

P0316  
MAWILA

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

P031659270

FACILITY: MAHLE POWERTRAIN LLC		SRN / ID: P0316
LOCATION: 14900 GALLEON COURT, PLYMOUTH		DISTRICT: Detroit
CITY: PLYMOUTH		COUNTY: WAYNE
CONTACT: Matthew Williams , Manager and Head of Development and Test Engineeri		ACTIVITY DATE: 06/10/2021
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Onsite Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION : June 10, 2021

TIME OF INSPECTION : 11:30 am

PERSONNEL PRESENT : Matt Williams, Manager - Development and Test  
Michael Zack, MAHLE

INSPECTED BY : Jill C. Zimmerman

FACILITY PHONE NUMBER : (734) 233-6760

FACILITY EMAIL : matthew.williams@us.mahle.com

## BACKGROUND

MAHLE Powertrain, LLC. is located in Plymouth, Michigan near the intersection of Beck Road and Five-Mile Road. The facility has been at this location since about 2012. This facility was formerly owned by Westport, with the change in ownership occurring in about 2017. The facility operates one shift per day, five days per week, unless there is a demand for additional work.

## COMPLAINT/COMPLIANCE HISTORY

No complaints have been received regarding this facility. Violation Notices were issued for nonsubmittal of MAERS for the years of 2017 and 2018. These violations were resolved when the reports were received in 2020. The MAERS for reporting year 2020 was received on time.

## PROCESS EQUIPMENT AND CONTROLS

The facility is permitted seven test cells, fabrication cell and space heaters. The facility has three fuel storage tanks, which they claim are exempt from permitting. Currently the facility is using six of the seven test cells. During the inspection, the six test cells were in different stages of use, including installing an engine or running a test.

## INSPECTION NARRATIVE

**I arrived at the facility at 11:30 am and meet with Mr. Matt Williams, Manager - Development and Test. I explained that the purpose of my inspection was to obtain emissions records and to inspect the dynamometers and other equipment at this location. Mr. Williams said that he maintains the emission records electronically. I reviewed the records onsite, and received a copy of these records via email.**

**Mr. Williams explained that no changes have been made to the plant since my last inspection. The facility operates seven engine testing cells. Fuels for the test vary and include diesel, gasoline and compressed natural gas (CNG). For some tests, the engines use a catalyst as a control device. The facility records whether the catalyst is used or not.**

**The facility has 5 boilers. The boilers are natural gas fired. The heat input for these units ranges from 145,000 BTU/hr to 1,440,000 BTU/hr for a total heat input of 2.023 MMBTU/hr. These boilers are exempt from permitting by Rule 282 (2)(b)(i).**

## **APPLICABLE RULES/PERMIT CONDITIONS**

**The facility is currently operating under Permit To Install (PTI) 19-12B, which was issued on May 17, 2017.**

**FG-TESTCELLS (7 engine dynamometer test cells firing unleaded gasoline, gasoline/ethanol, gasoline/methanol, diesel, methanol, ethanol, kerosene, CNG, and LPG, operated both controlled and uncontrolled):**

### **I. Emission Limits**

1. Compliance – CO emissions are limited to 87.5 TPY. During 2020 the facility reported CO emissions as less than 3 TPY.
2. Compliance – 1,3-Butadiene emissions are limited to 21.4 lb/year. During 2020 the facility reported emissions as less than 1 pound.
3. Compliance – 1,3-Butadiene emissions are limited to 1.53 lb/day. The annual reported emissions are less than the daily permit emission limit. Therefore, it can be assumed that the daily emission limit is being met.
4. Compliance – Acetaldehyde emissions are limited to 723 lb/year. During 2020 the facility reported emissions as less than 25 lbs.
5. Compliance –Benzene daily emissions are limited to 26.2 pounds per day. Since the annual reported emissions is less than the daily limit, it is assumed that the daily emissions limit is being met.
6. Compliance – Benzene emissions are limited to 347 lb/year. During 2020 the facility reportedly emitted less than 13 pounds of benzene, which is less than the permitted limit.
7. Compliance – Formaldehyde emissions are limited to 195 lb/yr. During 2020 the facility reported the annual emissions of formaldehyde was about 5 pounds, which is less than the permitted limit.

### **II. Material Limits**

1. Compliance – During the past year, the facility has only burned gasoline, diesel, LPG and CNG. These are all approved fuels as listed in the permit.

2. Compliance – During 2020 the facility used 1856 gallons which is less than the permitted limit of 124,000 gallons of gasoline, alcohol, and gasoline-alcohol blends both controlled and uncontrolled.
  3. Compliance – During 2020, the facility used 1553 gallons of gasoline uncontrolled which is less than the permitted limit of 44,000 gallons of gasoline, alcohol, and gasoline-alcohol blends uncontrolled.
  4. Compliance – During 2020, the facility burned 35,452 gallons of diesel, which is less than the permitted limit of 600,000 gallons of diesel, biodiesel, synthetic diesel, and kerosene both controlled and uncontrolled.
  5. Compliance – During 2020 , the facility burned 23,262 gallons of diesel uncontrolled which is less than the permitted limit of 200,000 gallons of diesel, biodiesel, synthetic diesel, and kerosene uncontrolled.
  6. Compliance – During 2020, the facility burned 58 kg of CNG which is less than the permitted limit of 180,000 kg of CNG both controlled and uncontrolled.
  7. Compliance – During 2020, the facility did not burned any CNG uncontrolled.
  8. Compliance – During 2020, the facility burned 7 kg of LPG both controlled and uncontrolled, which is less than the permitted limit of 110,000 kg of LPG
  9. Compliance – During 2020, the facility burned 7 kg of LPG uncontrolled, which is less than permitted limit of 10,000 kg.
- III. Process/Operational Restrictions – NA
- IV. Design/Equipment Parameters
1. Compliance – Catalytic Converters were present on the test engines during the onsite inspection.
  2. Compliance – No changes have been made to the cooling system for FG-TESTCELLS.
- V. **Testing/Sampling – NA**
- VI. **Monitoring/Recordkeeping –**
1. **Compliance – Records were readily available for review during the onsite inspection.**
  2. **Compliance – A list of all fuels fired is maintained onsite.**
  3. **Compliance – Emission and fuel usage records are maintained electronically.**
  4. **Compliance – The lead content of all gasoline loads is maintained on the fuel sheet.**
  5. **Compliance – The sulfur content of all diesel loads is maintained on the fuel sheet.**
  6. **NA – No changes have been made to the coolant system.**
- VII. **Reporting – NA – No changes have been made in land use has occurred.**
- VIII. **Stack/Vent Restriction – Compliance – All stacks have been installed to the required speculations. Therefore, the facility is operating in compliance with this condition.**
- IX. **Other Requirements – NA**

## **FG-FACILITY**

- I. Emission Limits – Compliance – The potential to emit CO emissions for the facility has been calculated to be about 89.16 TPY, which is lower than the current permit requirement of 89.9 TPY.
- II. Material Limits – NA
- III. Process/Operational Restrictions – NA
- IV. Design/Equipment Parameters – NA
- V. Testing/Sampling – NA
- VI. Monitoring/Recordkeeping –
  1. Compliance – The records for FG-FACILITY were readily available during the onsite inspection.

2. Compliance – Since no changes to the facility have been made since the last inspection, the PTE have not changed, so a new copy was not collected during the onsite inspection.

VII. Reporting – NA

VIII. Stack/Vent Restriction – NA

IX. Other Requirements – NA

Space heaters and the fabrication activities are covered in this permit under FGFACILITY. However, there are no permit conditions associated with these emission units.

The three storage tanks are each 1,000 gallon above ground storage tank. One tank stores diesel, one tank stores gasoline and one tank stores gasoline alcohol blends. These tanks are exempt by Rule 284(g).

#### **MAERS REPORT REVIEW**

The MAERS was received on time and it appeared that all emissions were reported accurately, and were supported by emissions records from the facility.

#### **FINAL COMPLIANCE DETERMINATION**

MAHLE Powertrain, LLC. appears to be operating in compliance with all permit conditions.

NAME 

DATE 6/17/2022 SUPERVISOR 