

Michigan Department of Environmental Quality  
Air Quality Division

State Registration Number  
N0929

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N0929-2018

**Ford Motor Company - Flat Rock Assembly Plant**

SRN: N0929

Located at

1, International Drive, Flat Rock, Michigan 48134

Permit Number: MI-ROP-N0929-2018

Staff Report Date: February 5, 2018

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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**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 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 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:	Ford Motor Company – Flat Rock Assembly Plant 1 International Drive Flat Rock, Michigan 48134
Source Registration Number (SRN):	N0929
North American Industry Classification System (NAICS) Code:	336112
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201500183
Responsible Official:	Deborah Manzano, Plant Manager 313-673-2616
AQD Contact:	Robert Byrnes, Senior Environmental Engineer 517-275-0439
Date Application Received:	October 29, 2015
Date Application Was Administratively Complete:	October 29, 2015
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	February 5, 2018
Deadline for Public Comment:	March 7, 2018

## Source Description

Ford Motor Company - Flat Rock Assembly Plant is an automobile manufacturing plant which consists of a stamping plant, a body shop, a paint shop, a plastic parts paint shop, and a final assembly shop.

The plant is located in the southeast corner of the City Flat Rock, Wayne County, on 400 acres with over 2.7 million square feet under roof. The area is bounded to the east by I-75, to the south by Gibraltar Road, to the west by Hall Road, and to the north by Vreeland Road. To the north and east of this site, the area is mostly farm land. There is a railroad classification yard to the North of Vreeland Rd. The nearest residential areas are to the South and East of the site and are over 1/2 mile from the manufacturing processes.

The plant has the capability of stamping, assembling, and painting metal body parts; molding and painting plastic parts, and final assembly of these and other received parts to produce a finished automobile. The assembly process begins with the framing of the body by welding together various vehicle metal stamped parts, such as doors, hoods, roofs, etc. After the body is framed, it then proceeds through a body cleaning and phosphating step, an electro deposition paint coating (E-Coat) process, primer surfacer paint coating process, top coat painting and clear coating process. The top coating and clear coating processes are conducted on two parallel lines. Several smaller coating operations are also located throughout the assembly plant. Volatile organic compounds (VOCs) are emitted from coating processes, cleaning operations, and various other related processes. VOC controls were added to the automotive body paint shop in 1997. This included the installation of three regenerative catalytic oxidizers for surface primer, topcoat, and clearcoat partial booth control. A regenerative thermal oxidizer was also added to replace old controls on paint cure oven emissions for improved VOC destruction and energy efficiency.

Steam for office heating is produced by two natural gas-fired boilers. Other smaller natural gas fired hot water boilers are used for process heating. No air emission control equipment is installed on the boilers. Natural gas is also used for all other comfort heating and ventilation.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2015**.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	11.6
Lead (Pb)	
Nitrogen Oxides (NO <sub>x</sub> )	56.8
Particulate Matter (PM)	14.4
Sulfur Dioxide (SO <sub>2</sub> )	0.4
Volatile Organic Compounds (VOCs)	552.6

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2015 by Ford Motor Company:

	Tons per Year
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>80.6</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 located in Wayne County, which is currently designated by the U.S. 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 Volatile Organic Compounds (VOC) exceeds 100 tons per year and the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, 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 was subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21, because at the time of New Source Review permitting the potential to emit of VOC was greater than 250 tons per year.

EU-ECOAT, EU-GUIDECOAT, EU-TOPCOAT and EU-ASSEMBLY PURGE and CLEAN at the stationary source is subject to the Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations promulgated in 40 CFR Part 60, Subparts A and MM.

EU-TANKS at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Organic Liquid Distribution promulgated in 40 CFR Part 63, Subparts A and EEEE.

EU-ECOAT, EU-NGB ADHESIVES & SEALERS, EU-DEADENERS, EU-GLASS INSTALL, EU-GUIDECOAT, EU-TOPCOAT, EU-FINAL REPAIR, EU-BLACKOUT/WAX, EU-UNDERCOAT, EU-ASSEMBLY PURGE & CLEAN at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Surface Coating of Automobiles and Light-Duty Trucks promulgated in 40 CFR Part 63, Subparts A and IIII.

EU-PLASTIC and EU-PLASTIC PURGE & CLEAN at the stationary source is 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.

EU-BOILER62013, EU-BOILER62018, EU-BOILER62019, EU-BOILER62026, EU-BOILER62575, EU-BOILER23136, EU-BOILER23145, EU-PEBOILER1, EU-PEBOILER2, EU-PLASTICSBOILER, at the stationary source is 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.

EU-UTFPH-SOUTH, EU-UTFPH-MIDDLE, EU-UTFPH-NORTH, EU-MSCFIREPUMP, EU-MSCEMGEN1 through EU-MSCEMGEN11, EU-LNCNTEMGEN, EU-SERVEEMGGEN, EU-PAINTEMGEN at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

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 VOC from EU-GUIDECOAT, EU-TOPCOAT and EU-ECOAT at the stationary source is subject to the federal Compliance Assurance Monitoring rule under 40

CFR Part 64. This emission unit has a control device and potential pre-control emissions of Volatile Organic Compounds greater than the major source threshold level.

<b>Emission Unit ID</b>	<b>Pollutant/ Emission Limit</b>	<b>UAR(s)</b>	<b>Control Equipment</b>	<b>Monitoring</b>	<b>Presumptively Acceptable Monitoring?</b>
EU-ECOAT	VOC/732.0 tpy	R336.1225, R336.1702(a) R 336.1901	Regenerative Thermal Oxidizer (RTO)	Continuous Temperature Monitoring, BACT	No
EU-GUIDECOAT	VOC/732.0 tpy	R336.1225, R336.1702(a) R 336.1901	Three Regenerative Catalytic Oxidizers (RCO) and a RTO	Continuous Temperature Monitoring, BACT	No
EU-TOPCOAT	VOC/732.0 tpy	R336.1225, R336.1702(a) R 336.1901	Three Regenerative Catalytic Oxidizers (RCO) and a RTO	Continuous Temperature Monitoring, BACT	No

EU-PLASTIC would be subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64, however the facility does not use the control device to achieve compliance with the emission limitations and therefore is not subject to part 64 (64.2(2)).

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-N0929-2011a are identified in Appendix 6 of the ROP.

<b>PTI Number</b>			
1032-84	1033-84	1038-84	1039-84
1040-84	C-6803	C-11383	C-6798
C-6799	C-6780	C-6801	C-6872
C-6852	C-6853	C-7819	C-6800
181-01	197-04	89-07	112-10
138-10	C-6821-6851		

**Streamlined/Subsumed Requirements**

The following table lists explanations of any streamlined/subsumed requirements included in the ROP pursuant to Rules 213(2) and 213(6). All subsumed requirements are enforceable under the streamlined requirement that subsumes them.

<b>Emission Unit/Flexible Group ID</b>	<b>Condition Number</b>	<b>Streamlined Limit/ Requirement</b>	<b>Subsumed Limit/ Requirement</b>	<b>Stringency Analysis</b>
FG-Facility	I.2	4.8 pounds of VOC per job	1.4 kg VOC/LAC equivalent to 11.66 lbs VOC/GAC. Standards for Volatile Organic Compounds under 40 CFR 60.392(b)	The streamlined requirement of 4.8 pounds VOC per job is more stringent than 11.66 lbs VOC/GAC.
FG-Facility	I.2	4.8 pounds of VOC per job	1.47 kg VOC/LAC equivalent to 12.24 lbs VOC/GAC. Standards for Volatile Organic Compounds under 40 CFR60.392(c)	The streamlined requirement of 4.8 pounds VOC per job is more stringent than 12.24 lbs VOC/GAC.
FG-Facility	VI.1	Records under SC VI.1 to calculate emissions on a monthly basis.	Performance test and Compliance provisions under 40 CFR 60.393.	The compliance provisions under SC VI.1 is equivalent to keeping a monthly record of VOC emissions under 40 CFR 60.393.
FG-Controls	VI.1 & VI.2	Continuous temperature monitoring for thermal oxidizers and desorption gas temperature for concentrators.	Monitoring of emissions and operations under 40 CFR 60.394.	Continuous temperature monitoring for the control equipment is equivalent to the continuous temperature monitoring requirements of 40 CFR 60.394.
FG-Facility	VII.2	Semi-annual reporting of deviations under SC VII.2	Reporting and recordkeeping requirements under 40 CFR 60.395	Semi-Annual reporting of deviations is equivalent as it has more detailed information than simply reporting emissions are over or under the limit.

### **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 the MDEQ, 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 Wilhemina McLemore, Detroit 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.



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**March 16, 2018 STAFF REPORT ADDENDUM**

MI-ROP-N0929-2018

**Purpose**

A Staff Report dated February 5, 2018, 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**

Responsible Official:	Deborah Manzano, Plant Manager 313-673-2616
AQD Contact:	Robert Byrnes, Senior Environmental Engineer 517-275-0439

**Summary of Pertinent Comments**

**Page 5, Staff Report, Regulatory Analysis:** The last paragraph on Page 5 refers to the emission limitation(s) or standards(s) from EU-GUIDECOAT, EU-TOPCOAT, and EU-E-COAT subject to Compliance Assurance Monitoring. The statement is only true for VOC, not PM-10. The current reference to PM-10 with a question mark should be removed from this statement.

**Page 58, FLEXIBLE GROUP SUMMARY TABLE, FG-SIRICEMACT:** EU-MSCEMGEN11 should be added to this flexible group.

**Changes to the February 5 Draft ROP**

The AQD agrees with both comments and the changes have been made.