

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

N732044095

FACILITY: MAHLE Industries, Inc.		SRN / ID: N7320
LOCATION: 23030 MAHLE DRIVE., FARMINGTN HLS		DISTRICT: Southeast Michigan
CITY: FARMINGTN HLS		COUNTY: OAKLAND
CONTACT: Annie Kushner , EHS/Quality Coordinator		ACTIVITY DATE: 02/27/2018
STAFF: Joe Forth	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Onsite Inspection		
RESOLVED COMPLAINTS:		

On February 27, 2018, I, Joseph Forth, Michigan Department of Environmental Quality-Air Quality Division (MDEQ-AQD) Staff, conducted a scheduled inspection at MAHLE Industries located at 23030 Mahle Dr., Farmington Hills, MI 48335. For the inspection, I was accompanied by AQD inspectors Adam Bognar and Lauren Magirl, and intern Zarnab Rehman. The purpose of the inspection was to determine the facility's compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, MDEQ-AQD Air Pollution Rules, the National Emissions Standards for Hazardous Air Pollutants (NESHAP), and Permit to Install No. 295-03F.

### Facility Description

MAHLE Industries is an international automotive parts tester and producer. MAHLE Industries' Farmington Hills location focuses on pre-production engine parts testing. The main properties they test the parts for are durability, subjecting each part to rigorous tests in a variety of different conditions. At this facility, there are five dynamometer test cells (1 and 2 sharing a stack, the other three having their own stack). Dynamometers 1 and 2 (2 being recently replaced is now new) are used for general testing. Dynamometer 3 is usually used for diesel engine testing. Dynamometer 4 tests specific parts, primarily bearings. Dynamometer 5 is used for idle testing and analyzing the sound to find parts that are broken or malfunctioning. The facility also has a room dedicated to testing canister filters for car exhaust. This test system however has not been used for approximately two years. The facility also has various sanding equipment that have self-contained filtration systems and do not exhaust to the outside air. Throughout the facility there are also various work rooms that are used to repair/perform maintenance on parts, but the engines are not ran within these rooms. Also located at this facility are three emergency generators used for powering the company's personal server network. These generators are exempt from permitting pursuant to R. 336.1285 (2)(g). Mahle employs approximately 15 people in their testing labs, 438 at the entire facility but this is mostly their office/sales/legal staff. The testing shifts are normally 7 am to 3:30 pm but can sometimes go longer depending on workload.

### Facility Inspection

We arrived at the facility at 1:45 pm and were met by Annie Kushner, EHS/Quality Coordinator, and Jeff King, Quality Specialist. We introduced ourselves, provided credentials, and state the purpose of the inspection. We sat down and began discussing the facility operations. I collected records required by their permit (PTI No. 295-03F). Ms. Kushner and Mr. King confirmed that FG-CANISTER is still not being operated and has not been operated for approximately two years. However, they would like to keep it in the permit in case they decide to reopen or modify the project. After collecting/reviewing the required records, we then began a tour of the facility. We began by going onto the roof to inspect the stacks. Only Cell 4 was operating at the

time of inspection, no visible emissions could be seen coming from the stack. All other stacks were connected to cells not operating at the time. All the stacks seemed to be in quality condition, no rust. There were also several stacks not used for emissions, but for the facility's air make up system, these stacks were also in good condition.

Next, we went down to the test cells. We viewed each cell room confirming that the ventilation was properly placed and maintained. Mr. King showed and explained to us how the emergency purge and air make up system works. There are a series of vents installed in the floors of the testing rooms, and when there is a catastrophic event, such as a gas leak, the system will trigger and purge the gases by pulling them down through the floor and out of stacks. Mr. King assured me that is only for emergencies and has yet to be used for such an event. Near the testing facility there are several workshop type rooms we were shown, but these are used only for maintenance and repairs. There were several sand and soda blasting machines, but they had built in filters with recirculating air systems and no emissions to the outside air. These blasters are exempt pursuant to R336.1285(2)(l)(vi)(C)

Finally, we were brought outside to inspect the emergency generators. Despite the generators being exempt, the facility still maintains records of the run times and KW hours (See Attachment A). I also recorded the current run times of each engine at the time of inspection.

Generator 1: 219.5 hours

Generator 2: 219.4 hours

Generator 3: 219.7 hours

This concluded the inspection, we left the facility at 3:30 pm.

Compliance:

PTI No. 295-03F

FG-TESTCELLS Special Conditions:

SC I.1: NOx emission limit of 0.138 lb/gal of diesel fuel used. AQD has not requested verification of this limit; therefore, the limit was not verified.

SC I.2: NOx emission limit of 0.15 lb per gallon of liquefied petroleum gas (LPG), compressed natural gas (CNG), hydrogen, or E85/ethanol, or gasoline. AQD has not requested verification of this limit; therefore, the emission limit was not verified. The facility is not using LPG, CNG or Hydrogen fuel.

SC I.3: NOx emission limit of 24.9 tons per 12-month rolling time period as determined at the end of each calendar month. As of January 2018, the 12-month rolling NOx emissions were 0.8 TPY. The highest monthly emission total was 0.4 tons in January 2018.

SC I.4: CO emission limit of 0.0137 lbs per gallon of diesel used. AQD has not requested verification of this limit; therefore, the emission limit was not verified.

SC I.5: CO emission limit of 2.5 lb per gallon of LPG used. AQD has not requested verification of this limit; therefore, the emission limit was not verified.

SC I.6: CO emission limit of 2.1 lb per gallon of compressed natural gas (CNG) used. AQD has not requested verification of this limit; therefore, the emission limit was not verified.

SC I.7: CO emission limit of 3.12 lb per gallon of E85/ethanol used. AQD has not

requested verification of this limit; therefore, the emission limit was not verified.

SC I.8: CO emission limit of 3.12 lb per gallon of gasoline used. AQD has not requested verification of this limit; therefore, the emission limit was not verified.

SC I.9: CO emission limit of 3.12 lb per gallon of hydrogen used. AQD has not requested verification of this limit; therefore, the emission limit was not verified.

SC I.10: CO emission limit of 89.9 tons per 12-month rolling time period as determined at the end of each calendar month. As of January 2018, the 12-month rolling CO emissions were 9.3 TPY combined usage, and the highest monthly emissions were 8.0 tons in January 2018.

SC II.1: A limit of 45,634 gallons of gasoline and E85/ethanol per 12-month rolling time period as determined at the end of each month. As of January 2018, the 12-month rolling time period usage of these fuels (gasoline) in FG-TESTCELLS was 5920 gallons. The highest usage of gasoline was 5114 gallons in January 2018.

SC II.2: A diesel fuel limit of 297,682 gallons per 12-month rolling time period as determined at the end of each month. As of January 2018, the 12-month rolling time period diesel fuel usage was 5306 gallons. The highest monthly usage was 1158 gallons in July 2017.

SC II.3: This condition limits the usage of liquefied petroleum gas (LPG) fuel in FG-TESTCELLS to 4,300 gallons per 12-month rolling time period as determined at the end of each month. The facility has not used any LPG fuel in 2010 and to present.

SC II.4: This condition limits the usage of compressed natural gas (CNG) fuel in FG-TESTCELLS to 4,300 gallons per 12-month rolling time period as determined at the end of each month. The facility has not used any CNG fuel since 2010.

SC II.5: This condition limits the usage of hydrogen fuel in FG-TESTCELLS to 4,300 gallons per 12-month rolling time period as determined at the end of each month. The facility has not used any LPG fuel since 2010.

SC VI.1 This condition requires the permittee to complete all required calculations in a format acceptable to the AQD District Supervisor by the 30<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting, or notification special condition. The facility appears to be in compliance with this condition.

SC VI.2: This condition requires that the permittee keep, in a satisfactory manner, monthly and previous 12-month NOx emission calculation records for FG-TESTCELLS, as required by SC I.3. Also requires that the permittee keeps all records on file for a period of at least five years and make them available to the Department upon request. The facility appears to be in compliance with these requirements based on the records provided.

SC VI.3: This condition requires that the permittee keep, in a satisfactory manner, monthly and previous 12-month CO emission calculation records for FG-TESTCELLS, as required by SC I.10. Also requires that the permittee keeps all records on file for a period of at least five years and make them available to the Department upon request. The facility appears to be in compliance with these requirements based on the records provided.

SC VI.4: This condition requires that the permittee keep, in a satisfactory manner, monthly gasoline, LPG, CNG, hydrogen, E85/ethanol and diesel use records for FG-

TESTCELLS, as required by SCII-1 through SC II-5. Also requires that the permittee keeps all records on file for a period of at least five years and make them available to the Department upon request. The facility appears to be in compliance with these requirements based on the records provided.

Records for FG-TESTCELLS can be found in Attachment B.

#### FG-CANISTER Special Conditions:

SC II.1: A limit for gasoline/Stoddard solvent usage of 4,963 pound per 12-month rolling time period as determined at the end of each calendar month. As of February 2017, facility's Stoddard solvent usage is 0 lb based on a 12-month rolling period. Stoddard solvent usage has been 0 lb since January 2006.

SC II.2: A total butane limit of 4,635 pounds per 12-month rolling time period as determined at the end of each calendar month. The canister test was conducted last time in September 2015 and the usage for this month was 42.1 lbs. The facility has not used butane since this date.

SC VI.1: This condition requires the facility to keep, in a satisfactory manner, monthly and previous 12-month gasoline and butane use records for FG-CANISTER. Also, further requires that all records shall be kept on file for a period of at least five years and made available to the department upon request. The facility has kept appropriate records from when the canister tests were performed, and still maintains a spreadsheet despite not using the equipment (See Attachment C).

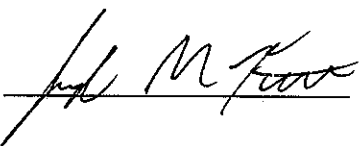
SC VIII-1: This condition requires that the exhaust gases from FG-CANISTER be discharged unobstructed vertically upwards to the ambient air and specifies the stack dimensions. Compliance with stack dimensions were not verified during this inspection. The facility has not been performing the tests since October 2015.

Records for FG-CANISTER can be found in Attachment C.

#### CONCLUSION

The facility appears to be operating in compliance with permit 295-03F, the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451.

NAME



DATE

4-25-18

SUPERVISOR

SK