

State Registration Number
P0429

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-P0429-2023

DexSys

State Registration Number (SRN): P0429

Located at

5589 West Mount Hope Highway, Lansing, Eaton County, Michigan 48917

Permit Number: MI-ROP-P0429-2023

Staff Report Date: November 28, 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).

TABLE OF CONTENTS

November 28, 2022 - STAFF REPORT	3
January 4, 2023 - STAFF REPORT ADDENDUM	10

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RENEWABLE OPERATING PERMIT

November 28, 2022 - STAFF REPORT

ROP Number

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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:	DexSys 5589 West Mount Hope Highway Lansing, Michigan 48917
Source Registration Number (SRN):	P0429
North American Industry Classification System (NAICS) Code:	336390 - Other Motor Vehicle Parts Manufacturing
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202200003
Responsible Official:	Gerry Mazzola, General Manager 419-290-7943
AQD Contact:	Matt Karl, Environmental Quality Analyst 517-282-2126
Date Application Received:	January 3, 2022
Date Application Was Administratively Complete:	January 3, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	November 28, 2022
Deadline for Public Comment:	December 28, 2022

Source Description

DexSys (Delta Exterior Systems) is owned and operated by Magna International, Inc. (Magna). The facility is located in a predominantly industrial area in Lansing. The closest industries are located less than a quarter mile west, south, and east of the facility. Lansing Community College West Campus and an insurance agency are located a half mile and one-fifth mile north, respectively, from the facility. There are also residential neighborhoods to the northwest of the facility, with the closest neighborhood one-fifth mile away. The I-496 corridor is approximately one mile north of the facility.

The facility is predominantly a General Motors automotive parts supplier specializing in the production of plastic automotive components. The automotive components consist of front- and rear-end bumper fascia are created using mold injection presses and a paint coating line equipped with robotic spray applicators.

The plastic automotive components are fabricated via five mold injection presses, which use mold release agents and thermoplastic olefin (TPO) resin pellets to produce front and rear bumpers. EUMOLD#1 through EUMOLD#4 are 4,000-ton injection molding presses and EUMOLD#5 is a 2,200-ton injection molding press. The conditions for the injection molds are contained in flexible group FGMOLDING.

The surface coating operation (EUPLASTICCOATING) of front- and rear-end bumpers consists of an uncontrolled paint kitchen; a 5-stage non-solvent parts washer with a natural gas-fired hot water heater; three (3) water wash spray booths for the application of adhesion promoters (AdPro), basecoats, and clearcoats and three (3) natural gas-fired drying ovens. The spray coating operation occurs in a non-fugitive enclosure that has been rated as permanent total enclosure (PTE). The emissions are controlled by a regenerative thermal oxidizer (RTO). The PTE is designed to achieve a 100% capture efficiency of the coatings' hazardous air pollutants (HAPs) and volatile organic compounds (VOCs). The emissions are routed to the RTO which is required to achieve a minimum destruction efficiency of 95%. Additionally, all waste purge solvent emissions are also routed to the RTO, although this is not required.

EUFINESSE is a defect repair station in which hand-held sanders and buffing pads are used. The repaired part is cleaned with a cloth containing isopropyl alcohol (IPA) and water. Conditions for EUPLASTICCOATING and EUFINESSE are contained in the flexible group FGMACT-PPPP.

There are three (3) diesel-fired emergency generators (FGDIESELENGS) located throughout the facility which are used to provide backup power during power outages. Some of the generators are contractually obligated to be tested for General Motors' purposes. EUFIREPUMPENG is a 190 kW (241 hp) DEUTZ AG diesel fuel-fired emergency engine model year 2009. EUDIESELENG#1 is a 130 kW (198 hp) Generac industrial diesel emergency engine model SD130 model year September 9, 2015. EUDIESELENG#2 is a 563 kW (744 hp) Tacoma Cummins industrial diesel fuel-fired emergency engine model QSX15, model year 2007 or later.

EUHEATERS is made up of air make-up units and miscellaneous heaters all individually less than 9.9 MMBTU/hr of heat input. EUBOILER is a 12.5 MMBTU/hr natural gas-fired boiler. Conditions for the heaters are contained in the flexible group FGNATURALGAS. The boiler EUBOILER is used for heating washer water and for temperature and humidity control for the paint system. It has a 1319-gallon capacity. Conditions for the boiler are contained in FGMACT-DDDDDD.

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)	0.03
Lead (Pb)	-
Nitrogen Oxides (NO _x)	3.9
PM10*	0.009
Sulfur Dioxide (SO ₂)	0.02
Volatile Organic Compounds (VOCs)	10.6

*Particulate matter with an effective aerodynamic diameter of <10 micrometers.

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2021 by the source:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Cumene	0.09
Ethylbenzene	0.2
Formaldehyde	0.02
Naphthalene	0.02
Xylene	0.7
Total Hazardous Air Pollutants (HAPs)	1.03

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

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.

The stationary source is in Eaton County, which is currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is equal to or more than 25 tons per year.

The stationary source is considered a “synthetic minor” source in regards to the Prevention of Significant Deterioration regulations of the Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality because the stationary source accepted legally enforceable permit conditions limiting the potential to emit of VOC to less than 250 tons per year.

The RTO associated with EUPLASTICCOATING was evaluated for Best Available Control Technology (BACT) Rule 702(a) at 95% control efficiency and was acceptable. VOCs from this emission unit were also limited under Rule 205, resulting in a VOC limit of 59.1 tons per year, as EUPLASTICCOATING has potential VOC emissions greater than major source threshold levels.

The EUPLASTICCOATING HAPs naphthalene, cumene, formaldehyde and ethyl benzene were reviewed as Toxic Air Contaminants (TACs) under Rule 225. Permitted stack heights were considered reasonable for dispersion of these TACs so as to protect the public's health and the environment. Formaldehyde emissions from EUPLASTICCOATING's natural gas-fired drying ovens are the result of heat-treating basecoat coatings containing melamine resin.

EUFINESSE was also evaluated for BACT under Rule 702(a). A VOC emission limit of 2.0 tons per year was assigned to the emission unit and is acceptable for BACT under Rule 702(a).

EUFIREPUMPENG, EUDIESELENG#1 and EUDIESELENG#2 at the stationary source are subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and IIII.

EUFIREPUMPENG, EUDIESELENG#1 and EUDIESELENG#2 at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

The natural gas-fired boiler EUBOILER is subject to the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters for Major Sources promulgated in 40 CFR Part 63, Subparts A and DDDDD.

EUPLASTICCOATING and EUFINESSE at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Surface Coating of Plastic Parts and Products promulgated in 40 CFR Part 63, Subparts A and PPPP.

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."

The emission limitation for VOCs from EUPLASTICCOATING is subject to the federal compliance assurance monitoring rule under 40 CFR Part 64. The emission unit has a control device (RTO) and potential pre-control emissions of VOCs greater than 100 TPY.

The emission limitation(s) or standard(s) for HAPs at the stationary source with the underlying applicable requirement(s) of 40 CFR Part 63, Subpart PPPP from EUPLASTICCOATING and EUFINESSE are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because the emission limitation of 0.16 lbs. organic HAP/lb coating solids meet(s) the CAM exemption for NSPS or MACT proposed after November 15, 1990.

The following Emission Units/Flexible Groups are subject to CAM:

Emission Unit/Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	Emission Unit/Flexible Group for CAM	PAM? *
EUPLASTIC COATING	VOCs/ 59.1 TPY	R 336.1205, R 336.1702(a)	Regenerative Thermal Oxidizer (RTO); Non-Fugitive Enclosure (NFE)	Combustion Chamber Temperature = Minimum temperature of 1500°F or the minimum temperature based on the most recent acceptable stack test which achieved a minimum overall destruction efficiency of 95%. Differential pressure across the enclosure (NFE) = Minimum of - 0.007 "WC	EUPLASTIC COATING	No

*Presumptively Acceptable Monitoring (PAM)

The emission limitation (EUPLASTICCOATING SC I.1 of 59.1 tons per year VOC) is subject to the requirements of CAM. The emission unit EUPLASTICCOATING has a regenerative thermal oxidizer (RTO) control device and has potential pre-control emissions greater than 100 tons per year. EUPLASTICCOATING is a plastic automotive parts coating line. It consists of an uncontrolled paint kitchen; a five-stage parts washer with a natural gas-fired hot water heater; three (3) water wash spray booths for application of adhesion promoter (AdPro), basecoats, and clearcoats; three (3) natural gas-fired drying ovens. The spray coating operation occurs in a booth and is controlled by a RTO.

The RTO combustion chamber temperature and the differential pressure across the enclosure are the approved indicators to be monitored according to 40 CFR Part 63, Subpart P- National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products. The RTO combustion chamber temperature is monitored to ensure temperatures greater than 1500 degrees Fahrenheit (°F). The booth differential pressure is monitored to ensure that the differential pressure between the booth and the surrounding area is less than -0.007 inches water column (in W.C.). All monitoring and data recording consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. An automatic shutdown of all coating operations will occur if airflow is diverted away from the RTO by the bypass valve.

On June 30, 2020, stack emission testing was conducted for EUPLASTICCOATING. Simultaneous sampling of RTO inlet duct and RTO exhaust stack to determine the total gaseous organic (TGO) destruction efficiency (DE) of RTO. Testing was conducted during normal operations. During the testing, emissions from the EUPLASTICCOATING was controlled by the RTO.

Additionally, the non-fugitive enclosure (NFE) associated with the EUPLASTICCOATING was evaluated against the EPA Method 204 criteria to verify 100% capture efficiency (CE) of the volatile organic compounds (VOC) emission within the enclosures. The performance test verified 100% CE and 97.8% DE at the RTO.

No changes have taken place to the EUPLASTICCOATING line or equipment that would affect the TGO capture or destruction efficiency since the performance test was conducted. In addition, there have been no changes to RTO.

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-P0429-2017 are identified in Appendix 6 of the ROP.

PTI Number			
38-13	38-13A	38-13B	38-13D
38-13E			

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

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUSolventTotes	Virgin and waste purge solvent totes: (2) 550-gallons, (3) 80-gallons, (1) 400-gallon, and (1) 55-gallon.	Rule 212(4)(d)	Rule 284(2)(i)
EUStorageContainer	5-gallon propane tanks for forklifts.	Rule 212(4)(d)	Rule 284(2)(b)

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUOven-Quality Control	Painted fasciae from quality control testing booth cured in the natural gas-fired oven, rated at less than 50 MMBTU/hr.	Rule 212(4)(c)	Rule 282(2)(b)(i)
EURofin DCX50 CO2 Laser	CO2 laser with 500 W output that cuts plastic parts off fasciae. Equipped with particulate control, exhausted to ambient air.	Rule 212(4)(e)	Rule 285(2)(l)(vi)(C)

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 Christopher Ethridge, Assistant Division Director. 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
P0429

RENEWABLE OPERATING PERMIT
January 4, 2023 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-P0429-2023

Purpose

A Staff Report dated November 28, 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:	Gerry Mazzola, General Manager 419-290-7943
AQD Contact:	Matt Karl, Environmental Quality Analyst 517-282-2126

Summary of Pertinent Comments

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

Changes to the November 28, 2022 Draft ROP

No changes were made to the draft ROP.