

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
A8638

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-A8638-2012

DETROIT DIESEL CORPORATION

SRN: A8638

Located at

13400 West Outer Drive, Detroit, Michigan 48239

Permit Number: MI-ROP-A8638-2012

Staff Report Date: July 2, 2012

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) requires that the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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JULY 2, 2012 STAFF REPORT

Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with a ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan's Administrative Rules for air pollution control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft permit terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft permit pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

| | |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Stationary Source Mailing Address: | DETROIT DIESEL CORPORATION 13400 West Outer Drive Detroit, Michigan 48239 |
| Source Registration Number (SRN): | A8638 |
| North American Industry Classification System (NAICS) Code: | 333618 |
| Number of Stationary Source Sections: | 1 |
| Is Application for a Renewal or Initial Issuance? | Renewal |
| Application Number: | 201100157 |
| Responsible Official(s): | Jeff Allen, Head of Operations 313-592-5206 Kenneth C. Saari, Director, Technical Services 313-592-5011 |
| AQD Contact: | Sebastian G. Kallumkal, Sr. Env. Engineer 586-753-3738 |
| Date Permit Application Received: | December 22, 2011 |
| Date Application Was Administratively Complete: | December 22, 2011 |
| Is Application Shield In Effect? | Yes |
| Date Public Comment Begins: | July 2, 2012 |
| Deadline for Public Comment: | August 1, 2012 |

Source Description

Detroit Diesel Corporation operates a roughly 3 million square foot diesel engine manufacturing, development and testing facility in Redford Township. The facility is located along the east side of Telegraph Road, stretching from just north of Plymouth Road north to the Chesapeake and Ohio railroad right-of-way. The Detroit Diesel property also extends east to Outer Drive. The eastern half of the property contains the administrative portion of the facility, while the manufacturing and testing operations are located on the western half of the property. The area to the north and east of the Detroit Diesel facility is a densely populated residential area. The area to the west and south of the facility along and west of Telegraph Road and adjacent to Plymouth Road primarily contains businesses of a commercial and light industrial classification.

Detroit Diesel produces medium-duty and heavy-duty on-highway diesel engines for the commercial truck market.

The process equipment and devices that generate emissions that are released to the ambient air at a facility are referred to as Emission Units for the purposes of the ROP. The Emission Units included in the ROP for Detroit Diesel consist of: natural gas-fired boilers; various paint spray booths (emissions controlled by filters or water curtains) used to apply coatings to diesel engines; and various test cells in which the performance of various engines and engine components, both production and developmental, are tested and analyzed.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) in the **2011** submittal.

TOTAL STATIONARY SOURCE EMISSIONS

| Pollutant | Tons per Year |
|---------------------------------------------------|-----------------|
| Carbon Monoxide (CO) | 34.97 |
| Lead (Pb) | 0.00 |
| Nitrogen Oxides (NO _x) | 63.34 |
| Particulate Matter (PM) | 2.15 |
| Sulfur Dioxide (SO ₂) | 6.99 |
| Volatile Organic Compounds (VOCs) | 16.22 |
| Individual Hazardous Air Pollutants (HAPs) | No HAP Reported |
| Total Hazardous Air Pollutants (HAPs) | No HAP Reported |

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

No Hazardous Air Pollutant (HAP) emissions were included in the facility's **2011** MAERS emission inventory report (and none were required by the Air Quality Division to be reported).

In addition to the pollutants listed above that have been reported in MAERS, the potential to emit of Greenhouse Gases in tons per year of CO₂e is less than 100,000 tons per year (calculated CO₂e PTE = 65,853 tons). CO₂e is a calculation of the combined global warming potentials of six Greenhouse Gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

See Parts C and D in the draft ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Wayne County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants except for Annual and 24-hour PM_{2.5} (fine particles) standard.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because the potential to emit nitrogen oxides exceeds 100 tons per year.

The potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is less than 10 tons per year and/or the potential to emit of all HAPs combined is less than 25 tons per year.

The stationary source is considered a "synthetic minor" source in regards to the Prevention of Significant Deterioration regulations, 40 CFR, PART 52.21 because the stationary source accepted legally enforceable permit conditions limiting the potential to emit of nitrogen oxides to less than 250 tons per year.

The stationary source is subject to the federal regulations on Ozone-depleting substances (40 CFR Part 82).

Emission units EU701-EU707 (emergency pumps and generators for computers and lighting backup and fire water lines) are existing, combustion ignition, less than 300 Hp, reciprocating internal combustion engines. These are exempt from permit to install (R336.1201) requirements pursuant to Michigan Administrative Rule, R336.1285(g). These are located at an area source of HAP emissions and are subject to 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Specific requirements are included in the draft ROP under FGRICEMACT.

Emission units EU088 (Series 60 Clearcoat Paint Booth), and EU089 (Series 60 Touchup Paint booth) were dismantled on 9/1/2010. Therefore, the flexible group table for FGSERIES60 was removed from the draft ROP. Emission unit EUBOILER6 (Bigalow natural gas fired, 144 MMBTU/hr, boiler) was dismantled on 11/18/2010. Emission unit table for EUBOILER6 was removed from the draft ROP. Three miscellaneous metal parts spray booths (EU500, EU501 and EU502) were dismantled on 11/18/2010. Therefore flexible group table for FG500 was removed from the draft ROP. Rule 287(c) exempt paint spray booth EU700 was dismantled on 11/14/2011. Therefore EU700 was removed from the flexible group table FGRULE287(c) in the draft ROP.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

No emission units are subject to the federal Compliance Assurance Monitoring rule under 40 CFR, Part 64, because all emission units at the stationary source either do not have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-A8638-2007 are identified in Appendix 6 of the ROP.

| PTI Number | | | |
|------------|--------|--------|--------|
| 102-00 | 125-05 | 208-05 | 165-06 |

Streamlined/Subsumed Requirements

This permit does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Non-applicable Requirements

Part E of the draft ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the draft ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

There were no processes listed in the ROP application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

| Exempt Emission Unit ID | Description of Exempt Emission Unit | Rule 212(4) Exemption | Rule 201 Exemption |
|-------------------------|-------------------------------------|-----------------------|--------------------|
| EU511 | Gasoline Storage Tank (550 gallon) | R 336.1212(4)(c) | R 336.1284(g)(i) |

Draft ROP Terms/Conditions Not Agreed to by Applicant

This permit does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action taken by the DEQ

The AQD proposes to approve this permit. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the U.S. Environmental Protection Agency (USEPA) is allowed up to 45 days to review the draft permit and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Wilhemina McLemore,

Detroit District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

Purpose

A Staff Report dated July 2, 2012, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

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|-----------------------|----------------------------------------------------------------------------------------------------------------------|
| Responsible Official: | Jeff Allen, Head of Operations (313) 592-5206 Kenneth C. Saari, Director, Technical Services (313) 592 5011 |
| AQD Contact: | Sebastian Kallumkal, Sr. Environmental Engineer (586) 753 3738 |

Summary of Pertinent Comments

Comment: MDEQ/AQD commented that the fuel burning sources are located in Wayne County and the draft ROP should include fuel sulfur content limit specified in R336.1402 for the diesel fuel burning sources included in FGHDCCELLS, FGNONROADCELLS, and FGRICEMACT.

Response: Fuel sulfur content limit specified in R336.1402 will be included in the proposed ROP.

Changes to the JULY 2, 2012 Draft ROP

Page 28: FGHDECELLS

1. MATERIAL LIMITS, Section II.1- Added Limit for sulfur content of the diesel fuel.
2. MONITORING/RECORDKEEPING, Section VI.2-Added requirement to keep records of the sulfur content of the diesel fuel combusted and each shipment received

Page 30: FGNONROADCELLS

1. MATERIAL LIMITS, Section II.1- Added Limit for sulfur content of the diesel fuel.
2. MONITORING/RECORDKEEPING, Section VI.2-Added requirement to keep records of the sulfur content of the diesel fuel combusted and each shipment received

Page 43: FGRICEMACT

1. MATERIAL LIMITS, Section II.1- Added Limit for sulfur content of the diesel fuel.