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

A430239588

FACILITY: MAHLE Engine Componenets USA, Inc.		**SRN / ID:** A4302
LOCATION: 2020 Sanford Street, MUSKEGON HTS		**DISTRICT:** Grand Rapids
CITY: MUSKEGON HTS		**COUNTY:** MUSKEGON
CONTACT: Barb Hoffman , EHS/Quality Coordinator		**ACTIVITY DATE:** 04/28/2017
STAFF: Chris Robinson	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: FY '017 on-site inspection to determine the facility's compliance status with MI-ROP-A4302-2015 and other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

AQD staff Chris Robinson (CR) conducted an on-site scheduled unannounced inspection on Friday April 28, 2017. CR arrived at MAHLE Engine Components USA, Inc. (MAHLE) located at 2020 Sanford Street, Muskegon Heights, MI at approximately 12:40 pm and met with Mr. Max Maschewske, Supervisor, and Ms. Barb Hoffman, Environmental Health & Safety/Quality Coordinator. No odors or visible emissions were detected. CR presented AQD identification and informed Mr. Maschewske and Ms. Hoffman of AQD's intent to perform an inspection of the facility to determine compliance status with respect to their ROP No. MI-ROP-A4302-2015 and any other applicable air rules and regulations.

Facility Description
This MAHLE location is an engine testing facility with 19 dynamometer test cells. Each test cell consists of an enclosed monitored room that exhausts to a single stack. The dynamometers are used for testing engine force, torque or power. In addition to the dynamometer tests this facility assembles and tests engines for emissions and component quality. Some of the engine components are manufactured by other MAHLE facilities. In 2015 Mahle completed demolition of their adjacent foundry where some of these components, at the time, were manufactured.

Compliance Evaluation
Cells 3-13 are considered grandfathered (installed prior to August 15, 1967). Although these cells do not have any special conditions in the ROP, the facility has a source-wide HAP limit and conditions. Therefore, emissions from these units must be calculated and recorded, which they are and have been included in **Attachment A**.

During the ROP renewal application period, the facility noted two boilers on-site, one of which was in the process of being dismantled. This boiler was dismantled during demolition of the foundry in 2015. At the time of this inspection only the 3.5 mbtu boiler located in the basement of the front office remained. This boiler is natural gas and appears to be exempt under Rule 282(2)(b)(i) – less than 50,000,000 btu/hr of natural gas.

Per discussions with Ms. Hoffman, the facility did not include the installation of a 228 hp natural gas emergency generator, installed in 2008, in past ROP renewal applications. Emissions for this unit are included with the boiler emissions and appears to be exempt per Rule 285(2)(g) for internal combustion engines with a maximum heat input of less than 10,000,000 btu.

The emergency generator appears to be subject to subpart ZZZZ of 40 CFR Part 63 (RICE MACT), which refers to subpart JJJJ of 40 CFR Part 60 (NSPS). However, there are no NSPS requirements. MAHLE is an area source of HAPs and AQD is not delegated for AREA source MACTS. Per discussions with AQD, Mahle will include this unit in their next ROP Renewal application. AQD correspondence and generator specification sheet are included in **Attachment B**.

ROP No. MI-ROP-A4302-2015

The facility maintains records for at least 5 years. Semi-annual reports and annual certifications were submitted as required and on time. No deviations or issues were reported.

During the inspection, CR did not specifically measure stack height or diameter. However, visual inspections appear to reflect the measurements specified in their ROP.

➢ **Source Wide Conditions**
MAHLE is subject to a source-wide HAP limit of less than 9.0 tpy individual HAPS and less than 22.5 tpy Aggregate HAPS based on a rolling 12-month period. Based on records provided by Ms. Hoffman (**Attachment**

A), HAP emissions for 2016 were 0.32 tons individual and 1.33 tons aggregate, well below the limits specified in their ROP No. MI-ROP-A4302-2015. In addition, Ms. Hoffman informed CR that HAP content is determined based on highest range provided by manufacturer's Safety Data Sheets (**Attachment A**).

The following monthly records were provided and are included in **Attachment A**:

- Gallons or pounds of each HAP containing material used.
- Where applicable, gallons or pounds of each HAP containing material reclaimed (Mahle does not reclaim any materials).
- HAP content, in lbs/gal or lbs/lb, of each HAP containing material used.
- Monthly and annual individual and aggregate HAP emission rate calculations.

➢ **FG-TESTCELLS**

Test cells 14-21 are subject to emission and material limits, for which Mr. Maschewske provided records (**Attachment C**). These records include April 2016 through March 2017 data. The results along with ROP limits are noted in the tables below and demonstrate that the facility is operating well within their limits.

Emission Limits:

Pollutant	Limit	April 2016 - March 2016 Material Usage	Time Period/Operating Scenerio
NOx	0.15 lb/gal gasoline (E85), CNG or LPG	* See Note Below	Test Protocol
	0.138 lb/gal diesel		
	34.3 tpy	< 10 tons	12-month rolling
CO	3.12 lb/gal gasoline (E85)	* See Note Below	Test Protocol
	0.0137 lb/gal diesel		
	2.1 lb/gal CNG		
	2.5 lb/gal LPG		
	89.9 tpy	< 75 tons	12-month rolling

* These emission factors are based on a stack test and are used to calculate emissions.

Material Limits:

Pollutant	Limit	April 2016 - March 2016 Material Usage	Time Period/Operating Scenerio
gasoline (E85), CNG or LPG	55,709 gallons	< 50,000	12-month rolling
Diesel	437,000 gallons	< 60,000	

The facility monitors and records gasoline (E-85), CNG, LPG, and diesel usage rates monthly and on a 12-month rolling basis. Monthly fuel usage and NOx & CO emission calculation records are provided in **Attachment C**.

➢ **FG-RULE 290**

The facility operates a soil and groundwater remediation system consisting of an air stripper and soil vapor extraction (SVE) unit located on site of the former foundry. Based on monthly records provided by Ms. Hoffman (**Attachment D**) the remediation system emitted approximately 18.81 lbs. TCE and 24.49 lbs. BTEX in 2016. Emissions for January - March 2017 are approximately 0.99 lbs. TCE and 5.27 lbs. BTEX. The maximum 2016 & 2017 observed monthly TCE/BTEX emissions were 3.51/2.77 lbs. respectively. These emissions are minimal and appear to be well below Rule 290 limits.

➢ **FG-COLDCLEANER**

MAHLE has a small non-heated parts washer with an air/vapor interface of no more than 10 square feet that contains overspray filters and vents to the outside environment. Operating instructions are posted and the solvent is a non-halogenated compound provided by Safety Kleen. Per discussions with Mr. Maschewske and Ms. Hoffman, parts are drained and maintenance is performed as required.

Conclusion

Based on observations made during this inspection and a records review, MAHLE appears to be in compliance with permit MI-ROP-A4302-2015 and any other applicable air rules and regulations.

Attachments

A - Source Wide Condition Records (HAPs & SDS)
B - AQD correspondence and generator specification
C - FG-TESTCELLS Records (Fuel Usage, NOx & CO)
D - FG-Rule 290 Records (SVE)

NAME _____ DATE 6/9/2017 SUPERVISOR _____