

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

A262068955

<b>FACILITY:</b> GM Components Holdings, LLC	<b>SRN / ID:</b> A2620
<b>LOCATION:</b> 2100 BURLINGAME AVE SW, WYOMING	<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> WYOMING	<b>COUNTY:</b> KENT
<b>CONTACT:</b> Annette Wendland , Environmental Engineer	<b>ACTIVITY DATE:</b> 09/07/2023
<b>STAFF:</b> April Lazzaro	<b>COMPLIANCE STATUS:</b> Non Compliance
<b>SUBJECT:</b> Unannounced, self-initiated inspection.	<b>SOURCE CLASS:</b> MAJOR
<b>RESOLVED COMPLAINTS:</b>	

Air Quality Division (AQD) staff April Lazzaro and Dillon King arrived at the facility to conduct an unannounced inspection. AQD staff conducted surveillance around the perimeter for visible emissions and odors; none were detected. Upon arrival, the gate security initiated the safety training, and I contacted Annette Wendland, Senior Environmental Engineer, who met us at the guard shack.

#### Facility Description

GM Components Holdings, LLC (GM) located in Wyoming, MI manufactures small engine components, as well as truck axles. The facility has seven active permits, which include Permit to Install (PTI) No.'s 85-19C, 179-98, 246-95, 422-94, 1121-91, 789-89 and 438-73. The company has approximately 1,200 employees and operates three shifts in the 1.8 million square feet facility.

#### Compliance Evaluation

During the pre-inspection meeting, a variety of items were discussed, including the purpose of the inspection. We were also joined by Alex Windle, Environmental Engineer who accompanied us during the inspection. The purpose of the inspection was to determine compliance with existing permits, but to also obtain additional information about the diesel fuel fired generators being used on-site to provide compressed air. A PTI pre-application meeting was held on July 6, 2023, where GM informed AQD that the diesel fuel fired generators were needed to provide compressed air while the existing, electric compressors were down for repairs. We learned that the main compressor is permanently out of commission, and the other compressor has been up and down over the past two months. A new compressor should be installed by early 2024, eliminating the need for the rented diesel fuel fired units. The company was informed that modeling would be needed for the compressors to ensure the air toxics and criteria pollutant limits would be met to protect public health. During the pre-inspection discussions, AQD staff learned that the application had not yet been submitted because emissions generated by the compressors where they are currently located, don't meet the health impacts according to modeling. The facility consultant (Trinity) is still working to determine the best location on-site from both an operations and health impacts modeling perspective. These diesel fuel fired generators will be further discussed below.

Additionally, we discussed active permits and what equipment is associated with each and their operational status which is also discussed below.

PTI No. 438-73 covers a decommissioned copper/tin cyanide plating tank and associated conveyor. GM plans to render this unit permanently inoperable by disconnecting the electrical fixtures and will void the PTI when this has been completed.

PTI No. 789-89 covers one AFC mesh belt heat treating furnace system referred to as Heat Treat 3. This unit is operational. The permit does not contain recordkeeping components but limits particulate emissions and opacity. No stack testing for particulate emissions has been requested and facility staff conducts monthly opacity observations from the roof.

PTI No. 1121-91 covers one AFC mesh belt heat treat furnace system referred to as Heat Treat 4. This unit is operational. The permit does not contain recordkeeping components but limits particulate emissions and opacity. No stack testing for particulate emissions has been requested and facility staff conducts monthly opacity observations from the roof.

PTI No. 422-94 covers one AFC mesh belt heat treat furnace system referred to as Heat Treat 5. This unit is operational. The permit does not contain recordkeeping components but opacity. The facility staff conducts monthly opacity observations from the roof.

PTI No. 246-95 covers one AFC mesh belt heat treat furnace system referred to as Heat Treat 6. This unit is operational. The permit does not contain recordkeeping components but limits opacity. The facility staff conducts monthly opacity observations from the roof.

PTI No 179-98 covers one Linberg continuous mesh belt heat treat furnace that has no special conditions. This unit did not operate in 2022 and GM will assess whether or not the PTI should be voided.

PTI No. 85-19C covers one 700 pound carbonitriding heat treat furnace. The permit limits emissions of volatile organic compounds (VOCs) to 7.1 tons per year, as well as material limits of 34 million cubic feet of natural gas both on a 12-month rolling time period determined at the end of each month.

Stack testing conducted in 2020 determined an emission factor in pounds of VOC/million cubic feet (mmcf) of natural gas. This emission factor is 413.7 lb VOC/mmcf of gas and is the emission factor being used based on the stack test results. Emissions data was requested for the time period of January 2022-August 2023 which was received timely. Records indicate the VOC emissions for the 12-month period ending in August 2023 was 1.29 tons which indicates compliance with the emission limit. Natural gas usage for the 12-month period ending in August 2023 was 6.23 mmcf which indicates compliance with the material limit.

The recordkeeping is being maintained in accordance with the requirements of the permit.

A roof assessment of the heat treat oven stacks was conducted, because there was roof staining observed from Google Earth images. GM has metal trays below each oil quench stack to try and contain any oil mist that condenses as it hits the cooler outside air. This approach is minimally successful because there is still oil staining on the roof in the immediate perimeter of the stacks. According to GM, no visible emissions have ever been observed. Possible options to eliminate this oil mist emission occurred and a mist eliminator or mesh pad was discussed. GM has been working on continuous improvement ideas in this area and hopes to eliminate this issue. The roof should be inspected again during future inspections to see if improvements have been made.

The facility operates two natural gas fired boilers in the powerhouse. The west boiler was installed in 2018 and is a Victory Energy Frontier Series boiler with a steam capacity of 40, 421 lbs/hr and 47.25 MMBtu/hr. The serial number is 14182. This boiler is exempt pursuant to Rule 282(2)(b)(i) and is subject to 40 CFR Part 60 Subpart Dc. All appropriate notifications have been received. The facility tracks natural gas usage on a monthly basis, and only one boiler will operate at any one time.

The east boiler was in the process of being installed at the time of the inspection and is a Cleaver Brooks Boiler with a capacity of 48,900 MMBtu/hr. The serial number is T9429-1-1. This boiler is exempt pursuant to Rule 282(2)(b)(i) and is subject to 40 CFR Part 60 Subpart Dc. An initial notification was sent to AQD on September 7, 2023. The facility will track natural gas usage on a monthly basis, and only one boiler will operate at any one time.

Four of the diesel fired generators used to power the compressors are currently located outside the powerhouse. They were not operating the day of the inspection, because recent repairs to the electric air compressor has it up and running. Two additional diesel fired generators are on the east side of the facility.

GM explained that they have been maintaining emissions records for the diesel fired units. We discussed briefly Rule 278, which details that a PTI may not apply to certain activities. Rule 278(1)(b) states, any activity that results in an increase in actual emissions greater than the significance levels defined in Rule 119. For the purpose of this rule, "activity" means the concurrent and related installation, construction, reconstruction, relocation, or modification of any process or process equipment. The six diesel fired engines that are currently on-site are considered a related installation of process equipment.

In the AQD rules, the term "actual emissions" is also defined in Rule 101(b) which states, "Actual emissions" means the average rate, in tons per year, at which the process or process equipment

actually emitted the air contaminant during the preceding 2-year period and which was representative of the normal operation of the process or process equipment. A different time period may be used if the time period can be demonstrated to be more representative of normal operation. Actual emissions shall be calculated using the process's or process equipment's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period. The department may presume that the actual emissions for a process or process equipment shall equal the allowable emissions for such process or process equipment if the allowable emissions are identified in the demonstration for an approved state implementation plan. For any process or process equipment that has not begun normal operations, actual emissions shall equal the allowable emissions." The term "actual emissions" is not applicable in parts 6 and 7 of these rules.

Of note is the fact that for any process equipment that has not begun normal operations, actual emissions shall equal allowable emissions. Allowable emissions is defined in Rule 101(k) which states, "Allowable emissions" means the emission rate calculated using the maximum rated capacity of the process or process equipment, unless there are legally enforceable limits that restrict the operating rate or the hours of operation, or both, and the most stringent of the following: (i) Any applicable standards pursuant to the clean air act. (ii) Any applicable emission limit specified in these rules, including a limit that has a future compliance date. (iii) Any applicable emission rate specified as a legally enforceable permit condition or voluntary agreement, performance contract, stipulation, or order of the department, including a rate that has a future compliance date."

The proper interpretation of the definitions identified above is that for equipment that is part of a related installation, allowable emissions are considered the Potential to Emit (PTE) of the emission units if no other limitations have been allocated, which is the case at this facility.

GM provided the PTE calculations for the six diesel generators that are currently on-site and have been operational as recently as September 1, 2023 and combined have operated for a total of 8,344.1 hours since April 26, 2023. The significance levels for certain pollutants are identified in Rule 119 and were compared to the PTE of the six diesel generators.

Significance Levels	PTE of six diesel fired generators	Over Significance Level Yes/No
Carbon monoxide: 100 tpy	79.38 tpy	No
Nitrogen oxides 40: tpy	79.38 tpy	Yes
Sulfur dioxide: 40 tpy	24.01 tpy	No
PM 10: 15 tpy	3.50 tpy	No
PM 2.5: 15 tpy	3.50 tpy	No
VOC 40: tpy	4.20 tpy	No

AQD calculations, using the NOx emission factor of 3.2 lbs/MMBtu indicate the PTE for NOx is 264.90 tons, however GM states that the manufacturer's certified performance data for the engines is 3.4 g/KW-hr which has not been verified.

As shown above the engine PTE is above the significance levels for nitrogen oxides. This is a violation of Rule 201 for failure to obtain a Permit to Install. It is important to note that a PTI application is forthcoming, when an engine configuration that can meet the constraints of the air model used to protect public health.

**FACILITY-WIDE PTE**

Major Source Thresholds	Facility-wide PTE	Major Source Yes/No
Carbon monoxide: 100 tpy	130.28 tpy	Yes
Nitrogen oxides 100: tpy	122.18 tpy	Yes
Sulfur dioxide: 100 tpy	24.41 tpy	No
PM: 100 tpy	6.7 tpy	No
VOC 100: tpy	85.6 tpy	No

The facility PTE is currently over the major source thresholds for both carbon monoxide and nitrogen oxides. Data submitted by the company indicates the first day of operation for the engines was April 26, 2023, and as such the facility will have 12-months from that date to obtain synthetic minor limits or obtain a Renewable Operating Permit.

**Summary**

GM Components Holdings was in non-compliance at the time of the inspection. A Violation Notice will be issued for Rule 201.

NAME April Lazzaro

DATE 09/19/2023

SUPERVISOR 