

State Registration Number
N2155

Michigan Department of Environmental Quality
Air Quality Division
**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N2155-2017

FCA US LLC – JEFFERSON NORTH ASSEMBLY PLANT

SRN: N2155

Located at

2101 Conner Avenue, Detroit, Michigan 48215

Permit Number: MI-ROP-N2155-2017

Staff Report Date: July 11, 2016

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).

TABLE OF CONTENTS

JULY 11, 2016 STAFF REPORT	3
MARCH 24, 2017 STAFF REPORT ADDENDUM	9

RENEWABLE OPERATING PERMIT

JULY 11, 2016 STAFF REPORT

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:	2101 Conner Avenue Detroit, Michigan 48215
Source Registration Number (SRN):	N2155
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:	201500066
Responsible Official:	Curt D. Towne, Plant Manager
AQD Contact:	313-956-8962
Date Application Received:	Robert Byrnes, Senior Environmental Engineer
Date Application Was Administratively Complete:	May 4, 2015
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	July 11, 2016
Deadline for Public Comment:	August 10, 2016

Source Description

FCA US LLC's Jefferson North Assembly Plant is located in the city of Detroit, on the west side of Conner Avenue, north of Jefferson Avenue. The Jefferson North Assembly Plant (JNAP) manufactures and assembles passenger vehicles. Currently, the Jeep Grand Cherokee and Dodge Durango model lines are produced at JNAP. The facility was built in 1991 and in January 1992, it produced the first Jeep Grand Cherokee. The current facility replaced an older assembly plant that stood in the same location.

JNAP receives automobile components from FCA US LLC's stamping and engine manufacturing plants as well as other mechanical and electronic components from numerous suppliers. The production of vehicles requires many different operations, including stamping, welding, adhesive application, painting and automotive fluid filling, as well as ancillary operations such as waste water treatment.

Also, in the ROP, for all of the emission units associated with the vehicle manufacturing operations, the facility is operating under a flexible permit which allows projects to proceed without a permit under R 336.1201 as long as there is no increase in emissions over the facility limits.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2014**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	9.9
Lead (Pb)	0.0
Nitrogen Oxides (NO _x)	62.6
Particulate Matter (PM)	32.3
Sulfur Dioxide (SO ₂)	0.4
Volatile Organic Compounds (VOCs)	704.4

Hazardous Air Pollutant emissions are not required to be reported in the MAERS:

Pollutant	Tons per Year
Individual Hazardous Air Pollutants (HAPs) **	Not Calculated
Total Hazardous Air Pollutants (HAPs)**	Not Calculated

**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 except for a portion of Wayne County designated as nonattainment for Sulfur Dioxide.

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, Nitrogen Dioxide, and Carbon Monoxide 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.

No emissions units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations.

The stationary source was subject to Act 451, Part 55, Rule 220 for Major Sources Impacting Nonattainment Areas at the time of New Source Review permitting. Rule 220 has been rescinded and replaced by the current equivalent Rule 1908. None of the conditions within this ROP were the result of any analysis performed under Rule 1908.

EU-ECOAT, EU-GUIDECOAT, EU-TOPCOAT1, EU-TOPCOAT2, and EU-TOPCOAT3 at the stationary source are subject to the New Source Performance Standards for Automobile and Light Duty Truck Surface Coating Operations promulgated in 40 CFR, Part 60, Subparts A and MM.

EU-BOILER1, EU-BOILER2, EUBOILER3 and EU-BOILER4 at the stationary source are subject to the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR, Part 60, Subparts A and Dc.

EU-ECOAT, EU-SEALERS, EU-GUIDECOAT, EU-TOPCOAT1, EU-TOPCOAT2, EU-TOPCOAT3, EU-TOUCHUP, EU-FINALSEALER, EU-WINDSHIELDFILL, EU-LOWBAKE, EU-WIPE, and EU-PURGE at the stationary source are subject to the Maximum Achievable Control Technology Standards for Surface Coating of Automobiles and Light-Duty Trucks promulgated in 40 CFR, Part 63, Subparts A and IIII.

EU-METHANOLTANK at the stationary source is subject to the Maximum Achievable Control Technology Standards for Organic liquids Distribution promulgated in 40 CFR, Part 63, Subparts A and EEEE.

EU-ENG-EFP and EU-ENG-WFP at the stationary source are 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.

EU-BOILER1, EU-BOILER2, EUBOILER3 and EU-BOILER4 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 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."

EU-ECOAT, EU-TOPCOAT1, EU-TOPCOAT2, and EU-TOPCOAT3 at the stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64. These emission units have a control device and potential pre-control emissions of volatile organic compounds greater than the major source threshold level.

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 and Wayne County permits that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-N2155-2017 are identified in Appendix 6 of the ROP.

Permit Number			
18-08	220-04	153-97A	32-95C
615-86A	C-10298	C-9253	C-9252

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.

Emission Unit/Flexible Group ID	Condition Number	Streamlined Limit/ Requirement	Subsumed Limit/ Requirement	Stringency Analysis
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 CFR 60.392(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.

Emission Unit/Flexible Group ID	Condition Number	Streamlined Limit/ Requirement	Subsumed Limit/ Requirement	Stringency Analysis
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

The following table lists terms and/or conditions of the draft ROP that the AQD and the applicant did not agree upon and outlines the applicant’s objections pursuant to Rule 214(2). The terms and conditions that the AQD believes are necessary to comply with the requirements of Rule 213 shall be incorporated into the ROP.

Emission Unit/ Flexible Group ID	Permit Term(s) and/or Condition(s) in Dispute	Applicant’s Objection
FG-FACILITY	I. EMISSION LIMITS 1, 2, 3, 4, 5 & 6.	The applicant objects to the inclusion of EU-COLDCLEANER, EU-RULE287(c), EU-RULE 290, EU-ENG-EFP, EU-ENG-WFP in the list of emission units covered by FG-Facility and as being subject to the emission limits found in FG-FACILITY. FCA does not approve of the addition of all facility emission units in the FG-Facility description because, in part, pollutant emissions from all such units were not included in the establishment of the corresponding permit limit.

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.

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2155

MARCH 24, 2017 STAFF REPORT ADDENDUM

MI-ROP-N2155-2017

Purpose

A Staff Report dated July 11, 2016, 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:	Zachary Leroux, Plant Manager 313-956-7721
AQD Contact:	Robert Byrnes, Senior Environmental Engineer 517-284-6632

Summary of Pertinent Comments

FCA COMMENTS

FCA Comments:

FCA provided 8 comments pertaining to FG-FACILITY and their opposition to what they consider a revision to the ROP definition of FG-FACILITY. FCA does not approve of the following addition to the Emission Units description:

Additionally, this includes but is not limited to the following emission units: EU-PMRCOLDCLEANER, EU-GRINDING, EU-SEALERS, EU-ECOAT, EU-GUIDECOAT, EU-TOPCOAT1, EU-TOPCOAT2, EU-TOPCOAT3, EU-TOUCHUP, EU-FINAL SEALER, EU-GAS FILL, EU-WINDSHIELDFILL, EU-LOWBAKE, EU-WIPE, EU-PURGE, EU-TF-O-004, EU-TF-O-005, EU-TF-O-006, EU-BOILER1, EU-BOILER2, EU-BOILER3, EU-BOILER4, EU-COLDCLEANER, EU-RULE287(c)), EU-RULE 290, EU-ENG-EFP, EU-ENG-WFP

FCA does not approve of the addition of all facility emission units in the FG-Facility description because, in part, pollutant emissions from all such units were not included in the establishment of the corresponding permit limit.

AQD Response:

No changes made. The AQD has updated the description of FG-Facility to clarify which emission units are currently included under FG-FACILITY. This was done by including all emission units in the ROP in the description of FG-FACILITY. FG-FACILITY covers all emission units and flexible groups associated with automotive assembly and painting operations.

EPA COMMENTS

EPA Comment 1:

There is not enough information to support the determination that the 4.8 pounds of Volatile Organic Compound (VOC) per job facility wide limit is more stringent than the New Source Performance Standard (NSPS) Subpart MM emissions limits in 40 Code of Federal Regulations (CFR) 60.392(b) and (c).

AQD Response 1:

FCA US LLC has provided a written response showing the 4.8 pounds of VOC per job is more stringent. The analysis considered the percent VOC contribution for e-coat (1.6%), powder (0%) and topcoat (81%) towards the overall 4.8 pounds VOC/job limit. Mass solids applied were calculated using the worst case minimum paint thickness for a vehicle. The apportioned VOC for each operation (e-coat, powder and topcoat) was then divided by the worst case mass solids applied and compared to the NSPS standard as follows:

Operation	Lb VOC/job (contribution portion of 4.8)	Solids/job (GACS)	Stringency/Equivalent Limit (lb/GACS)	NSPS Limit (lb/GACS)
E-coat	0.08	0.547	0.14	1.42
Powder	0	0.188	0	11.68
Topcoat (basecoat+clearcoat)	3.9	0.343	11.4	12.3

The equivalent limit is lower than the NSPS limit and therefore is more stringent. Streamlining/subsuming conditions have been added to FG-FACILITY special conditions (SC) I.1, VI.1 & VII.2 and to FG-CONTROLS SC VI.1 & VI.2.

EPA Comment 2:

There is not enough information to support the determination that the emission calculation requirements in FG-Facility SC VI.1 are equivalent to the compliance provisions in 40 CFR 60.393.

AQD Response 2:

The ROP references the US EPA Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light Duty Trucks in several different areas throughout and most specifically in Appendix 7 as follows:

The permittee shall use the calculations and methodologies in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in US EPA Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light Duty Trucks (September 2008, EPA-453/R-08-002) for EU-Guidecoat and EU-Topcoat.

The Auto Protocol requires monthly usages for recordkeeping. The Auto Protocol also has the ability to prorate VOC emissions on a daily basis while NSPS Subpart MM has a calendar quarter (every 3 months) recordkeeping/reporting requirement. Therefore the emission calculation requirements in the ROP are more stringent.

EPA Comment 3:

The Staff Report includes a determination that the continuous thermal oxidizer temperature monitoring in the FG-CONTROLS SC VI.1 and 2 is equivalent to the monitoring requirements in 40 CFR 60.394. However, the permit does not include streamlined permit conditions, and the FG-CONTROLS conditions do include NSPS Subpart MM.

AQD Response 3:

The streamlined permit conditions and NSPS Subpart MM applicable requirement references have been included in special conditions VI.1 and VI.2.

EPA Comment 4:

The Staff Report includes FG-BOILERMACT. Please provide information regarding the four boilers (capacity, boiler category, etc.), sufficient to identify the 40 CFR 60 Subpart DDDDD requirements that apply to these boilers and revise the FG-BOILERMACT table as necessary.

AQD Response 4:

The four boilers have a rated capacity of 70 MMBtu/hr each. They are existing units and burn natural gas which is covered under the "Gaseous fuel" definition in 40 CFR 63 Subpart DDDDD. The rated capacity has also been added to the Emission Unit Descriptions for each boiler.

EPA Comment 5:

EU-ECOAT, EU-TOPCOAT1, EU-TOPCOAT2 and EU-TOPCOAT3 are subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM). However, the permit does not include all applicable CAM requirements. Please include the requirements in 40 CFR 64.6(c) for each CAM subject pollutant specific emission unit.

AQD Response 5:

The AQD believes the ROP contains all applicable CAM requirements and has been consistent with those requirements as compared to other similar automobile manufacturing facilities. The requirements for CAM can be found in the group FG-CONTROLS.

EPA Comment 6:

EU-TOPCOAT1, EU-TOPCOAT2 and EU-TOPCOAT3 sections of the permit cite the December 1988 version of EPA's "Protocol for Determining the Daily Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations". FG-FACILITY and Appendix 7 cite the September 2008 version of the protocol. Please update the permit accordingly to cite the most recent version.

AQD Response 6:

The AQD has updated the references to the September 2008, EPA 453/R-08-002, as amended version of the Auto Protocol.

EPA Comment 7:

FG-FACILITY, SC V. Testing/Sampling requires the testing of a single boiler (out of four) as a representative unit once every 5 years. Please include information in the Staff Report verifying that these boilers are substantially similar. Also, include a requirement that the representative unit cannot be the same unit that has been previously tested in prior tests.

AQD Response 7:

The AQD has added the rate capacity for each boiler in their respective emission unit descriptions as a way to represent them as substantially similar. The AQD does not typically allow a re-test of the same unit unless there is cause for that specific unit to be retested. The AQD will consider the appropriateness of which unit shall be tested by reviewing future test plan submittals which are to be approved in accordance with Department requirements.

EPA Comment 8:

FG-AUTO-MACT, SCIII. Process/Operational Restrictions. The draft permit indicates that the permittee shall develop and implement a work practice plan and also a startup, shutdown, malfunction plan, in accordance with 40 CFR 63.3100(c) and 63.3100(f) respectively. Please verify the facility has developed the plans and they are publicly available.

AQD Response 8:

FCA US LLC has developed and implemented a work practice plan which is publicly available with the ROP Renewal application found on the DEQ/AQD website dated May 11, 2015. The facility does not have a startup, shutdown, and malfunction plan under AUTO MACT as they do not take control credit to achieve compliance with the respective emission limits.

EPA Comment 9:

FG-CONTROLS, SCIII.1 Process/Operational Restrictions. The draft permit indicates that the permittee shall develop, maintain and implement an Operation and Maintenance (O&M) plan for FG-CONTROLS, pursuant to 40 CFR 64.6(c)(1)(i) and (ii) and 64.7(e). Please verify the facility has a plan and it is publicly available.

AQD Response 9:

FCA US LLC has developed and implement an O&M Plan which is publicly available with the ROP Renewal application found on the DEQ/AQD website dated May 11, 2015.

EPA Comment 10:

FG-RULE287(c). Please include a description of the emission units in either the staff report or the draft permit.

AQD Response 10:

EU-MAINTENANCE_BOOTH has been added to the ROP Emission Unit Summary Table and it listed as an emission unit in FG-RULE287(c).

EPA Comment 11:

FG-RULE290. Please include a description of the emission units in either the staff report or the draft permit.

AQD Response 11:

FCA US LLC currently does not have any emission units operating as exempt under Rule 290. The emission unit ID that is currently listed is there as a placeholder for potential future exempt emission units.

EPA Comment 12:

FG-CI-RICE-MACT. The language included in the flexible group does not properly incorporate 40 CFR Part 63 Subpart ZZZZ. For instance, SC III.1 indicates that the work practice standards specified in 40 CFR 63.6602 are recommended.

AQD Response 12:

The AQD has removed the word "recommended" from FG-CI-RICE-MACT Special Condition III.1.

AQD Comments/Changes:

In the Staff Report Addendum, the Responsible Official was changed to Zachary Leroux because the AQD received an ROP notification of change on August 15, 2016.

Changes to the July 11, 2016 Draft ROP

On pages 14 and 15, in the Emission Unit Summary Table, staff added the rated capacity for EU-BOILER1 through EU-BOILER4.

On page 15 and page 78, staff added EU-MAINTENANCE_BOOTH in the Emission Unit Summary Table and listed it as an emission unit in FGRULE287(c).

For EUTOPCOAT1, EUTOPCOAT2 and EUTOPCOAT3, on pages 23, 26 and 29, respectively, for SC V.1 (Testing/Sampling), staff updated the references to the September 2008 version of the Auto Protocol.

On page 55, for FG-FACILITY, superscript "a" was added to the VOC limit contained in SC I.1 and the emission limit streamlined/subsumed condition was added to footnote a at the bottom of the Emission Limits table on page 56.

On page 57, for FG-FACILITY, superscript "b" was added to SC VI.1 a – SC VI.1 d. On page 58, at the bottom of the Monitoring/Recordkeeping section, staff added footnote b which contains a monitoring streamlined/subsumed condition.

On page 58, for FG-FACILITY, superscript "c" was added to SC VII.2. On page 59, at the bottom of the Reporting section, staff added footnote c which contains a reporting streamlined/subsumed condition.

On page 62, for FG-CONTROLS, superscript "a" was added to SC V1.1 and SC VI.2. At the bottom of the page, staff added footnote c which contains a monitoring streamlined/subsumed condition.

On page 86, for FG-CI-RICE-MACT, staff removed the word "recommended" from SC III.1.