

State Registration Number  
N7256

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N7256-2024

**Universal Coating, Inc.**

State Registration Number (SRN): N7256

Located at

5204 Energy Drive, Flint, Genesee County, Michigan 48505

Permit Number: MI-ROP-N7256-2024

Staff Report Date: January 22, 2024

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**

**JANUARY 22, 2024 - STAFF REPORT**

ROP Number  
MI-ROP-N7256-2024

**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:	Universal Coating, Inc. 5204 Energy Drive Flint, Michigan 48505
Source Registration Number (SRN):	N7256
North American Industry Classification System (NAICS) Code:	332812 - Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202200037
Responsible Official:	Tim Johnson, General Manager/Vice President 810-785-7555
AQD Contact:	Matthew Karl, Senior Environmental Quality Analyst 517-282-2126
Date Application Received:	January 14, 2022
Date Application Was Administratively Complete:	January 14, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	January 22, 2024
Deadline for Public Comment:	February 21, 2024

## Source Description

Universal Coating, Inc. is located at 5204 Energy Drive, Flint, Michigan in Genesee County. The facility is located to the south of the Genesee Power Plant and to the north of the Ajax Asphalt Plant on Energy Drive. Universal Coating, Inc. operations include the manufacture of miscellaneous metal and plastic parts for various industries, mainly for the automotive industry. Process equipment consists of various coating and adhesive lines including spindle line spray booths, phosphate pre-treatment lines, dip spin units, a roll coater line, a powder coating booth, hand spray booths and tumble spray lines. Emissions from the spindle lines, roll coater line, and tumble spray lines are controlled by a regenerative thermal oxidizer (RTO). The facility has a burn-off oven, vapor degreaser, natural gas fired furnaces for comfort heating and three natural gas fired boilers used to heat the phosphate pre-treatment tanks. Metal repair operations include welding units, a metal punch, grinder, drill press and other maintenance equipment.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2022**.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	0.99
Lead (Pb)	5 x 10 <sup>-6</sup>
Nitrogen Oxides (NO <sub>x</sub> )	1.18
PM10*	0.09
Sulfur Dioxide (SO <sub>2</sub> )	0.01
Volatile Organic Compounds (VOCs)	5.50

\* Particulate matter (PM) that has an aerodynamic diameter less than or equal to a nominal 10 micrometers.

The following table lists Potential to Emit (PTE) for Hazardous Air Pollutant emissions as calculated for the year 2023 by Nth Consultants, Ltd:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Hexane (CAS No. 110-54-3)	0.2
Xylene (CAS No. 1330-20-7)	28.8
Ethyl Benzene (CAS No. 100-41-4)	6.8
Toluene (CAS No. 108-88-3)	10.8
1,1,2-Trichloroethane (CAS No. 79-00-5)	0.012
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>108.9</b>

\*\*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 Genesee 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 VOC exceeds 100 tons per year and 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.

EU-DEGREASER at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Halogenated Solvent Cleaning promulgated in 40 CFR Part 63, Subparts A and T.

FG-MACT MMMM (EU-POWDERCOAT, EU-PHOSPHATE1, EU-PHOSPHATE2, EU-PHOSPHATE3, EU-PHOS-PROTO, EU-DS1, EU-DS2, EU-DS3, EU-DS4 (E), EU-DS5 (E), EU-DS6 (E), EU-DS7 (E), EU-CE1, EU-CE2, EU-CE3, EU-CE4, EU-CE5, EU-CE6, EU-CE7, EU-RC, EU-TS1 (E), EU-TS2 (E), EU-TS3, EU-TS4, EU-H1, EU-H2, EU-H3) at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products promulgated in 40 CFR Part 63, Subparts A and MMMM.

FG-MACT PPPP (EU-POWDERCOAT, EU-PHOSPHATE1, EU-PHOSPHATE2, EU-PHOSPHATE3, EU-PHOS-PROTO, EU-DS1, EU-DS2, EU-DS3, EU-DS4 (E), EU-DS5 (E), EU-DS6 (E), EU-CE1, EU-CE2, EU-CE3, EU-CE4, EU-CE5, EU-CE6, EU-CE7, EU-RC, EU-TS1 (E), EU-TS2 (E), EU-TS3, EU-TS4, EU-H1, EU-H2, EU-H3) at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products promulgated in 40 CFR Part 63, Subparts A and PPPP.

The three (3) steam boilers associated with FG-PHOSPHATELINES (EU-PHOSPHATE1, EU-PHOSPHATE2, EU-PHOSPHATE3, EU-PHOS-PROTO) at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and DDDDD.

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(s) or standard(s) for Organic HAPs at the stationary source with the underlying applicable requirement(s) of 40 CFR Part 63, Subparts MMMM and PPPP, from FG-MACT MMMM and FG-MACT PPPP, respectively, are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(i) because Organic HAPs Emission Limitations (See FG-MACT MMMM and FG-MACT PPPP for specific limitations) meet the CAM exemption for NSPS or MACT proposed after November 15, 1990.

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

FG-RTO consists of a permanent total enclosure (PTE) that captures and routes emissions from ten (10) metal and plastic parts coating lines and associated purge and cleanup solvents to a regenerative thermal oxidizer (RTO) control device. During the evaluation for permit to install (PTI) No. 96-03D the source

requested and was granted a PSD synthetic minor limit for VOC (49.7 TPY), which it would use the RTO control to comply with.

Emission Unit/ Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	Emission Unit/Flexible Group for CAM	PAM? *
FG-RTO (EU-CE1, EU-CE2, EU-CE3, EU-CE4, EU-CE5, EU-CE6, EU-CE7, EU-RC, EU-TS3, EU-TS4)	VOC, acetone (CAS No. 67-64-1), and methyl acetate (CAS No. 79-20-9), combined	R 336.1205, R 336.1224, R 336.1702(a)	Regenerative Thermal Oxidizer (RTO)	Combustion Chamber Temperature= greater than or equal to 1570.6°F or the minimum temperature from the most recent acceptable stack test, based on a 3-hour average	FG-RTO	No
			Permanent Total Enclosure (PTE)	Differential Pressure across the enclosure = greater than or equal to -0.007 inches water column, based on a 3-hour average  Average face velocity through all-natural draft openings (NDO) = greater than or equal to 200 feet per minute based on a 3-hour average		

\*Presumptively Acceptable Monitoring (PAM)

A Permanent Total Enclosure (PTE) and Regenerative Thermal Oxidizer (RTO) are used to control the VOC emissions from ten (10) metal and/or plastic parts coating lines and the associated purge and cleanup activities.

The monitoring approach used for the RTO involves continuously monitoring combustion chamber temperature using a thermocouple system with a digital temperature indicator and data acquisition system. The minimum combustion chamber temperature is set based on what is needed to achieve 95% destruction efficiency (by weight) of VOC emissions during stack testing, which is conducted every 5 years. The current minimum operating temperature is 1570.6°F. An averaging period of 3-hours is used for the combustion chamber temperature. If the average combustion temperature in any 3-hour period falls below the minimum operating temperature (1570.6°F) an alarm will be activated and coating lines routed to the

RTO will be shut down until problem can be identified, resolved, and the minimum operating temperature can be achieved.

The monitoring approach used for the PTE involves continuously monitoring differential pressure and facial velocity across the natural draft openings. A pressure device with a digital indicator and a data acquisition system are utilized. The PTE must achieve a differential pressure of 0.007 inches water column vacuum into the natural draft openings. The facial velocity in feet per minute is calculated based on the area of the natural draft openings and the differential pressure readings. A minimum facial velocity of 200 feet per minute is required. The minimum differential pressure and facial velocity were established to ensure a VOC capture efficiency of 100% (by weight). The minimum facial velocity is measured during stack testing, which is conducted every 5 years. An averaging period of 3-hours is used for both the differential pressure and facial velocity measurements. If the PTE falls below the required differential pressure or facial velocity, an alarm will be activated and coating lines routed to the RTO will be shut down until problem can be identified, resolved, and the minimum required differential pressure and facial velocity can be achieved.

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-N7256-2017 are identified in Appendix 6 of the ROP.

PTI Number			
93-81	95-89	499-93	177-96B
177-96B	199-03	96-03	96-03A
96-03B	96-03C	96-03D	

### **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 Not in the Draft ROP**

There were no PTI exempt processes listed in the ROP Application pursuant to Rule 212(4) that were not included in the Draft ROP.

### **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 Robert Byrnes, Lansing 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  
N7256

**RENEWABLE OPERATING PERMIT**  
**FEBRUARY 27, 2024 - STAFF REPORT ADDENDUM**

ROP Number  
MI-ROP-N7256-2024

**Purpose**

A Staff Report dated January 22, 2024, 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:	Tim Johnson, General Manager/Vice President 810-785-7555
AQD Contact:	Matthew Karl, Senior 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 January 22, 2024 Draft ROP**

No changes were made to the draft ROP.