permit is recommended after EPA review and public notice.