DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B179831431

FACILITY: General Motors LLC- Warren Transmission Plant		**SRN / ID:** B1798
LOCATION: 6275 Nine Mile Rd., WARREN		**DISTRICT:** Southeast Michigan
CITY: WARREN		**COUNTY:** MACOMB
CONTACT: Asefaw Teclegiorgis , Environmental Engineer		**ACTIVITY DATE:** 08/31/2015
STAFF: Samuel Liveson	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled inspection of major source. Report revised 11-9-2015.		
RESOLVED COMPLAINTS:		

On August 31, 2015, Air Quality (MDEQ-AQD) Senior Environmental Engineer Rem Pinga and I conducted a scheduled, level 2 inspection of General Motors LLC – Warren Transmission Plant (GM-WTP), located at 6275 Nine Mile Road in Warren, Michigan. The purpose of this inspection was to determine the facility's compliance with the federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; the conditions of Renewable Operating Permit (ROP) MI-ROP-B1798-2013; 40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines; 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; and 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

We arrived on site around 9:15 am. We met with Mr. Asefaw Teclegiorgis, Senior Environmental Engineer. Mr. Teclegiorgis provided records and a site walkthrough. I provided Mr. Teclegiorgis with my contact information and a copy of the pamphlet "DEQ Environmental Inspections: Rights and Responsibilities."

Opening Meeting

GM-WTP manufactures six speed transmissions that go into the Buick Enclave, Chevy Traverse, Chevy Impala Cadillac XTS, Chevy Malibu, and GMC. Terrain and the new Global Front Wheel Electric Hybrid program manufactures transmissions for the Volt and Cadillac. The facility has approximately 650 employees, and operates three shifts, usually for six days a week.

Facility Walk-Through

EU-COGEN
We visited the cogeneration unit on site. It is a natural-gas fired turbine combined with a boiler installed in 1987. The unit can output 35,000 pounds (lbs) of steam per hour. The natural gas usage is monitored every few minutes by an acquisition data system per Special Condition (S.C.) VI.1. Emissions are calculated monthly using emission factors from the most recent stack test per S.C. VI.3. The most recent stack test was performed on February 9, 2012. The facility is required to conduct its next stack test by July 16, 2018, which corresponds with the five year period following issuance of its ROP per S.C. V.1. However, according to Mr. Teclegiorgis, the unit will be decommissioned around Thanksgiving of 2015, so that an additional stack test may not be necessary. The facility is in the process of installing a new compressor room to be run by an independent company. According to Mr. Teclegiorgis, fuel

oil is not used on the cogeneration unit and there is no heat recovery. Nitrogen oxide emissions are not controlled. According to the Michigan Air Emissions Reporting System, the facility has not used fuel oil since before 2008.

According to facility record, the cogeneration unit was last operated in April. The required steam load at the facility is generally too low these days for the cogeneration unit to operate.

EU-COGEN Records
Mr. Teclegiorgis provided nitrogen oxide (NOx) emission calculations per 12-month rolling time period through August of 2015 per S.C. VI.3. The facility is limited to 136.7 tons of NOx per 12-month rolling time period per S.C. I.4. The highest emissions in 2015 were 28.5 tons of NOx per 12-month rolling time period in April of 2015.

Mr. Teclegiorgis provided monthly maximum natural gas usage results for January of 2015 through July of 2015. The facility is limited to using a maximum of 47,880 standard cubic feet (scf) of natural gas per hour per S.C. II.1. The maximum usage in 2015 appears to be 40,800 scf per hour in January of 2015.

EU-COGEN is subject to 40 CFR Part 60 Subpart GG: Standards of Performance for Stationary Gas Turbines (40 CFR Part 60 Subpart GG). To demonstrate compliance with the SO_2 emission limit per S.C. VI.2 and I.5, the facility follows method §60.334(h)(3)(i), which requires a tariff sheet specifying that the maximum total sulfur content is 20 grains per 100 scf or less. In the facility manila folder is a tariff sheet demonstrating that sulfur not contain more than 5 grains of total sulfur per 100 cubic feet.

FG-BOILERS
FG-BOILERS consists of EU-BOILER4 and EU-BOILER5. EU-BOILER5 was running during the inspection. Boilers have the ability to use fuel oil in place of natural gas. However, according to maintenance staff, the line to use fuel oil was decommissioned. Fuel oil pumps are off-site and no #6 fuel oil is stored on site. According to the Michigan Air Emissions Reporting System, the facility has not used fuel oil since before 2008. Because fuel oil is not used in the boilers, they are not subject to 40 CFR Part 63 Subpart JJJJJJ - National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources per §63.11195(e). Additionally, S.C. I.1, II.2, VI.1, and VI.2 related to fuel oil do not appear to be applicable. Mr. Teclegiorgis provided detailed records of maintenance conducted on FG-BOILERS per S.C. VI.3. The maintenance was conducted on May 29, 2015.

Steam from the boilers is provided for heat at the facility. Generally in the summertime boilers provide 5,000 lbs of steam per hour. In the wintertime this load can increase to 35,000 lbs per hour. According to facility records, each boiler has a design capacity of 70,000 lbs per hour. Natural gas usage is tracked daily.

EU-North Diesel Engine
Because this fire pump engine was installed in 2007, it is considered new per 40 CFR Part 63 Subpart ZZZZ paragraph §63.6590(a)(2)(iii). However it is not considered subject to 40 CFR Part 60 Subpart IIII because fire pump engines of this size are subject to this subpart starting in 2009, per Table 3 of 40 CFR Part 60 Subpart IIII. The engine appears to be operated for less than 100 hours per year so that it meets the definition of a fire pump engine per §60.4219.

The engine is equipped with a non-resettable hours meter per S.C. IV.1, which read 215.1 hours during the inspection. Mr. Teclegiorgis provided sample operating hours recordkeeping from May of 2015 through August of 2015 per S.C. VI.2. The hours of operation show that the hour meter showed 212.7 hours on August 3, 2015, which corresponds with our reading during the inspection. The hours of operation show that the total hours for maintenance and testing are 14.2 through 2015, below the limit of 100 hours per year per S.C. III.3. The engine has not been operated for emergency purposes in 2015.

EU-South Diesel Engine
The south diesel emergency engine was installed in 2001. MDEQ-AQD observed that it is equipped with a non-resettable hours meter per S.C. IV.1 which read 518.4 hours during the inspection. This engine is considered existing and is subject to 40 CFR Part 63 Subpart ZZZZ.

Mr. Teclegiorgis provided operating hours recordkeeping from September of 2014 through July of 2015 per S.C. VI.5, as well of records of maintenance performed per S.C. VI.4. The hours of operation show that the total hours for maintenance and testing are 11.0 through 2015, below the hourly limits per S.C. III.5 and III.6. The engine has not been operated for emergencies in 2015.

Computer Room Emergency Generator
MDEQ-AQD received notification of the installation of a new 260-horsepower natural-gas fired emergency generator being installed September 20, 2014. According to Mr. Teclegiorgis, the generator did not operate until November. According to the engine nameplate, it was manufactured October 18, 2013, and has an 8.8L displacement.

The engine appears to be subject to 40 CFR Part 60 Subpart JJJJ. The engine appears to have a non-resettable hours meter per §60.4237(b), and according to a letter from the manufacturer from August 18, 2015 provided by Mr. Teclegiorgis. Mr. Teclegiorgis provided the USEPA Certificate of Conformity for this engine per §60.4243(b)(1) and §60.4245(a)(3). Mr. Teclegiorgis provided hours of operation of the engine per §60.4245(b).The engine has been operated for maintenance only and for 17.5 hours total, below 100 hours per §60.4243 (d). The engine has a certified power of 235 kilowatts. This engine appears to be exempt from obtaining a Permit-to-Install per R 285(g).

West Diesel Fire Pump Engine
MDEQ-AQD received notification of the installation of a new 237-horsepower diesel emergency fire pump engine being installed March 2, 2015. The engine appears to be subject to 40 CFR Part 60 Subpart IIII. According to its nameplate, the engine was manufactured in July of 2014. The engine appears to have a non-resettable hours meter per §60.4209(a). Mr. Teclegiorgis provided hours of operation. The engine has operated 3.6 hours total since installation, below 100 hours per §63.4211(f). Also provided was documentation for generator type JU6H-UFAD88 for 237 horsepower that appears to show it is certified per §60.4211. This engine appears to be exempt from obtaining a Permit-to-Install per R 285(g).

FG-COLDCLEANERS
GM-WTP has one cold cleaner with a tank containing organic solvent. The solvent used is Crystal Clean. Otherwise the facility has heated cleaners with a water based cleaning solution. We visited two heated cleaners with a water based cleaning solution. Both were closed and had instructions posted. All cleaners have an air/vapor interface less than 10

square feet according to records provided by Mr. Teclegiorgis per S.C. VI.2. Mr. Teclegiorgis provided material safety datasheets for the water based cleaning solution Parco 220, as well as for PC-7300 water-based floor cleaner used on site. Parco 220 does not appear to have organic solvent so that heated cleaners don't meet the definition of a cold cleaner per R 103 (aa).

FG-R290
According to Mr. Teclegiorgis, at this time no equipment on site is subject to R 290. Marking ink operations no longer occur at the site, and there are no parts washers on site.

Miscellaneous
Machining equipment at the facility is exempt from Permit to Install requirements via R285(l)(vi). This includes aluminum working equipment such as CNC machines, valve body machining, and gear machining. Water-based coolants from machining equipment is stored in two indoor tanks of 130,000 gallons and 60,000 gallons. These tanks appear to be exempt from permitting requirements per R 284(c). Mr. Teclegiorgis provided the MSDS for the Bonderite 549 coolant. The coolant undergoes pH testing daily and contains some biocides to minimize bacteria growth. We visited the chip reprocessor where metal chips are separated from coolant in a 330-gallon centrifugal process. This appears to be exempt from permitting requirements per R 285(r)(iv).

The facility has one sand blaster that emits to the general in-plant environment. This sand blaster appears to be exempt from permitting requirements per R 285(l)(vi)(B).

Process tanks throughout the facility contain coolants. These tanks appear to be exempt from permitting requirements per R 284(c).

A wastewater treatment process is used to separate hydraulic oil from water. The process includes two open tanks of 300,000 gallons. No cooking occurs. There is no sludge pit. The process appears to be exempt from permitting requirements per R 285(m).

Compliance

Based on the AQD inspection and records review, it appears that GM-WTP is in compliance with the federal Clean Air Act, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the conditions of ROP MI-ROP-B1798-2013; 40 CFR Part 63 Subpart ZZZZ; 40 CFR Part 60 Subpart IIII; and 40 CFR Part 60 Subpart JJJJ.

NAME Adam Teclegiorgis DATE 11/9/2015 SUPERVISOR CJE