

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

B179838152

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: 12/15/2016
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of a major source.		
RESOLVED COMPLAINTS:		

On December 15, 2016, I conducted an unannounced, scheduled, level 2 inspection of General Motors LLC – Warren Transmission Plant (GM-WTP), located at 23500 Mound 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 Air Pollution Control Rules; 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.

I arrived on site around 9:30 AM. I met with Mr. Asefaw Teclegiorgis, Senior Environmental Manager. Mr. Teclegiorgis provided records and a walkthrough of the facility. I provided Mr. Teclegiorgis with my contact information.

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. The 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.

On March 24, 2016, the Air Quality Division (MDEQ-AQD) received a Notification of Change per Rule 215(1) for MI-ROP-B1798-2013. EU-COGEN, EU-BOILER4, and EU-BOILER5 plan to be permanently shut down as of March 31, 2016. As such, the special conditions associated with these emission units (EU-COGEN and FG-BOILERS) are no longer applicable. We discussed voiding the facility ROP. Mr. Teclegiorgis made a copy of the MDEQ-AQD procedure to void an issued ROP. On December 16, I sent an email about how MDEQ-AQD would like a Potential to Emit (PTE) calculation related to voiding the facility ROP. A PTE calculation will clarify whether the facility will be a true minor source or should obtain an opt-out permit before voiding the facility ROP.

Facility Walk-Through

Stamped aluminum and steel parts arrive at the facility, and completed transmissions ship from the facility. No spray coating of parts occurs on site according to Mr. Teclegiorgis.

Powerhouse – EU-COGEN and FG-BOILERS

We met with Mr. Doug Eldridge, Site Utility Manager, and visited the powerhouse to see EU-

COGEN and boilers EU-BOILER-4 and EU-BOILER-5. According to a certified notification received March 24, 2016, EU-COGEN has not been used since August 31, 2015, and EU-BOILER-4 and EU-BOILER-5 were last used December 31, 2015. According to the certified notification, these units were planned to be permanently shut down as of March 31, 2016.

I observed that the natural gas line leading to each unit (EU-COGEN, EU-BOILER-4, and EU-BOILER5) was cut and bolted shut on either end. According to Mr. Eldridge, the disconnection was verified with the boiler inspector, and the electrical line was cut as well. Because these units appear to be permanently shut down, I did not evaluate these units for compliance.

Emergency Engines

There are four emergency engines at the facility. The north diesel engine is covered under emission unit EU-North-Diesel Engine. The south diesel engine is covered under EU-South Diesel Engine. MDEQ-AQD received notification of the installation of the computer room emergency generator engine on November 13, 2014 as part of a Rule 215(3) notification. MDEQ-AQD received notification of the installation of a diesel emergency fire pump (known as the west diesel/Building 9 fire pump engine) on March 3, 2015 as part of a Rule 215(3) notification. It appears these are "off-permit" changes that may be made without a revision to the ROP per R 215(3).

EU-South-Diesel-Engine

We visited the South Diesel Engine. This engine is considered existing and is subject to 40 CFR Part 63 Subpart ZZZZ. According to documents located with the engine, the engine model number is 608IHF001, its horsepower is 290, and it has a date of December 2001. The non-resettable hours meter appears to be in place per EU-SOUTH-DIESEL-ENGINE Special Condition (S.C.) IV.1. The non-resettable hours meter read 553 hours during the inspection. According to Mr. Teclegiorgis and from engine maintenance records, the oil is changed every year per S.C. III.2.a. Annual maintenance is performed per S.C. III.1 and S.C. III.2.b, III.2.c, and III.3. The facility does not appear to use an oil analysis program to extend the specified oil change requirement per S.C. III.4 and V.1.

Because of the frigid weather (temperatures below 0 °F with wind chill), we were unable to visit the three other emergency generators on site. Records provided for emergency engines are described later in this report.

FG-COLDCLEANERS

According to Mr. Teclegiorgis, there are no cold cleaners on site per R 103(aa). All parts washers use a water-based cleaning solution.

Coolant/Production Washers

Water-based coolants from machining equipment are stored in two indoor tanks of 130,000 gallons and 60,000 gallons. These tanks appear to be exempt from obtaining a permit to install per R 284(2)(c). The coolant undergoes pH testing daily and contains some biocides to minimize bacteria growth.

Several production washers are used on site to wash transmission parts. According to Mr. Teclegiorgis, these production washers emit to the general in-plant environment, so they appear to be exempt from obtaining a permit to install per R285(2)(r)(iv).

Miscellaneous

Machining equipment at the facility is exempt from permit to install requirements via R285(2)(l)(vi). This includes aluminum working equipment such as CNC machines, valve body

machining, and gear machining.

We visited the chip reprocessor where metal chips are separated from coolant in a centrifugal process. The oil recovered from the chips is transferred into 330 gallon totes and reused. This process appears to be exempt from obtaining a permit to install per R 285(2)(r)(iv).

The facility has one sand blaster that emits to the general in-plant environment. According to Mr. Teclegiorgis, this sand blaster has not been used in many years and is currently not active. It appears to be exempt from obtaining a permit to install per R 285(2)(l)(vi)(B).

Two 30,000 gallon tanks store transmission fluid. These tanks appear to be exempt from obtaining a permit to install per R 284(2)(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 obtaining a permit to install per R 285(2)(m).

Recordkeeping

Production Washers

Mr. Teclegiorgis provided the material safety datasheet for the water-based cleaning solution Green Unikleen 1223, which is used by several parts washers on site. This degreaser has no hazardous components and it is non-volatile according to its material safety datasheet. The solution is heated slightly according to Mr. Teclegiorgis.

Because more than 1000 gallons washing fluids are used annually, these emissions are provided in the Michigan Air Emissions Reporting System (MAERS). Coolant usage in machining equipment is also provided in MAERS. According to MAERS, in 2015 approximately 4.8 tons of VOC emissions from GM-WTP were from coolant and washer fluids. Mr. Teclegiorgis provided the MSDS for Prevox 505, which accounted for 1.9 tons of VOC emissions from the facility. From the MSDS, a VOC content of 4.8 percent is provided from EPA Method 24. This appears to equate to approximately 0.44 lbs VOC/gal, which is the VOC content used in MAERS calculations.

Facility Natural Gas Usage

Mr. Eldridge provided the total natural gas usage in 2015 and 2016, as well as total natural gas usage in 2014 from Consumers Energy. Natural gas usage has declined since the end of 2015 when EU-BOILER-4 and EU-BOILER-5 were last used. According to the Consumers Energy reports, 83,673 thousand cubic feet (MCF) were used for the prior 12 months through November of 2016, compared with 248,762 MCF for the prior 12 months through November of 2015.

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.

Mr. Teclegiorgis provided operating hours for January through October of 2016 per S.C. VI.2. Through October 16, the engine has been operated for 17.8 hours in 2016. Because the engine has been operated for less than 100 hours in the year for maintenance and testing per §60.4211(f), the engine appears to meet the definition of an emergency engine per §60.4219. Maintenance records were also provided showing the engine received an oil change and is

operated according to manufacturer's recommendations and schedule per S.C. III.1. Mr. Teclegiorgis provided the MSDS for diesel fuel used per S.C. VI.3 showing that the facility uses ultra-low sulfur diesel with 15 parts per million (PPM) sulfur maximum per S.C. II.1.

EU-South Diesel Engine

Mr. Teclegiorgis provided operating hours from April through October of 2016 per S.C. VI.5, and records of annual preventative maintenance conducted August 4, 2016 per S.C. VI.2 and 4. Hours of operation show the engine has been operated for 19.2 hours in 2016 per S.C. III.5 and 6. Maintenance records show that the oil was changed annually, filters were replaced, and that belts and hoses were checked per Table 2d to 40 CFR Part 63 Subpart ZZZZ.

Computer Room Emergency Generator Engine

MDEQ-AQD received notification of the installation of a new 260-horsepower natural-gas fired emergency generator engine installed September 20, 2014.

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) according to a letter from the manufacturer from August 18, 2015 provided by Mr. Teclegiorgis located in the manila file. The USEPA Certificate of Conformity for this engine is in the manila file per §60.4243(b)(1) and §60.4245(a)(3).

Mr. Teclegiorgis provided hours of operation of the engine from January through December of 2016 per §60.4245(b). The engine has been operated for maintenance only and for 21.8 hours total, below 100 hours per §60.4243(d). Mr. Teclegiorgis also provided records of annual maintenance conducted on October 10, 2016, at which time the oil was changed. This engine appears to be exempt from obtaining a permit to install per R 285(2)(g).

West Diesel (Building 9) Fire Pump Engine

MDEQ-AQD received notification of the installation of a new 237-horsepower diesel emergency fire pump engine installed March 2, 2015. The engine appears to be subject to 40 CFR Part 60 Subpart IIII. The engine appears to have a non-resettable hours meter per §60.4209(a). Mr. Teclegiorgis provided hours of operation. The engine has operated 18.2 hours for maintenance in 2016 through October, below 100 hours per §63.4211(f). The engine has not been used for emergencies in 2016. Also provided were records of annual preventative maintenance conducted in August of 2016, during which time the oil was changed. In the manila file, documentation for generator type JU6H-UFAD88 for 237 horsepower appears to show it is certified per §60.4211. This engine appears to be exempt from obtaining a permit to install per R 285(2)(g).

Compliance

Based on the AQD inspection and records review, it appears that GM-WTP is in compliance with the federal Clean Air Act; NREPA; 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. EU-COGEN, EU-BOILER4, and EU-BOILER5 are permanently shut down.

NAME  DATE 1/4/2017 SUPERVISOR SK