

State Registration Number
N7228

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N7228-2023

FCA US LLC – Dundee Engine Plant

State Registration Number (SRN): N7228

Located at

5800 North Ann Arbor Road, Dundee, Monroe County, Michigan 48131

Permit Number: MI-ROP-N7228-2023

Staff Report Date: October 24, 2022

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) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), 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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RENEWABLE OPERATING PERMIT

October 24, 2022 - STAFF REPORT

ROP Number

MI-ROP-N7228-20XX

Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan’s Administrative Rules for Air Pollution Control promulgated under 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 Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP 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:	FCA US LLC - Dundee Engine Plant 5800 North Ann Arbor Road Dundee, Michigan 48131
Source Registration Number (SRN):	N7228
North American Industry Classification System (NAICS) Code:	336312
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202100128
Responsible Official:	Tania M. Pratnicki-Young, Plant Manager 734-529-9550
AQD Contact:	Stephanie Weems, Environmental Quality Analyst 517-416-3351
Date Application Received:	April 28, 2022
Date Application Was Administratively Complete:	April 29, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	October 24, 2022
Deadline for Public Comment:	November 23, 2022

Source Description

The Dundee Engine Plant (DEP) is located at 5800 Ann Arbor Road within the city limits of Dundee. It is immediately surrounded by commercial, industrial, and agricultural areas. The facility consists of two parallel engine manufacturing plants (North and South) with engine assembly occurring in the middle of the facility. The engine parts are machined, processed, etc. along the facility's perimeter and gradually move towards the center. The finished engines are loaded on racks and are shipped by truck or rail to the designated automotive assembly plant. The South plant is currently being underutilized.

The aluminum engine blocks, engine heads and crank shafts arrive pre-cast. These components are machined and assembled with other prefabricated engine components to complete an engine. Most of the air emissions from the facility are related to engine testing. There is a total of six engine dynamometers fueled with unleaded gasoline. Engines are tested for performance under controlled operating scenarios. There are also 2 test stations fueled by natural gas used to perform intrinsic diagnostic engine testing beyond what can be accomplished in the engine dynamometers.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2021**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	69.69
Lead (Pb)	0
Nitrogen Oxides (NO _x)	6.66
Particulate Matter (PM)	3.97
Sulfur Dioxide (SO ₂)	0.13
Volatile Organic Compounds (VOCs)	2.97

This source is a true minor source of Hazardous Air Pollutants (HAPs), thus no HAP emissions data is listed.

See Parts C and D in the 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.

Monroe County is currently designated by the United States Environmental Protection Agency (USEPA) as a non-attainment area with respect to the 8-hour ozone standard.

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

The stationary source is a minor source of HAP emissions because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

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

Although EUFIRE_PUMP1, EUFIRE_PUMP2, EUEM_GEN1, EUEM_GEN2, EUEM_GEN3 and EUEM_GEN4 were installed after August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. However, future modifications of this equipment may be subject to NSR.

EUFIRE_PUMP1, EUFIRE_PUMP2, EUEM_GEN1, EUEM_GEN2, EUEM_GEN3 and EUEM_GEN4 at the stationary source are not subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and IIII nor 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines due to the date of the installation being prior to the affected date.

EU-DYNO1, EU-DYNO2, EU-DYNO3, EU-DYNO4, EU-DYNO5 and EU-DYNO6 are not subject to the National Emission Standards for Hazardous Air Pollutants 40 CFR 63 Subpart PPPPP for Engine Test Cells/Stands because the facility is not a major source of HAPs.

EU-FIRE_PUMP1, EU-FIRE_PUMP2, EU-EM_GEN1, EU-EM_GEN2, EU-EM_GEN3 and EU-EM_GEN4 at the stationary source are subject to the Maximum Achievable Control Technology Standards for Stationary Reciprocating Internal Combustion Engines (RICE) promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

EUGASDISPENSE at the stationary source is subject to the National Emissions Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities promulgated in 40 CFR Part 63, Subparts A and CCCCC. The ROP contains special conditions provided by FCA US LLC – Dundee Engine Plant in their application for applicable requirements from 40 CFR Part 63, Subparts A and CCCCC. The AQD is not delegated the regulatory authority for this area source MACT.

Since the issuance of MI-ROP-N7228-2018, FCA US LLC – Dundee Engine Plant was issued PTI 42-19 for a new engine manufacturing plant with engine testing capabilities and other miscellaneous equipment. This permit primarily an additional engine manufacturing plant in the South Plant, which will consist of dry and wet machining operations, replacement of three of the six dynamometers (which will be situated between the north and south plants), a replacement of a single hot test stand with an additional new hot test stand for a total of three, and installation of five new natural gas-fueled space heaters with a maximum size of 0.9 million British thermal units per hour (MMBTU/hr) each. This permit was approved on August 22, 2019. This permit was not required to go through public comment.

The AQD's Rules 287 and 290 were revised on December 20, 2016. FGRULE287(2)(c) and FGRULE290 are flexible group tables created for emission units subject to these rules. Emission units installed before December 20, 2016, can comply with the requirements of Rule 287 and Rule 290 in effect at the time of installation or modification as identified in the tables. However, emission units installed or modified on or after December 20, 2016, must comply with the requirements of the current rules as outlined in the tables.

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 have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule pursuant to 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.

EUDRYMACHINE and EUWETMACHINE are not subject to the federal Compliance Assurance Monitoring rule because pre-control emissions were determined using the maximum throughput calculations and an established emission factor, and the pre-control emissions were reported as 1.38 tons per year for

EUDRYMACHINE and EUWETMACHINE total. EUDRYMACHINE uses a PM filtration system and EUWETMACHINE uses oil mist collectors to control PM emissions.

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-N7228-2018 are identified in Appendix 6 of the ROP.

PTI Number			
300-02C			

Streamlined/Subsumed Requirements

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

Non-applicable Requirements

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

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP 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 EGLE, AQD

The AQD proposes to approve this ROP. 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 USEPA is allowed up to 45 days to review the draft ROP 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 Scott Miller, Jackson District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP 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.

State Registration Number
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RENEWABLE OPERATING PERMIT
January 8, 2023 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-N7228-2023

Purpose

A Staff Report dated October 24, 2022, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. 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 Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	Tania M. Pratkanicki-Young, Plant Manager, Plant Manager 734-529-9550
AQD Contact:	Stephanie Weems, Environmental Quality Analyst 517-416-3351

Summary of Pertinent Comments

No pertinent comments were received during the 30-day public comment period.

Changes to the October 24, 2022 Draft ROP

No changes were made to the draft ROP.