

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

P067768327

FACILITY: Kawasaki Motors Corp USA		SRN / ID: P0677
LOCATION: 5080 36th Street SE, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Paul Marvin , Regulatory Compliance Engineer		ACTIVITY DATE: 06/29/2023
STAFF: April Lazzaro	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff April Lazzaro conducted an unannounced, scheduled inspection of Kawasaki Motors Corp USA (Kawasaki) located at 5080 36th Street in Cascade Township. The purpose of the inspection was to determine the facility's compliance with Renewable Operating Permit (ROP) No. MI-ROP-P0677-2018 and state and federal air pollution regulations. Paul Marvin, Regulatory Compliance Engineer was the site contact.

FACILITY DESCRIPTION

This Kawasaki facility conducts performance, durability and other testing on small engines up to 50 horsepower. The engines currently only burn an E10 fuel blend (10% ethanol 90% gasoline). The facility contains twenty engine test cells, one 2,000 gallon E10 fuel storage tank, one 125 gallon diesel fuel storage tank and ancillary equipment. The facility is a major source of carbon monoxide (CO) emissions and is a minor source of hazardous air pollutants (HAPS); 40 CFR Part 63, Subpart PTTTT for Engine Test Cells does not apply. EU-TANKS is subject to 40 CFR Part 63, Subpart CCCCCC.

COMPLIANCE EVALUATION

FGTESTCELLS

The facility operates 20 engine test cells, testing gasoline and ethanol-fired engines up to 50 hp. Nine of the engines, EU-TEST1 through EU-TEST9, are controlled by a Pressure Control Oxidizer (PCO) that controls emissions of carbon monoxide (CO) and volatile organic compounds (VOCs). EU-TEST10 through EU-TEST20 are uncontrolled. Each engine test cell is essentially a room which contains an engine dynamometer and other test equipment. The company currently only burns E10 fuel.

It is noted that each test endurance cell had a conical vent hood which surrounded the engine exhaust and ducted to the corresponding permitted stack.

EMISSION LIMITS

The company has emission limits for carbon monoxide (CO) of 6.57 lb/gal fuel combusted on an hourly uncontrolled basis and 180.7 tons per 12-month rolling time period. The basis for compliance for these limits is stack testing and recordkeeping.

The company conducted stack testing for CO and VOC on September 19, 2022 and the results indicated compliance with the hourly limit. The next stack test will be required within five years of the last test.

There are also pound per year limits for the following pollutants: benzene 291.5 lbs/yr, 1,3-butadiene 98.5 lbs/yr, formaldehyde 160.9 lbs/yr and acetaldehyde 1,144.1 lbs/yr all on a 12-month rolling time period.

A spreadsheet with 12-month rolling total emissions data was provided, however the formula used to calculate emissions is incorrect. A request was made to the company to submit a corrected spreadsheet, however that has not been received. The reported 12-month rolling total emissions for benzene- 190 lbs, 1,3-butadiene - 68.5 lbs, formaldehyde- 112.2 lbs and acetaldehyde- 797.5 lbs for the time period of July 2022-June 2023. There are correct monthly totals for these pollutants in a different spreadsheet that was provided to the AQD, however it does not contain 12-month rolling totals.

MATERIAL LIMITS

The permit contains limits to the amount of fuel that can be burned. The material limits states that any combination of fuels is limited to the following: Total 190,000 gallons, of which no more than 40,000 gallons may be burned uncontrolled on a 12-month rolling time period. The reported total fuel usage for the time period of July 2022-2023 was 32,894 gallons, with 7,448 gallons burned uncontrolled. The reported usage indicates compliance with the limits in the permit.

PROCESS/OPERATIONAL RESTRICTIONS

The permittee shall not operate EU-TEST1 through EU-TEST9 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the PCO, has been submitted. At the request of the AQD, a MAP was submitted on November 29, 2022. During the permit renewal process, an updated plan was requested, and was received on May 22, 2023.

DESIGN/EQUIPMENT PARAMETERS

The permittee is required to and is measuring total fuel usage. The permittee has EU-TEST1 through EU-TEST9 routed to the PCO as required. The lowest recorded PCO temperature during the time period requested was 616.7°F on June 27, 2023, which is above the minimum temperature requirement of 600°F. Mr. Marvin indicated during the inspection that if the temperature of the PCO is not above 600°F, the test cells will shut down, indicating that the interlock is operating properly. It was noted that there is no current interlock test conducted to verify that, which will be added to the requirements of the permit during the renewal process to assure compliance.

TESTING/SAMPLING

The permittee has conducted stack testing for CO and VOC within the 5 year period as required. The next test will be required to be conducted prior to September 19, 2027.

MONITORING RECORDKEEPING

As indicated above, the company is maintaining monthly fuel usage records in accordance with the permit. The company uses a programmable logic controller (PLC) to monitor and record fuel usage.

The company is also maintaining records of monthly emissions for CO, benzene, 1,3-butadiene, formaldehyde, and acetaldehyde using emission factors found in Appendix A of the permit, and as reported above. However, the 12-month rolling emissions are not being calculated properly, and updated emissions information has not been received as requested. This is a violation of FG-TESTCELLS, Special Condition VI.3.

A request for continuous temperature records was made, and it was learned that the permittee is not maintaining continuous records. This is a violation of FG-TESTCELLS, Special Condition VI.4.

REPORTING

The permittee has been late submitting the semiannual reporting of monitoring and deviations, which have been cited in violation previously. Additionally, the annual certification of compliance has been late which was also cited in violation in the past.

It is noted that the permittee did not submit the performance test report to the AQD Technical Programs Unit as required, until it was requested by the AQD.

STACK/VENT RESTRICTIONS

The stacks at the facility were not measured during this inspection.

FG-CIRICEMACT

There is one emergency generator that is exempt from permitting under Rule 285(2) (g). Because the facility is not a major source of HAP emissions, the major source requirements of 40 CFR 63, Subpart ZZZZ do not apply to the generator. However, the area source requirements do apply and have been incorporated into ROP No. MI-ROP-P0677-2018a. The non-resettable hours meter was observed and at the time of the inspection had 103 hours. The unit had 92 hours at the last inspection in 2020. Maintenance on the unit is conducted by Caterpillar Inc., who were on-site for maintenance during the inspection. During the ROP renewal process, the Malfunction Abatement Plan was requested, and the AQD was informed that Kawasaki did not currently have a plan but did ultimately submit one following the AQD request. The AQD is not delegated the regulatory authority for this area source MACT and as such compliance was not evaluated beyond what is described above.

FG-COLDCLEANERS

There is one heated, externally vented Cuda aqueous cold cleaner used to wash parts. No non-compliance issues were identified, and the material used in the device is greater than 5% VOC and as such meets the definition of a cold cleaner. It is noted that the definition for cold cleaner found in Rule 336.1103(aa) does not include a maximum or minimum temperature requirement.

EU-TANKS

There is one 2,000 gallon E10 fuel storage tank. This tank was evaluated under the original Permit to Install No. 230-15A as part of the permit project, however there are no applicable requirements specific to the tank.

Miscellaneous

It appears as though the facility is subject to 40 CFR Part 63, Subpart CCCCCC – NESHAP for Source Category: Gasoline Dispensing Facilities. The AQD is not delegated the regulatory authority for this area source MACT and as such compliance was not evaluated.

SUMMARY

Kawasaki Motors Corp., USA was in non-compliance at the time of the inspection.

NAME April Lazzaro

DATE 07/26/2023

SUPERVISOR 