

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

B246068670

FACILITY: General Motors LLC - Bay City		SRN / ID: B2460
LOCATION: 1001 Woodside Ave., BAY CITY		DISTRICT: Bay City
CITY: BAY CITY		COUNTY: BAY
CONTACT: JEFF JATCZAK , Environmental Engineer		ACTIVITY DATE: 08/17/2023
STAFF: Kathy Brewer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection for facility operations and records in Opt-Out PTI #31-05 and Rule 201 exempt emission units.		
RESOLVED COMPLAINTS:		

I (KB) conducted an announced inspection at the General Motors LLC - Bay City plant. I was accompanied by GM Senior Project Environmental Engineer Mr. Jeff Jatczak.

GM Bay City was issued PTI#31-05 on May 1, 2005 for three 72 MMBtu/hr natural gas fired boilers, several wet and dry machining operations, automatic parts ink markers, and maintenance painting operations. Emissions of concern are NOx, CO, and VOCs. The facility also has Rule 201 permit exempt emission units.

The facility is not a Major Source for HAPs.

The boilers were installed in 1965 and do not meet the criteria to be an affected facility under 40 CFR part 60 Subpart Dc. Per Mr. Jatczak a "MACT Applicability" (40 CFR Part 63 Subpart JJJJJ) status record is maintained.

The site operates throughout the entire year with 2-3 production shifts dependent upon product demand.

Facility wide MAERS reported 2022 emissions:

Pollutant	2022 MAERS Emissions
CO	8514.74 lbs
NOx	14191.24 lbs
SO2	60.82 lbs
VOC	6425.52 lbs

There were no violations of air permit PTI# 31-05 found during the inspection.

Records Reviewed:

5-24-2019 CSS Camshaft Rule 201 Exemption

6-1-2018 Multiple boiler and heating Rule 201 Exemption - Rule 282 (2)(b)(i)

Bonderite L-MR-B-400 machining fluid manufacturer provided VOC content

SDS Lacquer Thinner used in EU-MAINTPAINTING

VOC, NOx, and CO emission records January and September 2022, May 2023

Material and natural gas usage records January and September 2022, May 2023

Maintenance paint use logs

EU-MACHINING:

The facility has numerous machining lines to perform wet and dry machining on parts received from suppliers. Wet machines use metal working fluid as a lubricant. Machining operations can generate particulate matter and VOCs. Oil-mist collectors and dust collectors receive ventilated air from machining operations w/the collectors exhaust directed back into the workplace. Parts washers throughout the plant have fabric filter conveyors that collect fine metal from machining operations. The accumulated metal is sent off site for recycling.

Machining fluids usage is tracked based on purchase records. The usage of each VOC containing fluid is recorded monthly. VOC content of each fluid is used to determine emissions. The MAERS reported VOC emissions for 2022 were 5,538.42 lbs.

Records review indicate compliance with the permitted emission limits and usage limits.

Condition	Equipment	Limit	Jan 2022		Sep 2022		May 2023	
			Month	12 month TPY	Month	12 month TPY	Month	12 month TPY
SC 1.1 VOC Emission limit	EU-MACHINING	49 tpy	Tons 0.42	2.01	Tons 0.25	2.83	Tons 0.11	2.52
SC 1.2 Metal Working Fluids use	EU-MACHINING	610,000 gal/year	Gallons 10,533.7	Gallons 39,967.3	Gallons 3,135.1	Gallons 48,246	Gallons 800.6	Gallons 28,473

CSS Camshaft Rule 201 Exemption

The site provided the documentation for new machining equipment related to machining camshafts for manufacturing engine components. From the Rule 201 Exemption documentation:

Total VOC emissions estimated for CSS Camshaft project are only 1.40 tpy. PM, PM10, PM2.5 emissions are assumed to be nearly zero as the process abatement will discharge clean air back into the workplace. In addition this process does not generate Carbon Monoxide (CO), Nitrogen Oxide (NOx), Sulfur Dioxide (SO2), Lead, Asbestos, Fluorides, Sulfuric Acid Mist, Total Reduced Sulfur Compounds, and HAPs above significance levels.

Second, the individual components or emission units of the CSS Camshaft process equipment meet MDEQ Rule Exemptions as outlined below:

<u>Equipment</u>	<u>Exemption rule</u>
<i>Machining</i>	<i>285(2)(l)(vi)(B)</i>
<i>Washing washer</i>	<i>285(2)(l)(iii) for externally exhausted aqueous parts</i>
<i>Rust Prevention</i>	<i>285(2)(r)(i)</i>

Third, the entire process meets R285(c)(iii)

The exemption documentation is attached.

EU-INKMARKING

Machined parts are marked with ink for internal tracking purposes. Ink usage is tracked based on purchase records. The usage of VOC containing ink is recorded monthly. VOC content of the ink is used to determine emissions. The MAERS reported VOC emissions for 2022 were 345.6 lbs.

Records review indicate compliance with the permitted emission limits and usage limits.

Condition	Equipment	Limit	Jan 2022		Sep 2022		May 2023	
			Month	12 month TPY	Month	12 month TPY	Month	12 month TPY
SC 2.1	EU-INKMARKING	10.4 tpy	Tons 0.02	0.21	Tons 0.02	0.15	Tons 0.03	0.14

Condition	Equipment	Limit	Jan 2022		Sep 2022		May 2023	
			Month	12 month TPY	Month	12 month TPY	Month	12 month TPY
VOC Emission limit								
SC 2.2 Ink use	EU-INKMARKING	2900 gal/year	Gallons 6.8	Gallons 66.29	Gallons 0.0	Gallons 47.25	Gallons 9.8	Gallons 43.5

EUMAINTPAINTING

The site has a maintenance painting booth. Painting volume is very low. A log of paint type and amount used is maintained by the operators and kept in the booth. A copy of paint use logs are attached.

The maintenance paint booth had filters in place.

The MAERS reported VOC emissions for 2022 were 257.68 lbs.

Records review indicate compliance with the permitted emission limits and usage limits.

Condition	Equipment	Limit	Jan 2022		Sep 2022		May 2023	
			Month	12 month TPY	Month	12 month TPY	Month	12 month TPY
SC 3.1 VOC Emission limit	EU-MAINTPAINTING	10.4 tpy	Tons 0.01	0.10	Tons 0.0	0.12	Tons 0.1	0.12
SC 3.2 Paint use	EU-MAINTPAINTING	2400 gal/year	Gallons 2.0	Gallons 33.16	Gallons 0	Gallons 42.44	Gallons 2.5	Gallons 46.05

EUAIRMAKEUP

Several natural gas fired space heaters (0.5 – 1.0 MM Btu/hr) are located throughout the facility. The site also has numerous air make up units. A diagram with the location and Btu/hr for each unit is attached.

The MAERS reported emissions for 2022 were 14,191 lbs NO_x, and 8,8515 lbs CO lbs.

Records review indicate compliance with the permitted emission limits and usage limits.

Condition	Equipment	Limit	Jan 2022		Sep 2022		May 2023	
			Month	12 month TPY	Month	12 month TPY	Month	12 month TPY
SC 4.1.a NO _x	EU-AIRMAKEUP	59.1 tpy	Tons 1.69	6.87	Tons 0.07	6.96	Tons 0.27	6.57
SC 4.1.b. CO	EU-AIRMAKEUP	49.6	Tons 1.01	4.12	Tons 0.04	4.18	Tons 0.16	3.94

FG-BOILERS

The 3 boilers permitted in FG-Boilers were shuttered in-place in 2018. Each is rated at 72 MMBTU/hr and provided steam for production activities. The primary fuel used was natural gas with #2 oil as an emergency backup fuel. The fuel oil tank was permanently closed in 2011.

The site has installed several smaller gas fired and electrical pieces of equipment under a Rule 282 (2)(b)(i) permit Exemption per Rule 201. The combined heat input capacity for the natural gas fired equipment is 36.7 MMBTU/hr. The exemption documentation is attached.

FG-Facility

Records review indicate compliance with the permitted emission limits and usage limits.

Condition	Equipment	Limit	Jan 2022		Sep 2022		May 2023	
			Month	12 month TPY	Month	12 month TPY	Month	12 month TPY
Natural Gas Usage	FGFACILITY		MIMCF 24.14	MIMCF 98.17	MIMCF 1.03	MIMCF 99.46	MIMCF 3.83	MIMCF 93.79
SC 6.1.a NOx		89.8 tpy	Tons 1.69	6.87	Tons 0.07	6.96	Tons 0.27	6.57
SC 6.1.b CO		89.9 tpy	Tons 1.01	4.12	Tons 0.04	4.18	Tons 0.16	3.94

Kathy Brewer

NAME _____

DATE 8/21/23

SUPERVISOR *Chris Stone*
