

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

B221747660

FACILITY: EATON RESEARCH CENTER		SRN / ID: B2217
LOCATION: 26201 NORTHWESTERN HWY., SOUTHFIELD		DISTRICT: Southeast Michigan
CITY: SOUTHFIELD		COUNTY: OAKLAND
CONTACT: Erika Cleary, EHS Analyst		ACTIVITY DATE: 12/03/2018
STAFF: Joe Forth	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-site inspection		
RESOLVED COMPLAINTS:		

On December 3rd, 2018, I, AQD staff Joseph Forth, conducted a scheduled inspection of Eaton Research Center (Eaton), SRN B2217, located at 26201 Northwestern Highway, Southfield, Michigan. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and the conditions of Air Use Permit to Install No. 328-97A.

I arrived at 12:30pm and met with Erika Cleary, Environmental Health and Safety Analyst for Eaton. I explained the purpose of the inspection and provided credentials. Eaton Research Center is a combination of a product development and testing facility and a sales department. This facility contains gasoline and diesel storage tanks (FG-TANKS), 7 gasoline or diesel fueled engine test cells (FGTESTCELLS), and natural gas-fired boilers and heaters (FGHEATERS). The gasoline tank is still operational but is now used for diesel. Additionally, all equipment at the stationary source including equipment covered by other permits, grandfathered equipment and exempt equipment are in the FGFACILITY flexible group. I reviewed the PTI with Ms. Cleary and collected records.

Ms. Cleary escorted me throughout the inspection of the facility. We first looked at the test cell rooms. The fuel intake and exhaust appeared to be in good working condition, no noticeable rust or damage. None of the test cells were being operated at the time of inspection. Ms. Cleary then took me to see the facility's large boiler, it is a 3,200,000 BTU boiler installed in 1960. The facility also has 3 smaller boilers. The installation dates and heat capacities are as follows: 1. Installed 2002, 2,070,000 BTU; 2. Installed 2002, 2,070,000 BTU; 3. Installed 2009, 2,065,000 BTU. These boilers/heaters are exempt from permitting per R 336.1282(2)(b)(i). Ms. Cleary then showed me the two cold cleaners the facility has, both are exempt from permitting per R 226.1281(2)(i). The cold cleaners appeared to be properly maintained with the lid closed. Both cleaners had the AQD provided cold cleaner operation guidelines displayed at the cleaning station. The solvent used in the cold cleaners does not appear to contain any HAPS (See Attachment A).

Next, we then looked at the polymer lab at the facility. This lab performs research and development, mixing nanoparticles with plastic polymer pellets among other plastic related research. The lab has two forms of emission control. The main handling of the nanoparticles is done in an enclosed room with a fume hood. The fume hood is controlled by a HEPA filter (T-BACT). The lab itself is also controlled by a fume hood. The lead lab scientist said that they exchange both filters when the one in the hood exhibits a significant difference in pressure drop. Since the fume hood filter deals with a higher exposure to the nanoparticles it requires more frequent replacement, so the lab just replaces both at the same time. The operations of the lab appear to be exempt from permitting per R 336.1283(2)(a).

PTI No. 328-97A

FGTESTCELLS Special Conditions

1.1) Gasoline fuel usage limit for FGTESTCELLS of 20,000 gallons or less per 12-month rolling time period. Records indicate, and Ms. Cleary confirmed, that zero gallons of gasoline have been used since her time with the facility. The last inspection report of the facility by AQD staff Robert Elmouchi states that gasoline has not been used at the facility since before 2014. The two gasoline tanks were converted to diesel usage. Converting tanks from gasoline to diesel usage does not appear to violate permit conditions because the permit does not identify a specific number of tanks allocated for each fuel type. The permittee appears to be in compliance with this condition. The facility's gasoline usage has been 0 since January 1st, 2013. (See Attachment B)

1.2) Diesel fuel usage limit for FGTESTCELLS of 280,000 gallons or less per 12-month rolling time period. Records indicate that the greatest amount of diesel fuel used per the 12-month period since July 2014 was 8/1/2017-7/31/2018 at 3,956 gallons. Therefore the permittee appears to be in compliance with this condition. The diesel usage from 10/31/2017 to 11/30/2018 was 3,242 gallons. (See Attachment C)

1.3) The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. The provided calculation records appear to comply with this requirement. (See Attachment C)

1.4) The permittee shall keep, in a satisfactory manner, monthly and previous 12-month rolling time period fuel use records for FGTESTCELLS, as required by SC 1.1 and SC 1.2. The facility appears to be keeping satisfactory records. (See Attachment C)

FGFACILITY Special Conditions

2.1a A 12-month rolling time period NOx emission limit from FGFACILITY to 89.4 tpy (tons per year) or less. The NOx emissions from 10/31/2017 through 11/30/2018 from diesel was .9791 tons. NOx emissions from natural gas during the same time frame were 0.8 tons for a total of 1.7791 tons of NOx. Thus, the total NOx emissions for the facility during the time frame were which is in compliance with the permitted limit. The largest 12-month period of NOx at the facility was 8/1/2017-7/31/2018 at 1.1947 tons of NOx from diesel and from 9/1/2015-8/31/2015 at 1.2 tons of NOx from natural gas. (See Attachments C and D)

2.1b A 12-month rolling time period CO emission limit from FGFACILITY to 89.4 tpy or less. The CO emissions from 10/31/2017 through 11/30/2018 from diesel was 12.6 tons. CO emissions from natural gas during the same time frame were 0.7 tons for a total of 13.3 tons of CO. Thus, the total CO emissions for the facility during the time frame were which is in compliance with the permitted limit. The largest 12-month period of CO at the facility was 8/1/2017-7/31/2018 at 0.3 tons of CO from diesel and from 9/1/2015-8/31/2015 at 1.0 tons of CO from natural gas. (See Attachments C and D)

2.2 Natural gas usage limit for FGFACILITY to 78,400,000 cubic feet or less per 12-month rolling time period. From 10/31/2017, through 11/30/2018, the greatest 12-month rolling natural gas usage was 16,204,000 cubic feet, which is in compliance with the permitted limit. (See Attachment D)

2.3 The permittee shall provide the AQD with monthly and 12-month rolling time period records of the NOx emissions. NOx emissions were provided (See Attachments C and D).

2.4 The permittee shall provide the AQD with monthly and 12-month rolling time period records of the CO emissions. CO emissions were provided (See Attachments C and D).

2.5 The permittee shall provide the AQD with monthly and 12-month rolling time period records of the natural gas, diesel and gasoline usage. Natural gas, diesel and gasoline usage were provided (See Attachments B, C and D).

CONCLUSION

It appears that Eaton Research Center is in compliance with all of the evaluated permit conditions and applicable exemptions from R 336.1201.

NAME Jay M. Furtt

DATE 2-25-19

SUPERVISOR SK