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

P067740484

FACILITY: Kawasaki Motors Corp US		SRN / ID: P0677
LOCATION: 5080 36th Street SE, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Kevin Kline , Senior Supervisor		ACTIVITY DATE: 06/22/2017
STAFF: David Morgan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

At 8:15 A.M. on June 22, 2017, Air Quality Division staff Dave Morgan conducted a scheduled inspection of Kawasaki Motors Corp USA (Kawasaki) located at 5080 36th Street in Kentwood. The purpose of the inspection was to determine the facility's compliance with air use Permit to Install (PTI) No. 230-15A and state and federal air pollution regulations. Accompanying AQD staff on the inspection was Kevin Kline, Senior Supervisor for R&D Testing.

FACILITY DESCRIPTION

This Kawasaki facility conducts performance, durability and other testing on small engines up to 50 horsepower. The engines primarily burn gasoline but can also burn ethanol and gasoline/ethanol blends. The facility contains twenty engine test cells, fuel storage tanks and ancillary equipment. The facility is a major source of carbon monoxide (CO) emissions and will need to submit a Renewable Operating Permit (ROP) application. Since the facility began fuel usage on January 12, 2017, a ROP application is due by January 12, 2018 (12 months from commencement of operation). The facility is a minor source of hazardous air pollutants (HAPS) and therefore 40 CFR Part 63, Subpart PPPPP for Engine Test Cells does not apply.

COMPLIANCE EVALUATION

The following is an inventory of permitted engine test cell emission units and permitted exhaust stacks. Each engine test cell is essentially a room which contains an engine dynamometer and other test equipment. The company only burns gasoline or ethanol blended fuels as limited by PTI No. 230-15A.

Stack Vent ID	Emission Units	Description
SV-EF5A	EUTEST1, EUTEST2, EUTEST3, EUTEST4, EUTEST5	Durability/endurance testing of engines up to 50 horsepower.
SV-EF5B	EUTEST6, EUTEST7, EUTEST8, EUTEST9	Durability/endurance testing of engines up to 50 horsepower.
SV-EF5C	EUTEST10, EUTEST11, EUTEST13, EUTEST14	Performance testing of engines up to 50 horsepower.
SV-EF5E	EUTEST12	Performance testing of engines up to 50 horsepower.
SV-EF5D	EUTEST15, EUTEST16, EUTEST17, EUTEST18, EUTEST19, EUTEST20	Rain, climactic, chassis and anechoic testing of engines up to 50 horsepower

It is noted that each test cell has a conical vent hood which surrounds the engine exhaust and is ducted to the corresponding permitted stack. In addition, there is a separate general ventilation exhaust (or scavenge) for each test cell which is ducted to a corresponding stack (which was not identified in the permit). The scavenge exhaust is used as a safety measure to prevent the accumulation of flammable vapor in the room. Pollutants from the engine testing process are primarily exhausted though the conical vent hood on the engine exhaust. AQD staff observed more than the five permitted stacks on the outside of the building. AQD staff and Mr. Kline verified equipment exhaust above the test cells and corresponding stacks. In addition to the scavenge and primary dynamometer test cell exhaust, there was also exhaust for a bottle room and for an electric oven used for heating up engine blocks. All stacks (permitted and unpermitted) appeared to be above 43 feet from ground.

In addition, for safety, the company is monitoring CO levels in each test cell; if CO levels get too high then the system is shutdown.

-Testing-

The company is required to verify the CO emission factor within 180 days of initial startup, with a minimum of 60 days prior to testing for test plan submittal. Company records show fuel usage began on January 12, 2017, therefore a

performance test is required by July 11, 2017. Because the company will not meet the testing deadline, a violation of PTI No. 230-15A, FG-TESTCELLS, Special Condition V.1 will be cited.

-Recordkeeping-
The company is maintaining daily and monthly fuel usage records in accordance with the permit. The company uses a programmable logic controller (PLC) to monitor and record all fuel usage. According to company records, the company had the following fuel usage:

Month	Total Fuel Usage (gallons)	Highest Daily Fuel Usage (Gallons)	Daily Fuel Limit (gallons)	Compliance?
Jan 2017	186	32	864	Y
Feb 2017	1,236	57		Y
Mar 2017	2,288	119		Y
Apr 2017	1,597	106		Y
May 2017	3,198	102		Y
Jun 2017	2,126	110		Y

The company is also maintaining records of monthly emissions for CO, benzene, 1,3-butdiene, formaldehyde, and acetaldehyde using emission factors found in Appendix A of the permit. Emissions for January 2017 through June 2017 are as follows:

Pollutant	Factor (lbs/gal)	Actual (tons)	Limit (tons per 12-month rolling)	Compliance
CO	3.94	20.94	145	Y
Benzene	0.614	0.03	0.22	Y
1,3butadiene	0.00207	0.01	0.08	Y
formaldehyde	0.00339	0.02	0.12	Y
acetaldehyde	0.0241	0.12	0.88	Y

Since the company began operations in January 2017, 12-month rolling records were not yet available.

-Reporting-
The company was required to notify the AQD within 30 days of complete installation of the equipment. The company did not provide this notification. A violation of PTI No. 230-15A, FG-TESTCELLS, Special Condition VII.1 will be cited.

EUTANKS:
There is one 2,000 gallon gasoline storage tank. This tank was evaluated under PTI No. 230-15A as part of the permit project, however there are no applicable requirements specific to the tank.

Miscellaneous Tank:
There is currently a 500 gallon fuel tank exempt under Rule 284(2)(g)(iii) used for "E Zero" and "EU" gasoline fuel blends which are primarily used in performance cells P-3 and P-8. According to Mr. Kline this tank is used for low use specialty fuels and the tank will be removed in three to four weeks and replaced with 55 gallon drum quantities.

EUNATGASHEAT:
There are several natural gas heaters and water heaters. This emission unit was evaluated under PTI No. 230-15A as part of the permit project, however there are no applicable requirements specific to these sources.

Emergency Generator:
There is one emergency generator that is exempt from permitting under Rule 285(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.

SUMMARY
Kawasaki Motors Corp USA will be cited for the violations identified above. Records of fuel usage, Safety Data Sheets and other records have been saved to CD and is attached to this report.

NAME _____ DATE 7/11/17 SUPERVISOR _____