

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

A526273106

<b>FACILITY:</b> General Motors LLC - Milford Proving Ground	<b>SRN / ID:</b> A5262
<b>LOCATION:</b> 3300 General Motors Rd., MILFORD	<b>DISTRICT:</b> Warren
<b>CITY:</b> MILFORD	<b>COUNTY:</b> OAKLAND
<b>CONTACT:</b> Corri Zilio , Environmental Engineer	<b>ACTIVITY DATE:</b> 07/22/2024
<b>STAFF:</b> Jillian Cellini	<b>COMPLIANCE STATUS:</b> Compliance
<b>SUBJECT:</b> Evaluate compliance with MI-ROP-A5262-2021, Permit to Install (PTI) 130-22, and state and federal rules.	<b>SOURCE CLASS:</b> MAJOR
<b>RESOLVED COMPLAINTS:</b>	

On July 22, 2024, I (Jillian Cellini, EGLE-AQD), Kerry Kelly (EGLE-AQD), and Owen Pierce (EGLE-AQD) conducted an inspection of General Motors LLC - Milford Proving Ground located at 3300 General Motors Road in Milford, Michigan. The purpose of the inspection was to determine the facility's compliance status with the requirements of the federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended (Act 451), the AQD administrative rules, Renewable Operating Permit (ROP) MI-ROP-A5262-2021, and Permit to Install (PTI) 13022.

We arrived at General Motors LLC - Milford Proving Ground at about 8:00 AM. At the facility Visitor's Center, we met with Corri Zilio (Environmental Engineer) and Brenda Korth (Environmental Engineer). We introduced ourselves and stated the purpose of the inspection. Corri and Brenda answered some of our initial questions before the facility walk-through, and then began showing us around the facility.

Corri Zilio sent the requested records to determine compliance via email following the inspection. The digital records are in the AQD Warren shared drive at: "S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024".

General Motors is an automotive manufacturing company founded in 1908. The General Motors – Milford Proving Ground was established in 1924 and is the longest continuously operated proving ground in the world. It is 4000 acres and contains 138 miles of road within the grounds of the facility, some of which is specially engineered for automotive performance testing. According to Brenda, the proving grounds are primarily used for testing (including ride and handling, autonomous vehicles, road testing, stone impingement, and noise and vibration) and development of future products. Nothing is manufactured on the grounds of the facility. This site is located across both Oakland and Livingston counties, which are both currently designated by the United States Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants. The facility contains two lakes (Sloane Lake and Pickett Lake), and is immediately surrounded by residential properties, an aggregate supplier (Natural Aggregates Corporation), and a horse stable (Serenity Hills Farm). Residential areas are across the street on all sides of the grounds. General Motors – Milford Proving Ground is a Title V source as its potential to emit (PTE) CO and NO<sub>x</sub> exceeds 100 tons/year. It is considered a synthetic minor (opt-out) source for Hazardous Air Pollutants (HAPs).

This facility has a total of 60 permitted emission units, most of which (43 of 60) are engines (generators and engine dynos). Two permitted generators have been removed from the facility (EU-GEN24 and EU-GEN25) prior to the last inspection in August 2023. A new stationary natural gas fired emergency generator was added to the facility (EU-GEN36) at Building 16 after the last inspection. Corri Zilio notified EGLE-AQD of the installation on

5/13/2024 and that it would be operated in a certified manner on 5/16/2024. Two new Diesel Rotary Uninterruptible Power Supply generators (DRUPS) (EU-DRUPS7 and 8) are also now fully installed and operational. No equipment has been removed since the last inspection. As the last inspection was completed about 1 year ago, only records from June 2023 until June 2024 will be evaluated in this report. Records from emission units not observed during this inspection will still be evaluated. In the records that the facility sent over, Corri noted that at the time of request some June records were not available. This is documented in the report when applicable.

### Source-Wide Conditions

The source-wide conditions cover all boilers, heaters, and other combustion equipment including: emergency generators, all process equipment source-wide, equipment covered by other permits, grand-fathered equipment, and exempt equipment.

The emissions limits set forth by MI-ROP-A5262-2021 Source-Wide are as follows (SC I.12):

Pollutant	Limit	Time Period/Operating Scenario
1. Each Individual HAP	< 9.0 tpy	12-month rolling time period as determined at the end of each calendar month
2. Aggregate HAPs	< 22.5 tpy	12-month rolling time period as determined at the end of each calendar month

The facility provided records of monthly and rolling individual and aggregate HAP emissions from June 2023 – June 2024 ("S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\SOURCE-WIDE"). A summary of HAP emissions is below:

Aggregate HAP Emissions (tons)		
	Monthly	12-month rolling total
<b>June 2023</b>	0.075	3.7
<b>July 2023</b>	0.029	3.9
<b>Aug 2023</b>	0.49	4.8
<b>Sept 2023</b>	0.33	4.5
<b>Oct 2023</b>	0.089	3.9
<b>Nov 2023</b>	0.13	4.2
<b>Dec 2023</b>	0.054	4.4
<b>Jan 2024</b>	0.44	4.7
<b>Feb 2024</b>	0.16	4.5
<b>Mar 2024</b>	0.48	4.9
<b>Apr 2024</b>	0.11	4.6
<b>May 2024</b>	0.22	4.9
<b>June 2024</b>	0.69	4.9

The highest individual HAP emissions occurred in August 2023 (3.0 tons of ethylene glycol). The highest aggregate HAP emissions occurred in March, May and June 2024 (4.9 tons). As the individual and aggregate HAP emissions are below the emission limits given by MI-ROP-A5262-2021, Source-Wide, SC I.1-2, the facility is in compliance.

The materials limits set forth by MI-ROP-A5262-2021 Source-Wide states that natural gas usage for Source-Wide equipment shall not exceed 1500 billion BTU per year based on a 12-month rolling time period as determined at the end of each calendar month (SC II.1). The facility provided records of Source-Wide natural gas usage (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\SOURCE-WIDE\01 - RY2024 MPG ROP Workbook.xlsx). A summary of these records from June 2023 – May 2024 is below:

<b>Source-Wide Natural Gas Usage (BTU)</b>		
	<b>Monthly</b>	<b>12-month rolling total</b>
<b>June 2023</b>	23,569,665,000	460,004,964,000
<b>July 2023</b>	19,823,790,000	471,344,754,000
<b>Aug 2023</b>	25,486,755,000	460,953,689,000
<b>Sept 2023</b>	23,142,630,000	456,153,871,000
<b>Oct 2023</b>	32,364,780,000	456,287,746,000
<b>Nov 2023</b>	46,234,860,000	456,228,316,000
<b>Dec 2023</b>	42,932,756,000	441,928,617,000
<b>Jan 2024</b>	60,417,735,000	448,116,540,000
<b>Feb 2024</b>	50,699,376,000	445,002,576,000
<b>Mar 2024</b>	43,018,934,000	432,050,525,000
<b>Apr 2024</b>	39,563,016,000	439,767,041,000
<b>May 2024</b>	26,067,195,000	433,321,492,000

As the Source-Wide natural gas usage is below the material limits given by MI-ROP-A5262-2021, Source-Wide, SC II.1, the facility is in compliance.

### **Power Room/Boiler Room/Building #9 (FG-BOILERS, EU-BOILER5, EU-BOILER6)**

Brenda and Corri showed us to Building #9 during the inspection, which houses four natural gas fired boilers. According to Brenda and Corri, these boilers are used to create steam for testing (research and development) and provide heat to the facility. At this building we met Cooper, a GM employee who works in the powerhouse, who also helped show us around the building and answered questions about the boilers.

I observed the nameplates for all four boilers. EU-BOILER3 was a Babcock and Wilcox boiler, manufactured in 1965, with a rating of 50,000 lb/hr. EU-BOILER4 was a Keeler/Dorr-Oliver boiler, manufactured in 1988, with a rating of 50,000 lb/hr. EU-BOILER5 and EU-BOILER6 were both Nebraska boilers manufactured in 1980. I did not observe the heat input rating on either of these boilers, but the ROP states they both have a heat input rating of 40,000 lb/hr (54 MMBTU). I also observed the low NOx burner on EU-BOILER6. According to the previous inspection report by Kerry Kelly, all these boilers except EU-

BOILER3 were installed after 1988

([https://www.egle.state.mi.us/aps/downloads/SRN/A5262/A5262\\_SAR\\_20230821.pdf](https://www.egle.state.mi.us/aps/downloads/SRN/A5262/A5262_SAR_20230821.pdf)).

EU-BOILER 3 was installed in 1965.

I observed that all boilers had natural gas meters. As it was summer at the time of inspection, only EU-BOILER4, EU-BOILER5, and EU-BOILER6 were operating at varying levels. Cooper stated that the boilers usually run at higher levels during the months of December through March, and that all 4 boilers will run at the same time when it gets cold. Cooper also stated that all the water that runs through the boilers runs through a water filter, mostly to filter out the iron, before it is run through the boilers. Brenda, Corri, and Cooper stated that all four of these boilers only run on natural gas. I did not observe any other fuels besides natural gas being burned at the time of inspection and the records provided (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-BOILERS\01 - RY2024 MPG ROP Workbook.xlsx) also show that no other fuels are being burned by these boilers. Therefore, the facility is in compliance with SC II.1 (FG-BOILERS, EU-BOILER5, EU-BOILER6). Cooper also mentioned that all these boilers exhaust out of one brick stack, which was measured by Kerry Kelly at the last inspection to be in compliance with SC VIII.1 (EU-BOILER5 and EU-BOILER6).

The facility is required to operate and maintain each boiler in FG-BOILERS, EU-BOILER5, and EU-BOILER6 in a manner consistent with safety and good air pollution control practices for minimizing emissions (FG-BOILERS, EU-BOILER5, EU-BOILER6; SC III.1). Records of preventative maintenance (PM) are also required for EU-BOILER5 (SC VI.4) and EU-BOILER6 (SC VI.5). These records were provided by the facility and show that EU-BOILER5 was serviced on 4/2/2024 (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-BOILERS\03 - Boiler 05 PM.pdf) and EU-BOILER6 was serviced on 5/2/2024 (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-BOILERS\04 - Boiler 06 PM.pdf). Therefore, the facility is in compliance with the conditions mentioned above in MI-ROP-A5262-2021.

### **Emission Limits, Natural Gas Usage, and Total Operating Time (FG-BOILERS, EU-BOILER5, EU-BOILER6)**

#### **FG-BOILERS**

NO<sub>x</sub> emission limits for FG-BOILERS described in MI-ROP-A5262-2021(SC I.1) are as follows:

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/Operating Scenario</b>
1. NO <sub>x</sub>	0.14 lbs/MMBTU (60 ng/J)	24-hour average

To comply with this emission limit, the facility may be required to verify NO<sub>x</sub> emission rates via stack testing (FG-BOILERS, SC V.1) in addition to keeping records of natural gas usage per calendar month and per 12-month rolling time period for each boiler in FG-BOILERS (SC VI.2). Records of stack test requests or stack test reports do not exist in AQD files for FG-BOILERS. Therefore, it is likely stack testing on these units have never been requested. To determine NO<sub>x</sub> emissions for FG-BOILERS, the facility instead uses the heating value from their natural gas provider to the minimum heating value to meet the NO<sub>x</sub> emission limit. Using the emission factor given by Appendix 7a of MI-ROP-A5262-2021 (100 lb NO<sub>x</sub>/MMCF) and the emission limit for FG-BOILERS (0.14 lbs/MMBTU), the heating value

needed to meet this emission limit can be calculated using with following equation:  $(100 \text{ lb NO}_x/\text{MMCF}) / (0.14 \text{ lb NO}_x/\text{MMBTU}) = 714 \text{ MMBTU/MMCF} = 714 \text{ BTU/SCF}$ . A record of the total operating time is also required to be kept (FG-BOILERS, SC VI.1), though that does not show compliance with the emission limit.

A summary of the records provided by the facility of natural gas usage, operating times, and the natural gas heating values from June 2023 – May 2024 for FG-BOILERS is below (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-BOILERS\01 - RY2024 MPG ROP Workbook.xlsx):

	EU-BOILER3				EU-BOILER4			
	Monthly usage (MMCF)	12MRT usage (MMCF)	Operation days	Operation hours	Monthly usage (MMCF)	12MRT usage (MMCF)	Operation days	Operation hours
<b>June 2023</b>	0.00	121.46	0	0	1.70	122.84	13	312
<b>July 2023</b>	2.57	123.47	7	168	3.98	110.87	11	264
<b>Aug 2023</b>	6.69	130.16	31	744	0.06	87.80	8	192
<b>Sept 2023</b>	5.12	132.80	14	336	12.06	99.69	27	648
<b>Oct 2023</b>	6.41	120.83	21	504	18.27	117.92	31	744
<b>Nov 2023</b>	16.56	122.19	30	720	16.40	129.33	30	720
<b>Dec 2023</b>	14.87	116.01	31	744	17.91	133.52	31	744
<b>Jan 2024</b>	21.10	134.05	31	744	17.95	132.33	31	744
<b>Feb 2024</b>	14.33	126.11	29	696	9.63	126.00	23	552
<b>Mar 2024</b>	6.77	107.74	25	600	14.49	123.81	22	528
<b>Apr 2024</b>	0.84	95.27	29	696	18.93	133.68	30	720
<b>May 2024</b>	0.13	95.39	13	312	4.99	136.38	28	672

	EU-BOILER5				EU-BOILER6			
			Operation days	Operation hours			Operation days	Operation hours

	Monthly usage (MMCF)	12MRT usage (MMCF)			Monthly usage (MMCF)	12MRT usage (MMCF)		
<b>June 2023</b>	14.44	89.19	29	696	4.61	55.64	28	672
<b>July 2023</b>	4.07	93.26	23	552	5.93	61.55	20	480
<b>Aug 2023</b>	0.00	93.25	18	432	5.34	66.89	28	672
<b>Sept 2023</b>	0.04	80.05	8	192	4.41	62.71	22	528
<b>Oct 2023</b>	0.03	69.60	14	336	4.11	65.20	19	456
<b>Nov 2023</b>	3.29	60.48	16	384	0.93	60.22	25	600
<b>Dec 2023</b>	4.74	61.25	26	624	0.00	50.67	20	480
<b>Jan 2024</b>	7.63	54.60	23	552	4.40	45.23	31	744
<b>Feb 2024</b>	9.97	61.64	25	600	7.11	50.20	25	600
<b>Mar 2024</b>	6.61	68.21	24	576	9.90	57.72	31	744
<b>Apr 2024</b>	2.85	65.54	12	288	6.19	62.90	19	456
<b>May 2024</b>	11.70	65.39	31	744	4.92	57.85	18	432

<b>FG-BOILERS (EU-BOILER3-6)</b>					
	Monthly usage (MMCF)	12MRT usage (MMCF)	Source-Wide BTU/SCF	> 714 BTU/SCF	NO <sub>x</sub> Emission Rate (lb NO <sub>x</sub> /MMBTU)
<b>June</b>	20.75	389.13	1050	Yes	0.10
<b>July 2023</b>	16.55	389.16	1050	Yes	0.10
<b>Aug 2023</b>	12.10	378.10	1050	Yes	0.10
<b>Sept 2023</b>	21.63	375.25	1050	Yes	0.10
<b>Oct 2023</b>	28.82	373.56	1050	Yes	0.10
<b>Nov 2023</b>	37.18	372.22	1050	Yes	0.10
<b>Dec 2023</b>	37.52	361.46	1060	Yes	0.09
<b>Jan 2024</b>	51.09	366.21	1050	Yes	0.10
<b>Feb 2024</b>	41.05	363.95	1060	Yes	0.09
<b>Mar 2024</b>	37.77	357.49	1060	Yes	0.09

<b>Apr 2024</b>	28.82	357.39	1060	Yes	0.09
<b>May 2024</b>	21.73	355.02	1050	Yes	0.10

The highest NO<sub>x</sub> emission rates occurred in June – November of 2023, January 2024, and May 2024 with an emission rate of 0.10 lb/NO<sub>x</sub>/MMBTU. As the NO<sub>x</sub> emissions from FG-BOILERS are below the emission limits and natural gas usage and operating times were provided, the facility is in compliance with MI-ROP-A5262-2021 (FG-BOILERS SC I.1, SC VI.1, SC VI.2).

**EU-BOILER5 and EU-BOILER6**

NO<sub>x</sub> emission limits for both EU-BOILER5 and EU-BOILER6 described in MI-ROP-A5262-2021(SC I.1-2) are as follows:

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/Operating Scenario</b>
1. NO <sub>x</sub>	7.6 lb/hr	Monthly average
2. NO <sub>x</sub>	33.1 tpy	12-month rolling time period as determined at the end of each calendar month

To comply with these emission limits, the facility must calculate NO<sub>x</sub> emissions in lb/hr from EU-BOILER5 (SC VI.3) and EU-BOILER6 (SC VI.4) and tpy (per 12-month rolling time period) for EU-BOILER5 (SC VI.2) and EU-BOILER6 (SC VI.3). Calculations are to be done using the emission factor 100 lb NO<sub>x</sub>/MMCF stated in Appendix 7a. for EU-BOILER5. EU-BOILER6 is equipped with a low NO<sub>x</sub> burner, and therefore has an emission factor of 50 NO<sub>x</sub>/MMCF (MAERS emission factor).

A summary of the records of NO<sub>x</sub> emissions provided by the facility for EU-BOILER5 and EU-BOILER6 from June 2023 – May 2024 are below (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-BOILERS\01 - RY2024 MPG ROP Workbook.xlsx):

	<b>EU-BOILER5</b>				<b>EU-BOILER6</b>			
	<b>Monthly Emission (lbs)</b>	<b>Monthly Emission (lb/hr)</b>	<b>12-Month Rolling NO<sub>x</sub> (lbs)</b>	<b>12-Month Rolling NO<sub>x</sub> (tons)</b>	<b>Monthly Emission (lbs)</b>	<b>Monthly Emission (lb/hr)</b>	<b>12-Month Rolling NO<sub>x</sub> (lbs)</b>	<b>12-Month Rolling NO<sub>x</sub> (tons)</b>
<b>June 2023</b>	1444.5	2.1	8919.0	4.5	230.4	0.3	2782.0	1.4
<b>July 2023</b>	407.5	0.7	9326.1	4.7	296.3	0.6	3077.7	1.5
<b>Aug 2023</b>	0.0	0.0	9324.6	4.7	267.1	0.4	3344.5	1.7
<b>Sept 2023</b>	4.1	0.0	8005.0	4.0	220.3	0.4	3135.6	1.6

<b>Oct 2023</b>	2.9	0.0	6960.4	3.5	205.7	0.5	3260.2	1.6
<b>Nov 2023</b>	329.5	0.9	6048.1	3.0	46.3	0.1	3011.0	1.5
<b>Dec 2023</b>	474.5	0.8	6125.1	3.1	0.0	0.0	2533.7	1.3
<b>Jan 2024</b>	762.7	1.4	5459.5	2.7	220.3	0.3	2261.8	1.1
<b>Feb 2024</b>	996.8	1.7	6163.9	3.1	355.7	0.6	2510.3	1.3
<b>Mar 2024</b>	661.1	1.1	6821.5	3.4	495.0	0.7	2886.0	1.4
<b>Apr 2024</b>	285.4	1.0	6553.7	3.3	309.7	0.7	3145.0	1.6
<b>May 2024</b>	1169.8	1.6	6538.8	3.3	245.8	0.6	2892.7	1.4

The highest monthly average NO<sub>x</sub> emission from EU-BOILER5 was in June 2023 (2.1 lb NO<sub>x</sub>/hr). The highest monthly NO<sub>x</sub> emission from EU-BOILER6 was from March and April 2024 (0.7 lb NO<sub>x</sub>/hr). The highest 12-month rolling sum of NO<sub>x</sub> emissions from EU-BOILER5 was in July and August 2023 (4.7 tpy). The highest 12-month rolling sum of NO<sub>x</sub> emissions from EU-BOILER6 was in August 2023 (1.7 tpy). As the records for NO<sub>x</sub> emissions from EU-BOILER5 and EU-BOILER6 were provided and the NO<sub>x</sub> emissions are below the emission limits set forth in MI-ROP-A5262-2021, the facility is in compliance with MI-ROP-A5262-2021.

The monthly natural gas usage is also required to be monitored (EU-BOILER5, SC VI.1) and a record kept of the natural gas usage (EU-BOILER6, SC VI.1), though these conditions do not show compliance with the emission limit. These records are discussed in the FG-BOILERS. As these records were provided, the facility is in compliance with MI-ROP-A5262-2021.

MI-ROP-A5262-2021 indicates only EU-BOILER6 is subject to the New Source Performance

Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60 Subpart Dc). 40 CFR Part 60 Subpart Dc applies to steam generating units that have maximum heat input capacities between 100 MMBTU/h and 10 MMBTU/h for which construction, modification, or reconstruction is commenced after June 9, 1989. The only requirement in NSPS Dc for natural gas-fired boilers is to record and maintain records of the amount of each fuel combusted during each calendar month. As this facility keeps records of natural gas combusted per calendar month for FG-BOILERS, which includes EU-BOILER6, this facility is in compliance with 40 CFR Part 60 Subpart Dc and MI-ROP-A5262-2021.

### **EU-GEN19**

According to MI-ROP-A5262-2021, EU-GEN19 is a Cummins, propane-fired emergency engine with a 63 HP rating. As of the issuance of the MI-ROP-A5262-2021, this engine does not appear to have regulatory requirements associated with 40 CFR Part 63, Subpart

ZZZZ or 40 CFR Part 60, Subpart JJJJ. It is located at Building #43. This engine was not observed during the inspection.

EU-GEN19 is limited to 500 operating hours per year on a 12-month rolling time period basis as determined at the end of each calendar month (MI-ROP-A5262-2021, EU-GEN19, SC III.2) and the facility is required to monitor and record these hours (MI-ROP-A5262-2021, EU-GEN19, SC VI.1). Records of operating hours and reason for engine operation are also required by MI-ROP-A5262-2021 (EU-GEN19, SC VI.2). These records were provided by the facility (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\EU-GEN19\05 - 2023-2024 MPG Emergency Generators Hours Summary.xlsx). A summary of engine operating hours for EU-GEN19 from June 2023 – June 2024 is below:

<b>EU-GEN19 Operation Hours (hours)</b>				
	<b>Monthly maintenance &amp; testing</b>	<b>Non-Emergency Hours</b>	<b>Emergency Hours</b>	<b>12-month rolling total</b>
<b>June 2023</b>	1.7	0	0	15.1
<b>July 2023</b>	0.9	4	0	20
<b>Aug 2023</b>	0.8	0	0	19
<b>Sept 2023</b>	0.9	0	0	19
<b>Oct 2023</b>	0.8	0	0	18.8
<b>Nov 2023</b>	0.8	0	0	15
<b>Dec 2023</b>	1	0	0	14.9
<b>Jan 2024</b>	0.9	0	2.6	18
<b>Feb 2024</b>	0.8	0	0	17.7
<b>Mar 2024</b>	0.8	0	0	17.7
<b>Apr 2024</b>	1	0	0	17.7
<b>May 2024</b>	1	0	0	20.4
<b>June 2024</b>	0	0	2.6	20.6

As EU-GEN19 operated for less than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month and provided records and reasons for engine operation, the facility is in compliance with MI-ROP-A5262-2021 EU-GEN19, SC III.2, SC VI.1-2.

As this engine does not have regulatory requirements associated with 40 CFR Part 63, Subpart ZZZZ or 40 CFR Part 60, Subpart JJJJ, the facility is in compliance with MI-ROP-A5262-2021, EU-GEN19, SC IX.1-2.

## **EU-REMEDIATION**

Towards the end of the inspection, Brenda and Corri showed us EU-REMEDIATION. This emission unit includes soil vapor extraction wells, vacuum blower(s), and an air flow distribution system equipped with a catalytic oxidizer. I observed that EU-REMEDIATION was not in operation at the time of the inspection. Brenda and Corri stated that it has never been operational. The facility provided emission records indicating that there were no

emissions from EU-REMEDIATION from June 2023 – June 2024 (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\EU-REMEDIATION\01 - RY2024 MPG ROP Workbook.xlsx). As there were zero emissions from EU-REMEDIATION, EU-REMEDIATION is within the emission limits set by MI-ROP-A5262-2021, EU-REMEDIATION, SC I.1-3 and is therefore in compliance.

### **EU-BURNPAD**

Brenda and Corri also showed us EU-BURNPAD during this inspection. Brenda and Corri explained that EU-BURNPAD is a very thick concrete slab that is used for thermal testing. Brenda and Corri stated it has not been used for thermal testing in a while and has been used for law enforcement and firefighter training for car accidents (e.g., rollover crashes, jaws of life, etc.). I did not observe any thermal testing during my inspection. The facility provided emission records indicating that there were no emissions from EU-BURNPAD from June 2023 – June 2024 (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\EU-BURNPAD). As there were zero emissions from EU-BURNPAD, EU-BURNPAD is within the emission limits set by EU- MI-ROP-A5262-2021, EU-BURNPAD, SC I.1-2 and is therefore in compliance.

### **Building #94 (FG-ENGINE DYNOS)**

During the inspection, Brenda and Corri showed us to Building #94, which houses all 10 engine dynamometers in FG-ENGINE DYNOS (EU-ENGINE DYNOS1-10). Brenda and Corri explained that these engines are car and truck engines that have not been installed in a car body, but instead operate independently for the express purpose of noise and vibration testing. I observed that each engine is housed in its own sound-proofed cell where the testing is conducted. At the time of inspection, engine dynamometers are housed in rooms: 112, 114, 117, 119, 120, 121, 122, 124, 126, and 130. I observed two diesel engines in their cells in rooms 121 and 122, and I observed one ~500 HP engine, meant for a Corvette, in room 126. Some of the other engines were in testing, so we could not inspect them. One of the GM employees that works in noise and vibration testing stated that there are only two diesel engine dynamometers, the rest of the engine dynamometers are for gasoline powered vehicles. All engine dynamometers observed were equipped with emissions controls.

Emission limits for FG-ENGINE DYNOS (SC I.1-6) are as follows:

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/Operating Scenario</b>
1. CO	1,498 lb/day	Calendar day
2. CO	21.4 tpy	12-month rolling time period as determined at the end of each calendar month
3. NOx	4.4 lb/hr	3-hour average
4. NOx	1.0 tpy	12-month rolling time period as determined at the end of each calendar month
5. VOC	4.4 lb/hr	3-hour average
6. VOC	1.0 tpy	12-month rolling time period as determined at the end of each calendar month

To show compliance with the emission limits stated in FG-ENGINE DYNOS, the facility is required to keep a record of the gallons of fuel burned per 12-month rolling time period, as determined at the end of each calendar month, for FG-ENGINE DYNOS (SC VI.1). These 12-month rolling time period fuel usage totals will also be used to calculate CO, NO<sub>x</sub>, and VOC emissions limits for SC I.2, 4, and 6 (SC VI.4). The facility is also required to keep records of the gallons of fuel burned per day in FG-ENGINE DYNOS. These daily fuel usage rates shall be calculated based upon monthly record-keeping, prorated to a daily rate using days of operation per month records (FG-ENGINE DYNOS, SC VI.2). Then, daily fuel usage rates will be used to calculate CO emissions (SC I.1, SC VI.3). Additionally, the facility is required to monitor and record the total number of hours FG-ENGINE DYNOS is operated (SC VI.5) and the gallons of fuel burned (SC VI.6) each calendar week. The facility will use these weekly rates to calculate NO<sub>x</sub> and VOC emissions in lb/hr (FG-ENGINE DYNOS, SC VI.7). All calculations mentioned above will use CO, NO<sub>x</sub>, and VOC emission factors from MI-ROP-A5262-2021 Appendix 7b.

The facility provided all usage records and CO, NO<sub>x</sub>, and VOC emission calculations for FG-ENGINE DYNOS from June 2023 – June 2024 (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-ENGINE DYNOS\01 - RY2024 MPG ROP Workbook.xlsx, S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-ENGINE DYNOS\08 - 2024 B94 Dyno Fuel Tracking.xlsx). A summary of the gasoline and diesel fuel usage for FG-ENGINE DYNOS from June 2023 – May 2024 is below:

<b>FG-ENGINE DYNOS Fuel Usage</b>							
	<b>Work Days</b>	<b>Gasoline Monthly Total (gal)</b>	<b>Gasoline Daily Average (gal)</b>	<b>Diesel Monthly Total (gal)</b>	<b>Diesel Daily Average (gal)</b>	<b>Total Combined Average Daily Use Rate (gal/day)</b>	<b>12-Month Rolling Combined Usage (gal)</b>
<b>June 2023</b>	22	22.0	1.0	10.0	0.5	1.5	1,067
<b>July 2023</b>	19	70.5	3.7	3.0	0.2	3.9	1,072
<b>Aug 2023</b>	23	74.0	3.2	1.0	0.04	3.3	1,011
<b>Sept 2023</b>	20	122.9	6.1	2.0	0.1	6.2	1,041
<b>Oct 2023</b>	22	110.2	5.0	12.0	0.6	5.6	1,000
<b>Nov 2023</b>	19	68.0	3.6	4.0	0.2	3.8	1,048
<b>Dec 2023</b>	16	12.8	0.8	0.0	0.0	0.8	1,000
<b>Jan 2024</b>	21	76.9	3.7	42.0	2.0	5.7	924
<b>Feb 2024</b>	21	42.0	2.0	27.0	1.3	3.3	877
<b>Mar 2024</b>	20	36.3	1.8	29.0	1.5	3.3	847
<b>Apr 2024</b>	21	98.0	4.7	36.0	1.7	6.4	953
<b>May 2024</b>	22	185.0	8.4	33.0	1.5	9.9	1,118

At the facility, Corri explained that gasoline and diesel for the engine dynamometers come out of day tanks that are filled by two separate outside tanks (Tank A and B and one Diesel Tank). Chassis dynamometer fuel is also taken from these day tanks (accounted for in the

records). At the end of the day, the day tanks are evacuated back into Tank A, B, and the Diesel tank. An automatic tank gauge is now being used to keep track of fuel coming into and out of the tanks. However, some of the daily and weekly fuel use values are still negative (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-ENGINEDYNOS\08 - 2024 B94 Dyno Fuel Tracking.xlsx). In the fuel record, it was noted by Corri on 1/10/2024 that “The controller that fills the day tanks with fuel from Tank A -125 is out of order. The day tanks were full released fuel back to Tank A-125 resulting in an increase of fuel that slowly drained back to the Day Tank. Negative weekly use will be a result of this, but monthly fuel use should still be accurate.” Corri also noted in the record that Tank A and B were not used from 1/10/2024 – 1/31/2024. These negative values were treated as “0” values for calculation purposes.

A summary of monthly and daily CO, NO<sub>x</sub>, and VOC emissions from FG-ENGINEDYNOS from June 2023 – May 2024 is below:

<b>FG-ENGINEDYNOS Emissions</b>						
	<b>Total Dyno CO (lb/day)</b>	<b>12-Month Rolling CO (tpy)</b>	<b>Total Dyno NO<sub>x</sub> (lb/hr)</b>	<b>12-Month Rolling NO<sub>x</sub> (tpy)</b>	<b>Total Dyno VOC (lb/hr)</b>	<b>12-Month Rolling VOC (tpy)</b>
<b>June 2023</b>	3.18	1.3	0.14	0.1	0.06	0.1
<b>July 2023</b>	11.61	1.3	0.20	0.1	0.21	0.1
<b>Aug 2023</b>	10.05	1.3	0.16	0.1	0.18	0.1
<b>Sept 2023</b>	19.20	1.4	0.31	0.1	0.34	0.1
<b>Oct 2023</b>	15.71	1.3	0.34	0.1	0.28	0.1
<b>Nov 2023</b>	11.20	1.4	0.21	0.1	0.20	0.1
<b>Dec 2023</b>	2.50	1.4	0.04	0.1	0.04	0.1
<b>Jan 2024</b>	11.70	1.2	0.57	0.1	0.23	0.1
<b>Feb 2024</b>	6.41	1.1	0.35	0.1	0.13	0.1
<b>Mar 2024</b>	5.86	1.1	0.38	0.1	0.12	0.1
<b>Apr 2024</b>	14.80	1.2	0.56	0.1	0.28	0.1
<b>May 2024</b>	26.46	1.4	0.69	0.1	0.49	0.1

The highest daily CO emission from FG-ENGINEDYNOS was in May 2024 (26.46 lb/day). The highest 12-month rolling CO emissions from FG-ENGINEDYNOS was in September, November, and December of 2023 and May of 2024 (1.4 tpy). The highest 3-hr average NO<sub>x</sub> emission from FG-ENGINEDYNOS was in May 2024 (0.69 lb/hr). The 12-month rolling NO<sub>x</sub> emissions were constant from June 2023 – May 2024 (0.1 tpy). The highest 3-hr average VOC emission from FG-ENGINEDYNOS was in May 2024 (0.49 lb/hr). The 12-month rolling VOC emissions were constant from June 2023 – May 2024 (0.1 tpy). As the records for CO, NO<sub>x</sub>, and VOC emissions from FG-ENGINEDYNOS were provided and the CO, NO<sub>x</sub>, and VOC emissions calculated are below the emission limits set forth in MI-ROP-A5262-2021, the facility is in compliance with MI-ROP-A5262-2021, FG-ENGINEDYNOS, SC I.1-6.

Weekly NO<sub>x</sub> and VOC emissions were also reported by the facility. The highest reported NO<sub>x</sub> emission calculated from weekly fuel use for FG-ENGINEDYNOS was 1.567 lb/hr during the week of 1/1/2024. The highest reported VOC emission calculated from weekly

fuel use for FG-ENGINE DYNOS was 1.121 lb/hr during the week of 5/20/2024. As the weekly records for NO<sub>x</sub>, and VOC emissions from FG-ENGINE DYNOS were provided and the NO<sub>x</sub>, and VOC emissions were calculated, the facility is in compliance with MI-ROP-A5262-2021, FG-ENGINE DYNOS, SC VI.7.

Material limits for FG-ENGINE DYNOS are as follow (SC II.1-2):

Material	Limit	Time Period/Operating Scenario
1. Fuel	10,000 gal/year	12-month rolling time period as determined at the end of each calendar month
2. Fuel	350 gal/day	Prorated

A summary of the gasoline and diesel fuel usage for FG-ENGINE DYNOS is in a table above. The highest combined 12-month rolling total fuel usage for FG-ENGINE DYNOS was in May 2024 (1,118 gal/year). The highest prorated combined daily fuel usage for FG-ENGINE DYNOS was in May of 2024 (9.9 gal/day). As the records for fuel use for FG-ENGINE DYNOS were provided and the fuel used was below the emission limits set forth in MI-ROP-A5262-2021, the facility is in compliance with MI-ROP-A5262-2021, FG-ENGINE DYNOS, SC II.1-2.

### FG-BACKUPGENS + FG-DRUPS7&8

Brenda and Corri showed us the backup generators associated with the new data center (FG-BACKUPGENS and FG-DRUPS7&8). This flexible group contains four diesel-fired emergency generators (EU-GENERATOR1-4) and six diesel-fired DRUPS (EU-DRUPS1-6), along with newly installed FG-DRUPS7&8 (EU-DRUPS7 and 8). DRUPS are equipped with a flywheel that spins, generating kinetic energy (essentially a motor connected to a motor). This kinetic energy provides power to the data center before the diesel generator starts, creating an uninterruptable power supply (UPS), which is important to avoid data loss. FG-BACKUPGENS is permitted through MI-ROP-A5262-2021 and FG-DRUPS7&8 is permitted through PTI number 130-22. All engines in these groups are subject to 40 CFR Part 63 (NESHAP), Subparts A and ZZZZ and 40 CFR 60 (NSPS), Subpart IIII.

I inspected each engine in FG-BACKUPGENS and FG-DRUPS7&8. The information on each engine's nameplate matches the description for the engines in the ROP and PTI. The nameplates I observed on the engines during the inspection indicate that each DRUPS has a 3490 kW (4680 HP) rating, and each emergency generator has a 2500 kW (3,353 HP) rating. As the kW ratings on the nameplates do not exceed the maximum ratings specified in FG-BACKUPGENS, MI-ROP-A5262-2021 and PTI 130-22, the facility is in compliance (SC IV.2).

A GM employee, Peter, who helps maintain the engines indicated that each engine is run for ~0.5 hrs every month, otherwise these engines only turn on for if there is a power outage. This was confirmed by records provided by the facility, which also indicate that none of these generators have turned on due to power outage in the last year (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\05 - 20232024 MPG Emergency Generators Hours Summary.xlsx). Monthly and rolling 12-month sums of engine operating hours were provided by the facility. Each engine is equipped with a non-resettable hours meter (FG-BACKUPGENS, MI-ROP-A5262-2021 SC IV.1 and PTI 130-22 SC IV.1), which I used to record the total operating hours at the time of inspection.

A summary of the operating hours for each generator in FG-BACKUPGENS and FG-DRUPS7&8 from June 2023 until June 2024 is below:

<b>12-month rolling sums of engine operating hours (EU-GENERATOR1-4)</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>June 2023</b>	8.31	9.90	9.42	9.42
<b>July 2023</b>	8.16	9.79	9.25	9.30
<b>Aug 2023</b>	8.33	9.97	9.52	9.57
<b>Sept 2023</b>	9.42	10.05	10.25	10.10
<b>Oct 2023</b>	9.42	10.05	10.20	10.10
<b>Nov 2023</b>	9.72	10.37	10.40	10.05
<b>Dec 2023</b>	9.67	10.35	10.30	10.05
<b>Jan 2024</b>	9.86	10.10	10.30	10.00
<b>Feb 2024</b>	10.01	10.10	10.10	10.00
<b>Mar 2024</b>	9.91	9.95	9.45	9.35
<b>Apr 2024</b>	10.35	10.33	9.20	9.28
<b>May 2024</b>	10.73	10.55	9.51	9.55
<b>June 2024</b>	10.55	10.20	9.60	9.98
<b>Total operating hours on 7/22/2024</b>	125.18	126.53	106.51	103.10

<b>12-month rolling sums of engine operating hours (EU-DRUPS1-8)</b>								
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>June 2023</b>	8.85	8.64	8.90	9.22	8.45	9.87	0.00	0.00
<b>July 2023</b>	8.78	9.34	8.69	8.82	8.39	9.76	0.00	0.00
<b>Aug 2023</b>	9.27	9.54	9.04	7.75	10.69	10.37	0.00	0.00
<b>Sept 2023</b>	11.45	10.34	11.84	11.27	13.56	11.12	1.70	4.80
<b>Oct 2023</b>	11.42	10.29	11.79	11.17	13.52	11.42	2.33	5.45
<b>Nov 2023</b>	11.72	10.58	12.14	11.47	13.94	11.77	3.45	6.30
<b>Dec 2023</b>	11.00	9.79	11.53	10.65	12.95	10.97	4.20	7.80
<b>Jan 2024</b>	11.25	10.09	11.78	10.45	13.34	11.42	5.35	8.90
<b>Feb 2024</b>	10.80	10.19	11.77	10.57	13.37	11.37	6.35	9.85
<b>Mar 2024</b>	11.35	10.24	11.83	11.00	13.49	11.62	7.25	10.70
<b>Apr 2024</b>	11.30	10.42	12.38	11.20	14.00	11.43	7.85	11.32
<b>May 2024</b>	10.95	10.55	12.50	11.08	14.10	11.37	8.65	11.90
<b>June 2024</b>	11.12	9.85	12.23	11.40	14.39	11.05	9.50	13.25
<b>Total operating hours on 7/22/2024</b>	138.58	132.48	82.27	116.36	103.01	111.46	31.12	25.0

The highest 12-month rolling sum of hours in FG-BACKUPGENS was 14.39 hours in June 2024 on EU-DRUPS5. As no engine in FG-BACKUPGENS was operated for more than 500 hours per 12-month rolling time period for any purpose (SC III.1), and 100 hours per calendar year for non-emergency purposes (SC III.3), the facility is in compliance with FG-BACKUPGENS, MI-ROP-A5262-2021. Based on the records provided, engines in FG-BACKUPGENS are operating within the scenarios described in FG-BACKUPGENS, MI-ROP-A5262-2021 SC III.2 and are therefore in compliance.

The highest 12-month rolling sum of hours in FG-DRUPS7&8 was 13.25 hours in June 2024 on EU-DRUPS8. As no engine in FG-DRUPS7&8 was operated more than 18 hours per day and 177 hours per year (SC III.1), 100 hours per calendar year for testing (SC III.2), or 50 hours per calendar year in non-emergency situations (SC III.3), the facility is in compliance with PTI 130-22.

This facility complies with emissions limits for FG-BACKUPGENS SC I.1-5 by verifying NO<sub>x</sub>, NMHC + NO<sub>x</sub>, CO and PM emission rates from one of more engines in FG-BACKUPGENS, via stack testing upon request of the AQD District Supervisor (SC V.1). However, records of stack test requests or stack test reports do not exist in AQD files. Therefore, it is likely stack testing on these units have never been requested.

Emissions limit compliance for SC I.3-5 for FG-BACKUPGENS and SC I.1-3 for FG-DRUPS7&8 is dependent on using certified engines and operating the engines according to the manufacturer written instructions, or procedures developed by the owner/operator and approved by the engine manufacturer, over the entire life of the engine (FG-BACKUPGENS, MI-ROP-A5262-2021, SC V.2 and PTI 130-22 SC VI.2). I observed that all the engines were NSPS certified, and Brenda and Corri indicated all engines were being operated in a certified manner according to the manufacturer's emission-related written instructions in compliance with SC III.4 (FG-BACKUPGENS, MI-ROP-A5262-2021 and PTI 130-22). In addition to observing the engine certifications in person, Corri also provided certificates of conformity to NSPS standards for all engines in FG-BACKUPGENS (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-BACKUPGENS\45 - B136\_Engine Compliance Letter\_03102022.pdf) and for FG-DRUPS7&8 (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\EU-DRUPS7&8\44 - FGDRUPS7&8 EPA CERT.pdf).

The maximum sulfur content of the diesel fuel used in FG-BACKUPGENS and for FG-DRUPS7&8 did not exceed 15 ppm, according to records provided by the facility (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-BACKUPGENS\09 - 10-25-2023 B136 Diesel Fuel Supplier Certification Delivery.PDF). Therefore, the facility is in compliance with FG-BACKUPGENS, MI-ROP-A5262-2021 and PTI 130-22 (SC II.1).

On 9/26/2023 the facility submitted a report to EGLE-AQD stating that EU-DRUPS7 was started up on 8/28/2023 and EU-DRUPS8 was started up on 9/23/2023 and that both engines will be operated in a certified manner. As they submitted this report within 30 days of start-up, the facility is in compliance with PTI 130-22, SC VII.1 and VII.2.

## **Building #24 (FG-OLDDATACTR)**

According to MI-ROP-A5262-2021, Building #24 is associated with FG-OLDDATACTR, which consists of three compression ignition diesel-fueled emergency generator engines. Kerry Kelly noted in the last inspection that only one of these engines (EU-GEN23) was still operational. The other two generators in this flexible group (EU-GEN24 and EU-GEN25) have been removed. This was confirmed by Corri during our initial inspection meeting. EU-GEN23 was not observed during the inspection.

Emission limits for FG-OLDDATACTR (SC I.1) are as follows:

Pollutant	Limit	Time Period/Operating Scenario
1. NO <sub>x</sub>	515 lb/1000 gal	Hourly

To show compliance with FG-OLDDATACTR SC I.1, the facility is required to install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the fuel use for FG-OLDDATACTR on a monthly basis (SC VI.1) and keep monthly and 12-month rolling time period fuel use records for FG-OLDDATACTR (SC VI.4). Material limits set forth in FG-OLDDATACTR also state that the fuel use for all units in FG-OLDDATACTR shall not exceed 136,000 gallons per 12-month rolling time period (SC II.3), and that only diesel fuel should be burned in these engines (SC II.1). Compliance with SC I.1 is also shown through NO<sub>x</sub> stack testing upon AQD request (FG-OLDDATACTR, SC V.1); however, no AQD stack test reports or requests are found in this facility’s file.

Fuel use records were provided by the facility (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-OLDDATACTR\05 - 2023-2024 MPG Emergency Generators Hours Summary.xlsx) and are summarized below:

<b>FG-OLDDATACTR Monthly Fuel Use</b>		
	<b>Monthly Fuel Use (gal)</b>	<b>12-Month Rolling Total Fuel Use (gal)</b>
<b>June 2023</b>	935	4455
<b>July 2023</b>	110	1815
<b>Aug 2023</b>	110	1870
<b>Sept 2023</b>	110	1925
<b>Oct 2023</b>	110	1925
<b>Nov 2023</b>	110	1925
<b>Dec 2023</b>	110	1925
<b>Jan 2024</b>	110	1980
<b>Feb 2024</b>	55	1980
<b>Mar 2024</b>	55	1980
<b>Apr 2024</b>	110	1980
<b>May 2024</b>	110	2035
<b>June 2024</b>	110	1210

The highest monthly fuel use for FG-OLDDATACTR was in June 2023 (935 gal). The highest 12-month rolling total fuel use for FG-OLDDATACTR was in June 2023 (4455 gal).

These records show that only diesel fuel was burned in these units, and that the material limit of 136,000 gallons per month was not exceeded from June 2023 to June 2024, therefore, this facility is in compliance with MI-ROP-A5262-2021, FG-OLDDATACTR, SC II.1 and SC II.3. Corri was contacted by email on 8/20/2023 and confirmed that this facility does not sell any electricity to utility power distribution systems (MI-ROP-A5262-2021, FG-OLDDATACTR, SC II.2).

The facility is required to operate FG-OLDDATACTR in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction (SC III.1) and keep records of the date, duration, and description of any malfunction, any maintenance performed and any testing results for FG-OLDDATACTR (SC VI.2). The facility provided maintenance records from June 2023 – June 2024 which indicated that EU-GEN23 had maintenance on 5/17/2024, which is within one year of the last performed maintenance. Therefore, this facility is in compliance with MI-ROP-A5262-2021, FG-OLDDATACTR, SC III.1 and SC VI.2. It was also noted in the last report by Kerry Kelly that EU-GEN23 is a 2425 kW generator (3017 HP). As EU-GEN23 is the only generator in FG-OLDDATACTR that is operating at this time, the facility is in compliance with MI-ROP-A5262-2021, FG-OLDDATACTR, SC III.2 because the total capacity from each unit in FG-OLDDATACTR does not exceed 5 MW.

### **FG-SUBPARTIII**

This flexible group consists of four emission units (EU-GEN18, EU-GEN23, EU-GEN24, EU-GEN25) that are subject to 40 CFR Part 60, Subpart III Requirements for Emergency Compression Ignition Internal Combustion Engines <30 l/cyl. constructed (ordered) after July 11, 2005 and manufactured after April 1, 2006. As previously stated in FG-OLDDATACTR, EU-GEN24 and EU-GEN25 are no longer operational. No emission units in FG-SUBPARTIII were observed during this inspection.

Emission limits for FG-SUBPARTIII (SC I.1-4) are as follows:

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/Operating Scenario</b>
1. HC	1.3 g/kW-hr	Hourly
2. NO <sub>x</sub>	9.2 g/kW/hr	Hourly
3. CO	11.4 g/kW/hr	Hourly
4. PM	0.54 g/kW/hr	Hourly

EU-GEN18 is only subject to FG-SUBPARTIII, SC 1.2. EU-GEN23, EU-GEN24, and EU-GEN25 are subject to FG-SUBPARTIII, SC I.1-4.

To show compliance with the emission limits, the facility shall keep certification documentation from the manufacturer indicating that each engine in FG-SUBPARTIII meets the applicable emission limitations (SC VI.2) and keep records of the manufacturer's emission-related written instructions and records demonstrating that the engine has been maintained according to those instructions (SC III.1, 2, 4, SC VI.4). The facility provided a copy of the certificate of conformity for all engines in FG-SUBPARTIII (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTIII\Engine Certifications). These records indicate that all engines in FG-SUBPARTIII meet the emission limits and are therefore in compliance with MI-ROP-A5262-2021 and 40 CFR Part 60, Subpart III. The facility also provided manufacturer's instructions

and maintenance records for all units in FG-SUBPARTIII (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTIII\Maintenance Records and Manuals). This facility is therefore in compliance with MI-ROP-A5262-2021, FG-SUBPARTIII, SC III.1, 2, 4, SC VI.2, 4 and 40 CFR Part 60, Subpart III.

The facility is also required to keep records of fuel supplier certification or fuel sample test data, for diesel fuel used in FG-SUBPARTIII, demonstrating that the fuel meets the requirement of 40 CFR 80.510(b) (SC VI.1). The facility provided diesel fuel records that state the diesel used for these engines has a maximum sulfur content of 15 ppm (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTIII\10 - 2024-06-17\_130826 Facility Generator #1 Diesel.pdf, S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTIII\10A - 2023 facility Generator #1 Diesel.pdf). Therefore, this facility is in compliance with MI-ROP-A5262-2021, FG-SUBPARTIII, SC VI.1.

According to MI-ROP-A5262-2021, FG-SUBPARTIII, the facility is limited to operating any engines in FG-SUBPARTIII to 500 hours/year total on a 12-month rolling time period basis as determined at the end of each calendar month (SC III.6), and up to 100 hours/year for maintenance checks, readiness testing, and non-emergency situations (SC III.7). The facility provided hours of operation for each engine in FG-SUBPARTIII from June 2023 – June 2024. A summary of these hours of operation are below:

	EU-GEN18 Operation Hours			EU-GEN23 Operation Hours		
	12-Month Rolling Total maintenance & testing + non-emergency (hours)	12-Month Rolling Total Emergency (hours)	12-Month Rolling Total (hours)	12-Month Rolling Total maintenance & testing + non-emergency (hours)	12-Month Rolling Total Emergency (hours)	12-Month Rolling Total (hours)
<b>June 2023</b>	10.9	0	10.9	28	12.5	40.5
<b>July 2023</b>	14.8	0	14.8	9	7.5	16.5
<b>Aug 2023</b>	14.7	0	14.7	9.5	7.5	17
<b>Sept 2023</b>	14.7	0	14.7	10	7.5	17.5
<b>Oct 2023</b>	14.8	0	14.8	10	7.5	17.5
<b>Nov 2023</b>	14.8	0	14.8	10	7.5	17.5
<b>Dec 2023</b>	14.8	0	14.8	10	7.5	17.5
<b>Jan 2024</b>	14.9	0	14.9	10.5	7.5	18
<b>Feb 2024</b>	14.8	0	14.8	10.5	7.5	18

<b>Mar 2024</b>	14.9	0	14.9	10.5	7.5	18
<b>Apr 2024</b>	14.4	0	14.4	10.5	7.5	18
<b>May 2024</b>	14.5	0	14.5	11	7.5	18.5
<b>June 2024</b>	14.4	0	14.4	11	0	11

The highest 12-month rolling total hours for EU-GEN18 occurred in January 2024 and March 2024 (14.9 hours). The highest 12-month rolling total non-emergency hours for EU-GEN18 was in January 2024 and March 2024 (14.9 hours). EU-GEN18 was not used in any emergency situations from June 2023 – June 2024. The highest 12-month rolling total hours for EU-GEN23 occurred in June 2023 (40.5 hours). The highest 12-month rolling total non-emergency hours for EU-GEN23 was in June 2023 (28 hours). The highest 12-month rolling total emergency hours for EU-GEN23 was in June 2023 (12.5 hours). The operation hours for EU-GEN18 and EU-GEN23 are within the limits set forth in MI-ROP-A5262-2021, FG-SUBPARTIII, SC III.6-7 and 40 CFR Part 60, Subpart IIII, therefore, this facility is in compliance.

## FG-GASTANKS

This flexible group includes any new (placed into operation on or after 7/1/79) or modified gasoline storage tank of capacity greater than 2000 gallons that is exempt from the requirements of Rule 201 pursuant to Rule 278 and Rule 284(2)(g). Dispensing facilities for storage, mixing, blending and handling of gasoline and/or gasoline/ethanol blends, for natural gas storage and handling, or for diesel fuel storage and handling are exempt from obtaining a PTI (Rule 284(2)(g)). Dispensing facilities are a location where gasoline is transferred from a stationary tank to a motor vehicle (Rule 104(g)). During the inspection, I observed a gas station that had at least one of these underground gasoline storage tanks associated with it. Brenda and Corri explained that this gas station was used to fuel cars and trucks housed at the facility (like the one we were driving in at the time).

According to MI-ROP-A5262-2021, the facility is required to keep an updated record of the following for each gas tank: identification (name, tank #, etc.), location, capacity, date of installation/modification, material housed, monthly and annual gasoline throughput, and whether the tank is equipped with a submerged fill pipe and vapor balance system (FG-GASTANKS, SC III.1, SC III.5, SC VI.1). The facility provided records of the tank identifications, locations, capacities, installation dates, materials contained, monthly and annual gasoline throughput, and whether each tank is equipped with a submerged fill pipe and vapor balance system (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-GASTANKS\12 - FG-GASTANKS.pdf, S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-GASTANKS\01 - RY2024 MPG ROP Workbook.xlsx). These records indicated that all tanks have a submerged fill pipe and that all tanks that have capacities larger than 2,000 gallons have a vapor recovery system. Tanks that have capacities of 2,000 gallons or less are not required to have a vapor recovery system (Rule 703(2) and (3))

EGLE-AQD has not accepted delegation to implement and enforce NESHAP Subpart CCCCC. Compliance with conditions in MI-ROP-A5262-2021 pertaining to NESHAP CCCCC were not evaluated.

**Building #70 Paint Booths (FG-RULE287(2)(c ))**

During the inspection, Brenda and Corri showed us to a building that housed 4 paint booths and two mix rooms. A GM employee present in the building explained that they mostly paint show cars in these booths, and they do interior and exterior painting of car parts and whole cars. He also stated that they use water-based paint and solvent-based paint (each mix room is dedicated to one type of paint). The employee also said that all booths were downdraft booths, and that the cars and car parts can be baked inside the booth. I observed all the filters in each booth were properly installed (filters on the top and bottom of the booth) (FG-RULE287(2)(c )), SC IV.1). I observed all waste containers in this area to be closed, and all paint cans stored in the mix rooms to also be closed.

The GM employee also stated that any sanding, polishing, or paint preparation in general is usually done in the paint booths. During these processes, an industrial vacuum is used to catch any particulates produced by this process. The GM employee stated that there was no schedule to change out the filters in the vacuum, but the vacuum is used relatively often and the filters/bag is changed out as soon as someone who works in the building notices the filters are dirty and the bag is full. After the air passes through the vacuum filters, it is vented outside. As this equipment has emissions that are released outside after passing through an appropriately designed filter, this equipment and process is exempt from the requirement to have a PTI (Rule 285 (2)(vi)(C)).

I also observed two BECCA paint gun cleaners, one for water-based paint and one for solvent-based paint. The lids of these cold cleaners were closed, and the instructions were conspicuously posted (Rule 707) The opening of these cold cleaners were also less than 10 ft<sup>2</sup>, so this equipment and process is exempt from obtaining a PTI (Rule 281). These cold cleaners are part of FG-COLDCLEANERS and will be discussed more in that section of the report.

The paint booths included in Building #70 are part of FG-RULE287(2)(c ). This flexible group contains EU-PAINTBOOTH1, EU-PAINTBOOTH2, EU-PAINTBOOTH3, and EU-MISC ADHESIVES. These paint booths are exempt from the requirements to obtain a PTI pursuant to Rule 278, Rule 278a and Rule 287(2)(c). There are also paint booths located in Building #11 and Building #25 that were not inspected that are included in FG-RULE287(2) (c ). The facility is also required to maintain a list of emission units installed that are pursuant to Rule 287 (SC VI.2), which was provided by the facility (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-RULE 287(2)(c) \13 - MPG 287(2)(c) Paint Booths Inventory.xls).

The material limit for FG-RULE287(2)(c ) in MI-ROP-A5262-2021 is as follows (SC II.1):

Material	Limit	Time Period/Operating Scenario
1. Coatings	200 Gallons (minus water as applied)	Per month, as applied, minus water, per emission unit

To comply with this material limit, the facility is required to keep records of volume of coating used and documentation of any filter replacements for exhaust for each emission unit for each calendar month (FG-RULE287(2)(c )), SC VI.1). The facility provided records of paint usage (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-RULE 287(2)(c)\01 - RY2024 MPG ROP Workbook.xlsx) that are summarized below:

	Paint Booth Building #11 Total Usage (gals/month)	Paint Booth Building #25 Total Usage (gals/month)	Paint Booths Building #70 Total Usage (gals/month)	Paint Booths Total Usage (gals/month)
<b>June 2023</b>	0.0	2.50	27.8	30.265
<b>July 2023</b>	0.0	2.50	10.0	12.519
<b>Aug 2023</b>	0.0	2.50	21.8	24.289
<b>Sept 2023</b>	0.0	5.00	8.0	12.970
<b>Oct 2023</b>	0.0	5.00	23.1	28.125
<b>Nov 2023</b>	0.0	2.50	27.1	29.619
<b>Dec 2023</b>	0.0	2.50	17.0	19.537
<b>Jan 2024</b>	0.0	2.50	32.4	34.911
<b>Feb 2024</b>	0.0	2.50	25.8	28.337
<b>Mar 2024</b>	0.0	2.50	28.6	31.104
<b>Apr 2024</b>	0.0	5.00	35.4	40.351
<b>May 2024</b>	0.0	2.50	18.0	20.461

The highest monthly total paint use for FG-RULE287(2)(c ) occurred in April 2024 (40.351 gallons). As this is under the material limit set forth by MI-ROP-A5262-2021, the facility is in compliance with FG-RULE287(2)(c ), SC II.1. The facility also provided documentation of paint booth maintenance and filter replacements (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-RULE 287(2)(c)\14 - Paint Booth - Job Plans.xlsx, S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-RULE 287(2)(c)\15 - 2024 Paint Booth Filter PM.xlsx, S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-RULE 287(2)(c)\72 - 2023 Paint Booth PM.xlsx ). As the facility provided the records mentioned above required by MI-ROP-A5262-2021, FG-RULE287(2)(c ), SC VI.1, the facility is in compliance.

**FG-MACT6H**

FG-MACT6H describes emission units and processes that are applicable to paint stripping operations that involve the use of chemical strippers that contain methylene chloride (MeCl) in paint removal processes; Autobody refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations; Spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), collectively referred to as the target HAP to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment. FG-MACT6H includes EU-PAINTBOOTH1, EU-PAINTBOOTH2, and EU-PAINTBOOTH3, which include the paint booths observed during this inspection. EGLE-AQD has not accepted delegation to implement and enforce NESHAP Subpart HHHHHH. Compliance with NESHAP HHHHHH was not evaluated as a result. Records related to FG-MACT6H can be accessed here: <S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-MACT6H>.

**Building #11 (EU-TANKPURGE and FG-RULE290)**

We visited Building #11, where gas tank purging is done. Brenda explained that empty gas tanks are brought here to be completely purged of gas with steam. Brenda stated that emptied gas tanks are loaded into a cell, a steam line is inserted into the gas tank, the door to the cell is closed, and then the steam is turned on to purge any remaining gas from the tank. After the tanks have been purged, Brenda explained that the facility then evaluates them to see if they are viable or if they need to be scrapped. I observed three smaller purging cells and one large purging cell. Brenda said that depending on the size of the gas tank, more than one tank can be purged in a cell as there are at least two steam lines running into each cell. I did not observe any gas tanks in the purging cells at the time of the inspection, and Brenda explained that this area does not get used very often. She stated they also have another tank purging area in Building #12, which was inspected by Kerry Kelly during the last inspection.

FG-RULE290 contains EU-TANKPURGE and EU-AIRBAGS, which are exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 290. EU-AIRBAGS (the deployment of airbags in a SEDA air bag neutralization cabinet) was not observed during this inspection. Kerry Kelly inspected one of these cabinets during the last inspection in 2023. The facility provided records of emissions for EU-TANKPURGE and EU-AIRBAGS from June 2023 until May 2024 to show this (<S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-RULE290>). According to these records, all emissions from EU-TANKPURGE and EU-AIRBAGS are uncontrolled.

Below is a summary of emissions required to be reported by Rule 290 from EU-TANKPURGE and EU-AIRBAGS:

<b>EU-TANKPURGE</b>					
	<b>Noncarcinogenic ITSL ≥ 2.0 ug/m<sup>3</sup> (lbs) (Limit: 1000 lbs/mo)</b>	<b>Noncarcinogenic 2.0 ug/m<sup>3</sup> &gt; ITSL ≥ 0.04 ug/m<sup>3</sup> (lbs) (Limit: 20 lbs/mo)</b>	<b>Carcinogenic IRSL ≥ 0.04 ug/m<sup>3</sup> (lbs) (Limit: 20 lbs/mo)</b>	<b>Noncarcinogenic, non- ozone forming emissions (lbs) (Limit: 1000 lbs/mo)</b>	<b>Record total monthly emissions (lbs) (Limit: 1000 lbs/mo)</b>

<b>June 2023</b>	0	0	0.035	1.616	1.650
<b>July 2023</b>	0	0	0.031	1.441	1.471
<b>Aug 2023</b>	0	0	0.041	1.927	1.969
<b>Sept 2023</b>	0	0	0.028	1.304	1.332
<b>Oct 2023</b>	0	0	0.035	1.655	1.690
<b>Nov 2023</b>	0	0	0.047	2.181	2.227
<b>Dec 2023</b>	0	0	0.026	1.227	1.253
<b>Jan 2024</b>	0	0	0.031	1.460	1.491
<b>Feb 2024</b>	0	0	0.025	1.168	1.193
<b>Mar 2024</b>	0	0	0.020	0.954	0.974
<b>Apr 2024</b>	0	0	0.037	1.733	1.770
<b>May 2024</b>	0	0	0.044	2.064	2.108

<b>EU-AIRBAGS</b>					
	<b>Noncarcinogenic ITSL ≥ 2.0 ug/m<sup>3</sup> (lbs) (Limit: 1000 lbs/mo)</b>	<b>Noncarcinogenic 2.0 ug/m<sup>3</sup> &gt; ITSL ≥ 0.04 ug/m<sup>3</sup> (lbs) (Limit: 20 lbs/mo)</b>	<b>Carcinogenic IRSL ≥ 0.04 ug/m<sup>3</sup> (lbs) (Limit: 20 lbs/mo)</b>	<b>Noncarcinogenic, non- ozone forming emissions (lbs) (Limit: 1000 lbs/mo)</b>	<b>Record total monthly emissions (lbs) (Limit: 1000 lbs/mo)</b>
<b>June 2023</b>	0.0038	0.0001	0.0009	0.0145	0.0193
<b>July 2023</b>	0	0	0	0	0
<b>Aug 2023</b>	0.0532	0.0014	0.0132	0.2030	0.2708
<b>Sept 2023</b>	0.0247	0.0007	0.0061	0.0943	0.1257
<b>Oct 2023</b>	0.0912	0.0024	0.0226	0.3480	0.4642
<b>Nov 2023</b>	0.0418	0.0011	0.0103	0.1595	0.2127
	0	0	0	0	0

<b>Dec 2023</b>					
<b>Jan 2024</b>	0.1102	0.0029	0.0273	0.4205	0.5609
<b>Feb 2024</b>	0.2641	0.0070	0.0653	1.0078	1.3441
<b>Mar 2024</b>	0.3990	0.0105	0.0987	1.5225	2.0307
<b>Apr 2024</b>	0.1805	0.0048	0.0447	0.6888	0.9187
<b>May 2024</b>	0.0912	0.0024	0.0226	0.3480	0.4642

The records provided indicate EU-TANKPURGE and EU-AIRBAGS do not emit any toxic air contaminants with an initial threshold screening level (ITSL) or initial risk screening Level (IRSL)  $\leq 0.04 \text{ ug/m}^3$ . The contaminate with the lowest ITSL/IRSL in the records provided is formaldehyde (IRSL =  $0.08 \text{ ug/m}^3$ ). This is in compliance with MI-ROP-A5262-2021, FG-RULE290, SC I.2.c. The records also indicate EU-TANKPURGE and EU-AIRBAGS do not emit mercury or lead, so they are also in compliance with MI-ROP-A5262-2021, FG-RULE290, SC I.2.d-e.

The highest total monthly emissions from EU-TANKPURGE occurred in November 2023 (2.227 lbs), with benzene and ethylbenzene contributing 0.047 lbs to the total. The highest total monthly emissions from EU-AIRBAGS occurred in March 2024 (2.0307lbs), with benzene and formaldehyde contributing 0.0987 lbs to the total. These records indicate the emissions from EU-TANKPURGE and EU-AIRBAGS are within the limits established in Rule 290. Therefore, the facility is in compliance with the conditions in MI-ROP-A5262-2021, FG-RULE290.

### **FG-COLDCLEANERS**

This flexible group includes any cold cleaner that is grandfathered or exempt from obtaining a PTI pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv).

During the inspection, I observed three cold cleaners, two BECCA parts washers in Building #70 and one other Safety-Kleen parts washer near the chassis dynos. The cleaners were not being used during the inspection. The lids of these cold cleaners were closed (SC VI.3), and the instructions were conspicuously posted (Rule 707) The opening of these cold cleaners were also less than  $10 \text{ ft}^2$ , so this equipment and process is exempt from obtaining a PTI (Rule 281).

The facility is required to maintain the following information on file for each cold cleaner: a unique identifier for each cold cleaner, the date the unit was installed, manufactured or that it commenced operation, the air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h), the applicable Rule 201 exemption, the Reid vapor pressure of each solvent used, and if applicable, the option chosen to comply with Rule 707(2) ( FG-COLDCLEANERS, SC VI.2). The facility provided these records (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-COLDCLEANERS\26 - Cold Cleaner Log.xlsx) and noted that none of the cold cleaners are heated or have a Reid vapor pressure of more than 0.3 psia. These records indicate there

are 28 cold cleaners located at this facility (5 aqueous parts washers and 23 solvent-based parts washers). According to the records, no halogenated solvents used in the cold cleaners (FG-COLDCLEANERS, SC II.1) and all cold cleaners, have an air/vapor interface less than 10 ft<sup>2</sup> (FG-COLDCLEANERS, SC IV.1).

### **FG-RICEMACT**

FG-RICEMACT includes engines that are subject to 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), located at an area source of HAP emissions, existing emergency, compression ignition (CI) RICE. This includes 13 emission units (EU-GEN1-4, 6-12, and 21-22). EGLE-AQD received notification on 9/29/2022 that Milford Proving Ground removed diesel fired EU-GEN8 and installed a new natural gas and propane fueled generator (EU-GEN8a). No engines that are included in FG-RICEMACT were observed during this inspection.

EGLE-AQD has not accepted delegation to implement and enforce NESHAP Subpart ZZZZ for area sources of HAP, therefore, compliance with requirements in NESHAP ZZZZ was not evaluated as a result. Records related to FG-RICEMACT can be accessed here: <S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-RICEMACT>.

### **Building #16 (EU-GEN36, FG-SUBPARTJJJJ)**

During the inspection, we visited a newly installed stationary natural gas fueled emergency generator, EU-GEN36, at the HVAC Battery Lab located at Building #16. We were unable to inspect the actual generator due to construction, but Corri explained this generator will be used for emergency power for the HVAC Battery Lab.

The facility notified EGLE-AQD that the generator was installed on 5/13/2024. EU-GEN36 is exempt from Rule 201 per Rule 278 and 285(2)(g) and subject to NSPS JJJJ according to the notification. Corri indicated on 5/16/2024 that the engine would be operated in a certified manner. EGLE-AQD also received notification on 9/29/2022 that Milford Proving Ground is installing a new natural gas and propane fueled generator (EU-GEN8a) which will be subject to 40 CFR Part 60, Subpart JJJJ.

In MI-ROP-A5262-2021, FG-SUBPARTJJJJ consists of five emission units (EU-GEN14a, EU-GEN15a, EU-GEN20, EU-GEN30, EU-GEN31) that are subject to 40 CFR Part 60, Subpart JJJJ requirements for Emergency Spark Ignition Internal Combustion Engines greater than 25 horsepower that commenced construction (ordered) after June 12, 2006 and were manufactured on or after January 1, 2009. No emission units in FG-SUBPARTJJJJ were inspected during this visit.

Emission limits for FG-SUBPARTJJJJ (SC I.1-7) are as follows:

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/Operating Scenario</b>
1. HC +NO <sub>x</sub>	13.4 g/kW-hr	Hourly
2. CO	519 g/kW-hr	Hourly
3. HC+NO <sub>x</sub>	2.7 g/kW-hr	Hourly
4. CO	4.4 g/kW-hr	Hourly

5. NO <sub>x</sub>	2.0 g/HP-hr	Hourly
6. CO	4.0 g/HP-hr	Hourly
7. VOC	1.0 g/HP-hr	Hourly

EU-GEN14a and EU-GEN20 are only subject to FG-SUBPARTJJJJ SC I.1 and 2. EU-GEN15a is only subject to FG-SUBPARTJJJJ SC I.3 and 4. EU-GEN30 and EU-GEN31 are only subject to FG-SUBPARTJJJJ SC I.5-7.

To show compliance with the emission limits, the facility shall keep certification documentation from the manufacturer indicating that each engine in FG-SUBPARTJJJJ meets the applicable emission limitations (SC VI.3) and keep records of the manufacturer's emission-related written instructions and records demonstrating that the engine has been maintained according to those instructions (SC III.1-2, SC VI.2). The facility provided a copy of the certificate of conformity for all engines in FG-SUBPARTJJJJ (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTJJJJ\Engine Certifications). These records indicate that all engines in FG-SUBPARTJJJJ meet the emission limits. The facility also provided manufacturer's instructions and maintenance records for all units in FG-SUBPARTJJJJ (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTJJJJ\Maintenance Records and Manuals). This facility is therefore in compliance with MI-ROP-A5262-2021, FG-SUBPARTJJJJ, SC III.1-2, SC VI.2-3 and 40 CFR Part 60, Subpart JJJJ.

The facility is also only allowed to burn pipeline natural gas in EU-GEN30 and EU-GEN31 (FG-SUBPARTJJJJ, SC II.1) and only propane in EU-GEN20, EU-GEN14a, and EU-GEN15a (FG-SUBPARTJJJJ, SC II.2). The facility provided fuel records that state the mandated fuels are used in those engines (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTJJJJ\05 - 2023-2024 MPG Emergency Generators Hours Summary.xlsx). Therefore, this facility is in compliance with MI-ROP-A5262-2021, FG-SUBPARTJJJJ, SC II.1-2 and 40 CFR Part 60, Subpart JJJJ.

According to MI-ROP-A5262-2021, FG-SUBPARTJJJJ, the facility is limited to operating any engines in FG-SUBPARTJJJJ to 500 hours/year total on a 12-month rolling time period basis as determined at the end of each calendar month (SC III.3), and up to 100 hours/year for maintenance checks, readiness testing, and non-emergency situations (SC III.4). The facility provided hours of operation for each engine in FG-SUBPARTJJJJ from June 2023 – June 2024 (S:\Air Quality Division\STAFF\Jillian Cellini\Inspection Documents\GM - Milford 2024\FG-SUBPARTJJJJ\05 - 2023-2024 MPG Emergency Generators Hours Summary.xlsx). The highest 12-month rolling total hours for FG-SUBPARTJJJJ occurred in June 2023 (42.16 hrs, EU-GEN14a.) The highest 12-month rolling total non-emergency hours for FG-SUBPARTJJJJ was in October 2023 (34.8 hours, EU-GEN14a.). The highest 12-month rolling total emergency hours for FG-SUBPARTJJJJ was in June 2023 (8.55 hours, EU-GEN14a.). The operation hours for FG-SUBPARTJJJJ are within the limits set forth in MI-ROP-A5262-2021, FG-SUBPARTJJJJ, SC III.3-4 and 40 CFR Part 60, Subpart JJJJ, therefore, this facility is in compliance.

## Other Equipment and Processes

### Airbag Deployment Laboratory

The first building we observed on this inspection was the airbag deployment laboratory. This laboratory is in Building 25, which I observed has four stacks that exhaust out of the top of the building. As no testing was taking place at the time of inspection, we were able to inspect the lab itself. Brenda and Corri explained that airbags are deployed in this lab a couple of times a month for safety testing with crash test dummies in different positions (standard sitting and “awkward” positions like laying down across the seat, etc) to evaluate airbag safety. I observed that the vehicles that were being used for testing were not fully contented – they appeared to be only the shell of the car. They explained this testing happens a couple of times a month. I observed several exhaust systems that Brenda and Corri explained lead up to the stacks that were not running at the time of inspection. They stated these exhaust systems are usually only run for a couple of minutes after the airbags are deployed to clear smoke from the room. Brenda stated this was mostly so employees can safely inspect how the airbags have been deployed after a test. As this process is part of research and development, it is exempt from obtaining a PTI under Rule 283(2)(b).

### **Chassis Dynos**

While inspecting FG-ENGINE DYNOS in Building #94, I observed several large garage-like areas that cars could be pulled into. Brenda and Corri explained that this is where chassis dynamometer testing was done. Brenda and Corri explained that chassis dynamometers were also housed in Building #94, and that they are used mostly for noise and vibration testing. Compared to a stationary dynamometer, a chassis dynamometer is not separated from the vehicle. The whole vehicle is then “driven” in a controlled environment on several conveyor belts that reproduce road conditions. This testing is part of the research and development process.

According to a memo written on June 12, 2013, by G. Vinson Hellwig, the chief of the AQD at the time: “Due to a lack of national consistency on this issue, no clear guidance from EPA and that neighboring states consider chassis dynos mobile sources, and AQD has determined that motor vehicle test operations including chassis dynos are subject solely to Title II of the CAA and are not stationary sources.” Therefore, these activities are only voluntarily permitted by a facility. Compliance with federal and state rules for these chassis dynamometers was not evaluated.

### **REPORTING**

All semi-annual and annual reports required by MI-ROP-A5262-2021 were received on time for the last year. These annual and semi-annual reports required by the ROP are due on 3/15 and 9/15 of every year. The semi-annual report submitted in September 2023 noted two deviations: weekly dynamometer fuel use and therefore lb/hour NOx and VOC records from January 2022 to June 2023 were not kept, and maintenance on EU-GEN23 was late according to manufacturer's schedule. These deviations were addressed (fuel records sent, EU-GEN23 maintenance was completed), and a VN was not sent. The semi-annual report submitted in March 2024 noted two deviations: EU-GEN6 was operated for more than 50 hours in non-emergency situation and EU-GEN22 maintenance was late (MACT ZZZZ requirements). A VN was not issued for these deviations.

### **2023 Emission Report**

This facility submitted their annual emissions report form on time to MiEnviro for the 2023 calendar year. The Criteria Air Pollutant emissions are as follows:

Pollutant	Total Emissions (tons)
Carbon Monoxide	18.42417
Lead	0.00009
Nitrogen Oxides	26.64643
PM <sub>10</sub> Primary (Filt + Cond)	1.90837
PM <sub>10</sub> Filterable	0.61349
PM <sub>2.5</sub> Primary (Filt + Cond)	1.90027
PM <sub>2.5</sub> Filterable	0.61349
PM Condensable	1.19655
Sulfur Dioxide	0.33142
Volatile Organic Compounds	5.14477
Total Organic Gas	0.3335
Ammonia	0.08856

**Conclusion**

Observations made during the inspection and record review indicate that General Motors LLC - Milford Proving Ground located at 3300 General Motors Road, Milford, MI is operating in compliance with all requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules, MI-ROP-A5262-2021, and PTI 130-22.

NAME Jillian Cellino DATE 8/20/2024 SUPERVISOR K. Kelly