DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B160672895

FACILITY: General Motors LLC Flint Assembly		**SRN / ID:** B1606
LOCATION: G-3100 Van Slyke Rd., FLINT		**DISTRICT:** Lansing
CITY: FLINT		**COUNTY:** GENESEE
CONTACT: Kim Gerlock , Environmental Engineer		**ACTIVITY DATE:** 05/02/2024
STAFF: Autumn Cole	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: On-site inspection of Assembly Plant		
RESOLVED COMPLAINTS:		

B1606 General Motors LLC Flint Assembly

On March 5, 2024 the State of Michigan's Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), conducted an on-site inspection of General Motors Flint – Assembly plant. The last inspection of the facility was on April 12, 2022. The facility location is at G-3100 Van Slyke Rd, Flint.

The Environmental Contact:

Kim Gerlock, Environmental Engineer

Email: Kimberly.gerlock@gm.com Phone: (517)257-0717

AQD Staff

Autumn Cole, Environmental Engineer

Bob Byrnes, Engineer

Loren Hicks, EQA

Facility Description:

General Motors Flint is a large truck manufacturing facility. They have three major parts of their process. Metal center – where they stamp out large sheets of metal for parts for their vehicles, Engine plant - where they construct and test the engines and the Assembly plant - where they paint and assemble all parts of the vehicle before they are sold. This inspection date focused only on the assembly plant, as it is where a majority of their emissions are from.

Regulatory Overview

This facility is a major source for HAPS, NOx, Sox, CO and VOC. They are therefore subject to MI-ROP-B1606-2020, their permit under the Title V Renewable Operating Permit (ROP) program.

They are also subject to 40 CFR Part 60 Subpart Kb, Subpart MM, and 40 CFR Part 63 Subpart A, Subpart DDDDD, Subpart III, and Subpart ZZZZ.

This facility is required to report to MIEnviro semiannually and annually.

Fee Status:

Major Source

Inspection:

We arrived at the site at 8:30am. Upon arrival, no visible emissions or odors were detected. We met with Kim Gerlock, Environmental Engineer, who sat down with us and discussed the purpose of this inspection, any changes since the last inspection, and just a general overview of the assembly plant and its emission units. From there, we began our tour of the process to review the equipment.

Emission Units:

Emission Unit / Flexible Group	Description	Compliance Status
EU-PRETREATMENT	Pretreatment of vehicle surface to prepare it for prime coat (E-coat).	Compliance
EU-ECOAT	Prime coating operations are performed in an electrodeposition tank followed by a curing oven, oven canopy, cooler zone, and a dry filter scuff booth	Compliance
EU-SEALERS & ADHESIVES	Sealers and adhesives are applied both in the body shop and the paint shop. Various sealer materials application stations in the paint shop are followed by a curing oven.	Compliance
EU-SOUND DAMP	An acoustical damper product (Liquid Applied Sound Deadener (LASD)) that will be applied using robotic spray equipment.	Compliance
EU-THREE WET	Two parallel coating processes each consisting of an automatic basecoat prime booth, a heated flash-off area, an automatic basecoat booth, a heated flash-off area, an automatic clearcoat booth, a curing oven, a cooling zone, and a finesse booth.	Compliance

EU-GLASS INSTALL	**Materials used to bond the windshield and rear windows to the vehicle.**	**Compliance**
EU-FINAL REPAIR	**Dry filter booths used for repair paint application.**	**Compliance**
EU-PURGE&CLEAN	**Solvents used for cleanup and purge of facility paint systems. A solvent recovery system is in place to recover solvents used in the purging of automatic spray guns. Also included is a manual body wipe and other miscellaneous solvent uses**	**Compliance**
EU-VEHICLE FLUID FILL	**Each new vehicle will be filled with various fluids such as power steering fluid, antifreeze, transmission fluid, engine oil, windshield washer fluid, refrigerant, and fuel. All vehicles filled with gasoline shall be equipped with an Onboard Re-Fueling Vapor Recovery System (ORVR) to control VOC emissions.**	**Compliance**
EU-NATURAL GAS	**Natural gas burning will take place in the ovens, the paint booth air supply houses, the thermal oxidizers, and miscellaneous support equipment installed under this permit in the new paint shop**	**Compliance**
EU-PSEMERGEN	**383 hp natural gas fired emergency generator supporting the paint shop. Model: GTA855E, Serial: 25404677**	**Compliance**
EU-GASOLINE TANK1	**An underground fuel storage tank equipped with submerged fill pipes and conservation vents. The fuel storage tank is filled using a vapor balance system.**	**Compliance**
EU-GASOLINE TANK2	**An underground fuel storage tank equipped with submerged fill pipes and conservation vents. The fuel storage tank is filled using a vapor balance system**	**Compliance**
EU-DIESEL TANK1	**An underground fuel storage tank equipped with submerged fill pipes and conservation vents**	**Compliance**
EU-DIESEL TANK2		**Compliance**

	An underground fuel storage tank equipped with submerged fill pipes and conservation vents.	
EU-AF TANK1	An underground antifreeze storage tank equipped with submerged fill pipes and conservation vents	Compliance
EU-AF TANK2	An underground antifreeze storage tank equipped with submerged fill pipes and conservation vents	Compliance
EU-TF TANK1	An underground transmission fluid storage tank equipped with submerged fill pipes and conservation vents.	Compliance
EU-POWER STEERING TANK	An above ground power steering fluid storage tank equipped with submerged fill pipes and conservation vents.	Compliance
EU-NPSPRGRECTNK	An indoor, above ground reclaim purge solvent storage tank	Compliance
EU-WBPURGETANK	An indoor, above ground waterborne purge solvent storage tank	Compliance
EU-COLDCLEANER1	Small non-chlorinated cold cleaners	Compliance
EU-FIREPUMPENGINE#1	A 420 HP fire pump diesel engine located at the North Pump House	Compliance
EU-FIREPUMPENGINE#2	A 196 HP fire pump diesel engine located at the David Road Pump House	Compliance
EU-NATGASGENERATOR#1	A 105 HP emergency natural gas generator located outside security post #2	Compliance
EU-NATGASGENERATOR#2	A 11.7 HP emergency natural gas generator located on the admin roof	Compliance
EU-NATGASGENERATOR#3	A 300 HP emergency natural gas generator located on the dock A roof.	Compliance

EU-NATGASGENERATOR#4	**A 150 HP emergency natural gas generator located at Pit 7.**	**Compliance**
EU-NATGASGENERATOR#5	**A 89 HP emergency natural gas generator located at Pit 9.**	**Compliance**
EU-NATGASGENERATOR#6	**A 195 HP emergency natural gas generator located at Pit 10.**	**Compliance**
EU-BOILER1	**An 8 MMBTU/hr natural gas fired hot water generator/boiler that will be utilized in the pretreatment operations of the paint shop.**	**Compliance**
EU-BOILER2	**An 8 MMBTU/hr natural gas fired hot water generator/boiler that will be utilized in the pretreatment operations of the paint shop**	**Compliance**
EU-BOILER3	**An 8 MMBTU/hr natural gas fired hot water generator/boiler that will be utilized in the pretreatment operations of the paint shop**	**Compliance**
EU-BOILER4	**An 8 MMBTU/hr natural gas fired hot water generator/boiler that will be utilized in the pretreatment operations of the paint shop**	**Compliance**
EU-BOILER5	**An 8 MMBTU/hr natural gas fired hot water generator/boiler that will be utilized in the pretreatment operations of the paint shop**	**Compliance**
EU-NORTHHEATER	**North basement hot water heater/boiler with capacity less than 5 MMBTU/hr. Subject to 40 CFR Part 63, Subpart DDDDD**	**Compliance**
EU-SOUTHHEATER	**South basement hot water heater/boiler with capacity less than 5 MMBTU/hr. Subject to 40 CFR Part 63, Subpart DDDDD.**	**Compliance**
EU-NATGASEQUIP	**All-natural gas-fired equipment in the existing assembly plant including any hot water heaters/boilers which are not subject to 40 CFR Part 63, Subpart DDDDD requirements. This emission**	**Compliance**

	unit includes the general assembly building extension; however, it excludes the new paint shop.	
EU-GAGENERATOR	100 kW (153.2 HP) Emergency generator powered by a natural gas spark ignition engine supporting general assembly. Model: GGHH-1721856, Serial: D170175848	Compliance
EU-BDYGENERATOR	85 kW (131.6 HP) Emergency generator powered by a natural gas spark ignition engine supporting the body shop. Model: GGHG-1721858, Serial: D170181442	Compliance
EU-LOCGENERATOR	A 162.7 HP emergency natural gas generator located west of J dock. Model: C100 N6, Serial: H190623183	Compliance
EU-MTAGENERATOR	A 158 HP emergency natural gas generator located outside security post #2. Model: 100REZGD, Serial: 25404677	Compliance
FG-Tanks	Any existing, new or modified storage tank. Includes EU-GASOLINE TANK1, EU-GASOLINE TANK2, EU-DIESEL TANK1, EU-DIESEL TANK2, EU-AF TANK1, EU-AF TANK2, EU-TF TANK1, EU-POWER STEERING, TANK EU-NPSPRGRECTNK, EU-WBPURGETANK	Compliance
FG-PAINT & ASSEMBLY	Equipment used for automotive assembly and painting operations. Includes EU-PRETREATMENT, EU-ECOAT, EU-SEALERS & ADHESIVES, EU-SOUND DAMP, EU-THREE WET, EU-GLASS INSTALL, EU-FINAL REPAIR, EU-PURGE&CLEAN, EU-VEHICLE FLUID FILL, EU-NATURAL GAS EU-GASOLINE TANK1, EU-GASOLINE TANK2, EU-DIESEL TANK1, EU-DIESEL TANK2, EU-AF TANK1, EU-AF TANK2, EU-TF TANK1, EU-POWER STEERING TANK, EU-NPSPRGRECTNK, EU-WBPURGETANK,EU-BOILER1, EU-BOILER2, EU-BOILER3, EU-BOILER4, EU-BOILER5, EU-PSEMERGEN	Compliance
FG-CONTROLS	Six regenerative thermal oxidizers used for control of VOC emissions from the electrodeposition tank and curing oven, sealer oven, basecoat prime heated flash-off, basecoat heated flash-off, clearcoat paint spray booths, and curing ovens and particulate	Compliance

	control for spray booth. Include EU-ECOAT, EU-SEALERS & ADHESIVES, EU-THREE WET, EU-FINAL REPAIR	
FG-MACT-NC	**Includes U-PRETREATMENT, EU-ECOAT, EU-SEALERS & ADHESIVES, EU-SOUND DAMP, EU-THREE WET, EU-PURGE&CLEAN, EU-GLASS INSTALL, EU-FINAL REPAIR, EU-NPSPRGRECTNK, EU-WBPURGETANK**	**Compliance**
FG-BOILERS	**Boilers which provide hot water to the new paint shop. The 5 boilers are all identical Cleaver Brooks natural gas fired with a capacity of 8 MMBTU/hr each and are subject to 40 CFR Subpart DDDDD. Include EU-BOILER1-5**	**Compliance**
FG-NATGASEQIUP	**All-natural gas-fired equipment in the existing assembly plant (excluding new paint shop and body shop). Includes EU-NORTHHEATER, EU-SOUTHHEATER, EU-NATGASEQUIP, EU-GAGENERATOR.**	**Compliance**
FG-63-5D-WTRHEATERS	**These units are subject to 40 CFR Subpart DDDDD. Includes EU-NORTHHEATER, EU-SOUTHHEATER**	**Compliance**
FG-COLD CLEANERS-1	**Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Includes EU-COLDCLEANER1**	**Compliance**
FG-EMERGENCY	**Covers emergency generators for the facility. These generators are subject to the requirements of 40 CFR Part 60, Subpart JJJJ. Includes EU-FIREPUMPENGINE#1, EU-FIREPUMPENGINE#2, EU-NATGASGENERATOR#1, EU-NATGASGENERATOR#2, EU-NATGASGENERATOR#3, EU-NATGASGENERATOR#4, EU-NATGASGENERATOR#5, EU-NATGASGENERATOR#6**	**Compliance**
FG-EMERGENERATOR-1	**Standards of Performance for Stationary Spark Ignition Internal Combustion Engines as found at 40 CFR Part 60, Subpart JJJJ. Includes EU-BDYGENERATOR, EU-PSEMERGEN, EU-GAGENERATOR, EU-LOCGENERATOR EU-MTAGENERATOR**	**Compliance**

Records Review

EU-PRETREATMENT

Pretreatment system is a series of dip tanks and sprays to clean the bodies of the vehicles which come from the body shop. The first tanks do a cleaning of the body, the middle tanks apply a Zirconium pre-treatment followed by rinse stages. Permit requirements for this emission unit state the materials used shall not contain any VOCs. Copiers of 18 material MSDS were obtained and reviewed, all of which stated 0% VOC (calculated), 0% VOC EPA Method 24, 0% estimated or 0% not applicable. After reviewing the Data Sheets, it is determined that EU-PRETREATMENT is in compliance.

EU-COAT

The ELPO system consists of the dip tank, cure oven and scuff booth. Emissions from the ECOAT tank and oven are directed to 2 RTO's The RTO's were each 2 chamber with poppet valves and were manufactured by the Alliance Corporation. The following is a summary of the RTO and the observed operating temperature:

ID	Controls	Operating Parameters	Compliance?
EO-RTO#1	Oven section 1	1517.1 °F Inst 377.5 °F Inlet 426.2 °F Exhaust ~~195.23 Scfm~~ 44.6Hz 13.32 "wc	In Compliance, (4/26/2022 performance test was 98.2% DE at 1520°F)
EO-RTO#2	Oven section 2	1520.7 °F Inst 370 °F Inlet 416.6 °F Exhaust ~~141.25 Scfm~~ 45 Hz 13.46 "wc	In Compliance, (4/27/2022 performance test was 97.5% DE at 1520°F)

Usages are determined by inventory/purchase records or provided by BASF. Formulation data as provided by the supplier is used to determine the VOC content of the E-coat materials.

EU-SEALERS & ADHESIVES

Sealers and adhesives are applied in both the body shop and the paint shop. The paint shop has switched from using manual application to mainly using robotic application for sealers. For underbody sealer, the facility uses 6 very large robots to lift the truck bodies and apply the sealers. Most of the sealer and adhesive materials used are from the supplier EFTEC. VOC chamber with poppet valves version (appeared same as e-coat) and was manufactured by the Alliance Corporation. The following is a summary of the RTO and the observed operating temperature:

ID	Controls	Operating Parameter	Compliance?
Sealer Oven RTO	Sealer Oven	1548 °F Inst 322.9 °F Inlet 400.2 °F Exhaust ~~179.14 Scfm~~ 46.2 Hz 12.25 “wc	In Compliance, (5/19/2021 performance test was 97.1% DE at 1555°F)

VOC contents are determined by the Method 24 content listed on the MSDS. GM Flint assembly was approved to use the alternative method published in 40 CFR Part 63, Subpart PPPP to determine VOC content on 2-part sealer/adhesive materials.

EU-SOUND DAMP

The Sound Damp system is an acoustical damper product that is applied using robotic spray equipment. Permit requirements for this emission unit state the materials used shall not contain any VOCs. Copies of all the material MSDS were reviewed. The MSDS stated the VOC content was 0% theoretical. PPG is the provider of the sold product being used and method 24 is used to determine the VOC content of the Sound Damp material.

EU-THREE WET

This emission unit consists of 2 parallel topcoat systems where the primer, basecoat and clear coat is applied as wet on wet on wet. The process is as follows: a water-borne prime system which sprays a grey or white primer with a heated flash area, a water-borne basecoat system which sprays the various colors with a heated flash area, followed by a solvent-borne clear coat

system and a curing oven. Each of the topcoat lines curing ovens are dual pass. Each line has a cure oven, and then each oven has a left and right side to them. As cars come out of the clear coat booths, they go either right or left into the respective lines curing oven. Method 24 is performed by BASF on a batch basis to determine the VOC content.

The 2 parallel line top coat cure ovens are ducted to cure oven RTO No. 1 and cure oven RTO No. 2. Each line has a separate RTO for the oven. The topcoat oven RTO's are a 2 chamber with poppet valves version (appeared same as e-coat) and was manufactured by the Alliance Corporation. The clear Coat Booths, the prime heated flashes and the base coat heated flashes are ducted to a separate RTO. The clear coat booth RTO is a 2 chamber and was manufactured by DURR. The following operating parameter were observed during the inspection:

ID	Controls	Operating Parameters	Compliance?
Topcoat Oven RTO#1	Topcoat Line 1, Oven #1 & #2	1516.8 °F Inst 280.1 °F Inlet 342.6 °F Exhaust ~~153.69 Scfm~~ 49.2 Hz 15.84 "wc	In Compliance (5/19/2021 performance test was 97% DE at 1515°F)
Topcoat Oven RTO#2	Topcoat Line 2, Oven #3 & #4	1512.9 °F Inst 277.4 °F Inlet 350 °F Exhaust ~~160.32 scfm~~ 49.2 Hz 15.94 "wc	In Compliance (5/20/2021 performance test was 97.3% DE at 1515°F)
Clear Coat DURR RTO	Heated Flash and Clear Coat Booth	1574 °F Inst 30.7CV 90 °F Inlet 15.3 "wc 54.5 Hz	In Compliance (5/21/2021 performance test was 95.4% DE at 1575°F)

EU-GLASS INSTALL

The Glass Install process utilizes Dow Beta Seal (an adhesive material) to bond the windshield and rear windows to the vehicle. Method 24 analysis of the material is done by the supplier unless the facility requests the use of an alternative method to be approved the District Supervisor.

EU-FINAL REPAIR

The Final Repair process is a series of dry filter booths used for repair paint application. Primer and Basecoat paint repair materials come from the main paint kitchen which sends the paint to EU-Three Wet. Clearcoat repair materials are unique (they are separately purchased cans of materials) as they must repair 2k clearcoat without a high bake oven. BASF is the supplier who has already conducted a Method 24 (Not spray cans/tubes) analysis on each batch of coating received. Spray cans/tubes are determined using formulation data as there is no way of performing Method 24 on a tube or spray can. Records of material usages are kept by the paint shop mix room attendant for primers and basecoats. Clearcoat and other touch up materials usages are determined from purchasing records. Inspection and maintenance were completed on the booths October 28th 2023.

EU-PURGE & CLEAN

The Purge process is for the solvents used for the cleanup of the facility paint systems. A solvent recovery system is in place for the solvent borne clear coat system. The clean process is for the manual body wiping of the vehicles as well as booth and spray equipment cleaning. Method 24 is generally not performed on these materials as they are commonly 100% VOC and the manufacturer's chemical composition is adequate to determine the VOC content. A copy of Dec 2023 – March 2024 record was obtained and reviewed. The facility uses manifest records for purge solvent and then applies 100% CE, 96% DE for the remainder as solvent purge materials are only used in the fully controlled clear coat booths.

EU-VEHICLE FLUID FILL

The fluid fill process is where the various fluids such as power steering fluid, antifreeze, transmission fluid, refrigerant, windshield washer fluid and fuel are added. Vehicles are filled with gasoline or diesel fuel depending on the engine type.

Special condition IV. 1 requires that the permittee shall not add gasoline to a vehicle without an onboard Re-fueling Vapor Recovery (ORVR) system unless VOC emissions are controlled by a VOC control device. This does not include the addition of diesel fuel to a vehicle.

The gasoline storage tanks at the facility are subject to NSPS 40 CFR Part 60 Subpart Kb.

FG-TANKS

This flexible group is the conditions for the various liquid materials that are stored and used for trucks. The tanks contain, Antifreeze, gasoline, diesel fuel, spent purge solvent, water borne

purge tank, transmission fluid, and power steering fluid. A copy of the details for each tank was obtained during the inspection and is attached to the hard copy of this report. The attachment shows the ID, capacity, year of installation, type of material, vapor pressure and the applicable requirements required by Special Condition VI.2

FG-PAINT & ASSEMBLY

This flexible group covers equipment for automotive assembly and painting operations. Six regenerative thermal oxidizers are used for the control of VOC emissions from the painting operations. 2 RTO's are on the E-Coat Oven (Section 1 &2 with tanks emissions ducted to section 1), RTO on the sealer oven, 2 RTO's on Topcoat Lines 1 & 2's cure ovens, and 1 RTO on the clear coat booths. The quarterly emission records for December 2023, January and February 2024 were reviewed for this report.

Permit Condition	Pollutant	Limit	Units	December 2023	January 2024	February 2024
I.1	VOC	649.6	Tons/year	460.8	462.0	458.6
I.2	VOC	4.8	Lbs/job	3.5	3.5	3.5
I.3	PM	25.1	Tons/year	6.0	6.1	6.0
I.4	PM10	25.1	Tons/year	6.0	6.1	6.0
I.5	PM2.5	25.1	Tons/year	6.0	6.1	6.0
I.6	NOx	50.0	Tons/year	25.4	25.9	25.6
II.1	Natural Gas	1000	MMCF/year	508.9	518.5	512.8

The Auto Protocol (EPA – 453/R-08-002) requires an annual review of operating conditions/parameters to document the most recent testing remains valid for Transfer Efficiency (TE), Capture Efficiency (CE), Destruction Efficiency (DE), and Oven Solvent Loading (OSL). The facility conducted the annual review of the facility control efficiencies on May 2021, April 2022, and August 2023. The following tables document the results of the annual review.

Transfer Efficiency

Coating Type	Date Completed	Completed By	Test Values
Primer Surfacer	November 2019	JLB Industries, LLC	68.7%
Basecoat Solid	November 2019	JLB Industries, LLC	70.8%
Basecoat Metallic	November 2019	JLB Industries, LLC	77.7%
Clearcoat	November 2019	JLB Industries, LLC	78.1%

Oven Solvent Loading

Coating Type	Date Completed	Completed By	Zone	Test Values (lbs VOC/gal Solid applied)
Primer Surfacer	August 2023	BASF	Heated Flash	1.7739
			Oven	0.3315
Basecoat Solid	August 2023	BASF	Heated Flash	2.1620
			Oven	0.4278
Basecoat Metallic	August 2023	BASF	Heated Flash	2.1671
			Oven	0.5819

Capture Efficiency

Equipment	Date Completed	Completed By	Test Values
ECOAT Oven RTO	N/A	N/A	100%
Sealer Oven	11/22/2019	Eftec NA	85.5%

Clearcoat Booth	6/30/2016	BASF	79%
Clearcoat Oven	6/30/2016	BASF	21%

Destruction Efficiency

Equipment	Date Completed	Completed By	Test Values
ECOAT Tank & Oven RTO 1	4/26/2022	Montrose Air Quality Services	98.2%
ECOAT Oven RTO 2	4/27/2022	Montrose Air Quality Services	97.5%
Sealer Oven RTO	5/19/2021	Montrose Air Quality Services	97.1%
Booth RTO (Durr)	5/21/2021	Montrose Air Quality Services	95.4%
Topcoat Oven RTO 1	5/19/2021	Montrose Air Quality Services	97%
Topcoat Oven RTO 2	5/20/2021	Montrose Air Quality Services	97.3%

FG-CONTROLS

This flexible group covers the 6 regenerative thermal oxidizers that are used for VOC emission control. The oxidizers control emissions from the clear coat paint spray booths, the flash off areas, and cure oven portions of EU-ECoat, EU-Sealers and Adhesives and EU-Three Wet. This Flexible Group also covers the particulate control system for both the water wash and dry filter portions of the plant.

Verification of proper oxidizer temperature were verified and documented in the individual emission units above.

Thermocouples were validated on 10/8/2023. Valve seal/timing inspections were conducted on 11/28/2023. Heat media inspections were conducted 12/28/2023.

Additional changes include the Booth RTO rebricking top 12” media on 3/30/2024. This new media is the same type as the replaced media.

Copies of weekly water wash records were requested for the months of January 2024 – March 2024. Records of the water wash system inspection documented the water wash was as designed and noted by a green highlight for the weeks.

FG-MACT

GM has provided their semiannual compliance certifications as required. Summary records of the HAP emission calculations were requested for January 2023 through December 2023 for review as part of the site inspection. The records review showed the facility was in compliance with all applicable emission limits. Copies of these records are attached to this report.

Pollutant	MACT Limit	Actual Emissions Jan 23 - Dec 2023
HAP – PS, Topcoat, Glass Install, Final Repair	0.5 lbs HAP/GSA	0.27 lbs HAP/GSA
HAP – Sealers and Adhesives	0.01 lbs HAP/lb material	0.00 lbs HAP/lb material
HAP – Deadener	0.01 lbs HAP/lb material	0.00 lbs HAP/lb material

GM uses the compliance method specified in 63.3091(b) which is the combined emissions from primer surfacer, topcoat, final repair, glass bonding primer and glass bonding adhesives. Electrodeposition is excluded from the grouping per 63.3092(a) since it contains no more than 1.0 percent by weight of any organic HAP and no more than 0.1 percent by weight organic HAP which is a carcinogen.

FG-NATGASEQUIP

This flexible group covers natural gas-fired equipment in the existing assembly plant. 12 month rolling average records of the NOx and natural gas usages for the time period of April 2023, to March 2024, we reviewed following inspection. The following limits apply to FG-NATGASEQUIP.

Limit – Permit Condition	April 2023 – March 2024
NOx, 35.8 ton per year – SCI. 1	14.2 tpy
709 MMcf natural gas per year	284.68 MMcf

FG-EMERGENCY ENGINES-1

This flexible group covers emergency backup engines for the facility. These engines are subject to the requirements of 40 CFR Part 63, Subpart ZZZZ. The emission units and information provided under this flexible group are:

Emission Unit	Total Hours for 2023
EU-FIREPUMPENGINE#1	24.7
EU-FIREPUMPENGINE#2	24.1
EU-NATGASGENERATOR#1	29.2
EU-NATGASGENERATOR#2	15.8
EU-NATGASGENERATOR#3	11.1
EU-NATGASGENERATOR#4	21.8
EU-NATGASGENERATOR#5	25.1
EU-NATGASGENERATOR#6	17.7

The latest maintenance records for each engine were also obtained and reviewed. The documents for each engine were highlighted with the appropriate unit number, current hours, a check of the oil level, inspection of the air cleaner, a check of the ignition system (gas engines only) and a changing of the oil and amount of oil used. Based on the total hours run for 2023, these emission units are under the 100 hour per year limit for maintenance checks and readiness testing and emergency demand responses.

FG-EMERGENERATOR-1

This flexible group covers emergency generators for the facility. These generators are subject to the requirements of 40 CFR Part 60, Subpart JJJJ. The emission units and information provided under this flexible group are:

Emission Unit	Total Hours for 2023
EU-PSEMEREGEN	27

EU-BDYGENERATOR	**19.8**
EU-GAGENERATOR	**20.3**
EU-LOCGENERATOR	**18**
EU-MTAGENERATOR	**21**

The latest maintenance records for each of the generators were also reviewed. The documents for the generators highlighted with the appropriate unit number, current hours, a check of the oil level, inspection of the air cleaner, and a changing of the oil and amount of oil used. Based on the total hours run for 2023, these emission units are under the 100 hour per year limit for maintenance checks and readiness testing and emergency demand responses.

Compliance Statement:

Upon review of GM Flint assembly plant, there are no outstanding issues and they are found to be in compliance with their ROP obligations.

NAME _____ DATE 7/31/24 SUPERVISOR RB

GM Flint Assembly
Summary of Performance

Emission Records for FG-Paint & Assembly - Dec 2023, Jan 2024, Feb 2024 & March 2024

Process	Pollutant	UOM	January-24	February-24	March-24	December-23
EU-ECOAT	VOC	LB	276.5	241.3	220.5	157.2
	PM	LB	0.0	0.0	0.0	0.0
	PM10	LB	0.0	0.0	0.0	0.0
	PM2.5	LB	0.0	0.0	0.0	0.0
EU-FINAL REPAIR	VOC	LB	186.4	197.8	206.4	177.6
	PM	LB	7.2	7.9	9.8	7.5
	PM10	LB	7.2	7.9	9.8	7.5
	PM2.5	LB	7.2	7.9	9.8	7.5
EU-GLASS INSTALL	VOC	LB	0.0	466.6	466.6	466.6
EU-NATURAL GAS (incl. EU-Boiler 1-5 & EU-PSEMERGEN)	NOx	LB	6,101.9	5,416.8	5,053.9	4,560.7
	VOC	LB	335.6	297.9	278.0	250.8
	PM	LB	1,012.5	983.3	923.0	785.7
	PM10	LB	1,012.5	983.3	923.0	785.7
	PM2.5	LB	1,012.5	983.3	923.0	785.7
	Throughput	MMCF	61.0	54.2	50.5	45.6
EU-PRETREATMENT	VOC	LB	0.0	0.0	0.0	0.0
EU-PURGE & CLEAN	VOC	LB	17,019.3	19,505.8	22,907.2	21,531.1
EU-SEALERS & ADHESIVES	VOC	LB	2,246.1	2,293.6	2,327.9	1,531.3
EU-SOUND DAMP	VOC	LB	0.0	0.0	0.0	0.0
FG-TANKS (incl. all tanks in FG-Paint & Assembly)	VOC	LB	84.8	75.5	73.5	63.5
EU-THREEWET	VOC	LB	53,013.0	56,498.0	47,897.0	38,093.0
	PM	LB	114.0	122.5	104.0	77.2
	PM10	LB	114.0	122.5	104.0	77.2
	PM2.5	LB	114.0	122.5	104.0	77.2
EU-VEHICLE FLUID FILL	VOC	LB	46.2	49.6	44.5	36.3

GM Flint Assembly

03-2024 FG-NATGASEQUIP

Month	Natural Gas Use (MMCF) without body shop
January-24	60.940
February-24	46.374
March-24	**40.080**
April-23	24.819
May-23	15.066
June-23	1.152
July-23	0.083
August-23	0.235
September-23	1.370
October-23	14.677
November-23	40.199
December-23	39.686
12 Month Rolling Total	284.68
12 Month Rolling Limit	709.0

Month	NOx (ton) without body shop
January-24	3.0
February-24	2.3
March-24	**2.0**
April-23	1.2
May-23	0.8
June-23	0.1
July-23	0.0
August-23	0.0
September-23	0.1
October-23	0.7
November-23	2.0
December-23	2.0
12 Month Rolling Total	14.2
NOx 12MRT Limit (tpy)	35.8

Notes:

1) Paint shop Main Meter natural gas usage from Consumers Energy Account #100044176392

2) WWT, Engine storage, New Body, and New GA natural gas usage data collected from John Ebenhoeh

3) 12-month rolling total of natural gas throughput and emissions of the existing Flint Assembly plant.

4) FGNATGASEQUIP includes all natural gas usage from the existing assembly plant, WWT, Engine storage, and new trim shop.

Calculations:

1) Emissions (tons) = Natural gas usage MMCF x Emission factor lb/MMCF / 2000 lb per ton

2) 12 Month Rolling Total Usage (MMCF) = sum of previous 12 months usage (MMCF)

3) 12 Month Rolling Total NOx Emisions (tons) = sum of previous 12 months emissions (tons)

4) AP-42 Emission Factor for NOx = 100 lb/MMCF