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

A526226167

FACILITY: General Motors LLC - Milford Proving Ground		**SRN / ID:** A5262
LOCATION: 3300 General Motors Rd., MILFORD		**DISTRICT:** Southeast Michigan
CITY: MILFORD		**COUNTY:** OAKLAND
CONTACT: Brenda Korth , Environmental Engineer		**ACTIVITY DATE:** 06/10/2014
STAFF: Joyce Zhu	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM 208A
SUBJECT: Annual inspection		
RESOLVED COMPLAINTS:		

On 6/10/14, I conducted an air quality inspection at General Motors, Milford Proving Ground. The facility is located on 3300 General Motors Rd., Milford. I arrived at the facility around 9:15 AM. I met with Mr. Dan Ray, Mr. Brent Wilson, Ms. Brenda Korth, (all from GM), & Ms. Laurie Graves from Tetra Tech. At the beginning of the inspection, we discussed some of the permit contents pertaining to PTI #97-12, #43-12, #264-03A, #10-07, #194-12, & source-wide permit to install # MI-PTI-A5262-2005 (GM voided its ROP # MI-ROP-A5262-2005 in 2009). I also asked for records. Afterwards, they took me for inspection.

Inspection:
The facility is principally engaged in the testing of motor vehicles, engines, and automobile components.

SOURCE-WIDE PERMIT TO INSTALL MI-PTI-A5262-2005

SOURCE-WIDE REQUIREMENTS
In the Permit, there are source-wide restriction for emissions of SO2, NOx, and PM, as well as the usage restrictions for natural gas, the No. 2 oil, and the No.6 oil. Some of the emission restrictions are based on burning the amount of No. 6 oil or sulfur content in the fuel oil. Since the company is no longer using No.6 oil and No. 2 oil, they will automatically meet the limits. As a matter of fact, the No. 2 oil storage tank has been disconnected & closed through LARA. The company keeps a list of the combustion equipment on site with the corresponding design capacities, the model, the date of installation/modification, the physical location, & the type of fuel the equipment is capable of burning. The company record shows that the types of fuel they used has been well below the material restriction limits during 12-month rolling time period for the month of May 2014

FG-ENGINEDYNOS-S1
There are 10 dynamometers in Building #94. Most of these dynos are for noise and vibration tests at different speeds. According to the company record, all the dynamometers were installed after 1998. Majority of the equipment uses gasoline; however, there are a few burning diesels. During the inspection, none of the cells were running. The company keeps the following records for the dynamometers in Building #94; a) monthly fuel usage in gallons; b) average daily fuel usage for the 10 dynos; c) CO, NOx, and VOC emission calculation for the 12-month rolling time period; d) an updated list of engine dynamometer containing description, make, model, date of installation /modification, design capacity, and the physical location in the plant. From the company's record, they have used less than 20 gallons of fuel per day on an average since June 2013. The average daily fuel usage (<20 gallons per day) has been also well below the permit restriction (350 gallons per day) since June 2013. The

emission of CO, NOx, and VOC emissions have been less than the corresponding permit limits in terms of lb/day, tons/(12-month rolling time period), & lb/hr for the month of May.

FG-RULE287(C)-S1
According to GM, there are three booths that are exempted from permit to install under the Rule 287(c). One booth is located in Building #70; one, in Building #11; & one, in Building #25. I only inspected the booth in Building #11. It was not like the conventional booth; it appeared that they spray inside a room with filters at the exhaust. Even though they did operate the coating operation during the inspection, there was some overspray inside the room. Paints were stored in closed containers in the same room. According to the company's usage record, they haven't operated the booth in Building #11 since June 2013; they have used less than 20 gallons of coatings a month for the other two booths since June, 2013. It appears that the operation complies with the ROP requirements.

COLD CLEANERS
There were used to be 21 units currently on-site. I only inspected the units in Buildings #2, #11, & #94. Three of the units in Building #2 use solvent; one uses aqueous solution. For all of the units I inspected in the three buildings, there was a sign posted near each of the cold cleaners regarding to comply with Rule 707. All units were equipped with draining devices & were closed when not in use. I didn't see any spill near any of the units. They use Safety-Kleen in those units. Safety-Kleen is responsible for taking care of the spent solvents. GM keeps the following information on file: the unit I.D., the installation date, the air/vapor interface area, the applicable rules that exempted the unit from permit to install (PTI) requirements, and the vapor pressure of the solvent in each of the units.

FGRULE-290-SI
The only process that is exempted from permit to install according to Rule 290 is the gasoline purge operation. This is to purge the gasoline fume in the gas tank before getting rid of the tank. Smaller tanks are placed in an oven to drive out the volatiles. For the larger tanks, they use steam rod to evaporate the vapor. The company's record shows the emission from the operation has been less than 3 pounds per month, well below the Rule 290 limit (20 lbs/month) since June 2013. The operating appears to be in compliance with Rule 290 & ROP requirements.

FG-GASTANKS-S1
This flexible group covers gasoline storage tanks with 2000 gallon or lager capacities. According to GM, all of the tanks are installed after 1993. Currently, there are total of 31 tanks on site; some of the tanks have multi compartments. I only inspected a tank near Building #94. The tank was equipped with permanent submerge fill pipes, vapor balance systems, interlocking systems, and devices to ensure that the vapor-tight collection lines closed upon disconnection. The company keeps the following records: a) the tank I.D.; b) location within the plant; c) the capacity of the vessel; d) the type of material contained in the vessel; e) site wide annual material throughput.

EU-BOILER5-S2 & EU-BOILER6-S2
There are four boilers on site, Boiler Nos. 3, 4, 5, & 6. During the inspection, only Boiler #4 was operating. I observed the following information: The steam load of Boiler #4

was at 25822 lbs/hr; the natural gas valve opening was at 46%. They just checked burners & valves during the week prior to my inspection for Boiler #3 & #4. Boiler #6 was checked in May; they've scheduled the maintenance checkup for Boiler #5 in July. Tune-up of each boiler is scheduled every 5 years. They will conduct the load test for the boilers when the weather is getting colder, but no later than December this year. Company's record shows that the NOx emission was at 11.937 tons during the 12-month rolling time period for the month of May, well below the permit limit of 33.1 tons / (12-month rolling time period).

FG-SOILREMEDIATION-S1 & Permit No. 264-03A
This flexible group covers two soil vapor extraction (SVE) units located at two separate locations (Bldg #31 & Bldg #61). The PTI permit covers soil remediation project located in building #31. According to GM, they never operate the SVE near Building #31. They only pumped ground water through a carbon adsorption system. This operation is exempted from PTI requirement per Rule 285(w). No remediation activities have been carried out during the inspection. The company should void Permit # 264-03A.

PERMIT NO. 10-07
This permit covers diesel-fired engine generators. I only inspected the one (model # DQKH-580853 & Serial No. D0700473444546) located in Building #24. The maximum nameplate capacity of the generators in the building is 2200 KW. During the inspection, they did not operate the engine. According to the company's record, they conducted loaded run for the unit on a monthly basis & no-load run on a weekly basis. The company does not sell any electricity generated by those units to the utility power distribution system. The company record shows that the 12-month rolling time period diesel consumption for the month of May, 2014 is 20,550 gallons. This is well below the permit limit of 136,000 gallons/(12-month rolling time period).

Permit No. 194-12
This permit is for 12 diesel-fueled emergency generators in the new data center. The new data center was still under construction during the inspection. In lieu of conducting of initial performance test to demonstrate compliance, the company was able to produce the certification of conformity with the clean air act of 1990. During the inspection, there were only 4 units installed. I requested the information regarding to the nameplate capacity of the engines. During the meeting of 6/27, the company stated that the nameplate capacity of those engines were larger than the permit requirements. The company has met with AQD permit section in early July & tried to revise the permit condition. On 7/16/2014, AQD issued a violation notice (VN) to the company in this regard. The company's record indicates that the total diesel fuel consumed by those generators was 4066.17 MMBTU/yr.

Permit No. 97-12
The permit covers a remediation project which includes air strippers, soil vapor extraction systems, & air sparging systems. According to Brenda, GM has moved the remediation equipment from Bldg. #31 to Bldg. # 61, the crash test building. However, the company never operated the equipment.

Permit No. 43-12
This permit is an opt-out permit for greenhouse gas (GHG). The company keeps the following monthly as well as 12-monthrolling time period records: 1. Natural gas usage

rate; 2. No.2 fuel oil usage rate; 3. Gasoline usage rate; 4. Propane usage rate; & 5. CO2e emission calculation. The company's record shows that the total natural gas consumption during 12-month rolling time period for the month of May 2014 was 529,020 mmBtu (permit limit: 1,300,000 mmBTU/[12-month rolling time period]); No. 2 fuel oil consumption, 4,110 mmBtu (permit limit: 125,000 mmBTU/[12-month rolling time period]). The resulted CO2e emission during the same period was at 31, 379 tons (permit limit 86,550 tons/[12-month rolling time period]). The company appeared to operate in compliance with the permit requirements in May 2014.

In conclusion, there is a violation identified for Permit No. 194-12; however, the company appeared operating in compliance for other processes & operations that are covered by their permits. A VN has been issued regarding to the non-compliance of Permit No. 194-12.

NAME Joyce St DATE 7/30/14 SUPERVISOR CTE