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

P072552363

FACILITY: Eaton Rapids Electric Department		**SRN / ID:** P0725
LOCATION: 300 Market Street, EATON		**DISTRICT:** Lansing
CITY: EATON RAPIDS		**COUNTY:** EATON
CONTACT: Rob Pierce , Generator Operations		**ACTIVITY DATE:** 02/04/2020
STAFF: Michelle Luplow	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Announced, scheduled inspection to determine compliance with PTI 142-16.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow
Personnel Present: Rob Pierce, Generator Operations staff (rpierce@cityofeatonrapids.com)

Other Personnel: Jon Stoppels, City Manager (jstoppels@cityofeatonrapids.com)

Purpose
Conduct an announced, scheduled compliance inspection by determining compliance with PTI 142-16 for two electric generation engines, issued in January 2017. This is the first time the facility will be inspected under this PTI. The facility was last inspected in June 2016.

Facility Background/Regulatory Overview
The generators are subject to the area source RICE MACT Subpart ZZZZ. The Lansing District Office received notification from the City of Eaton Rapids on 4-7-16 that they were conducting RICE MACT Subpart ZZZZ stacking testing on their 2 engines on 6-1-16. Prior to this notification the AQD had not been aware of the existence of this source, nor its engines. It was found during the 2016 inspection that the engines were unpermitted and each over the 10 MMBtu/hr threshold provided in the Rule 285(2)(g) exemption (at 13.0 MMBtu/hr and 18.9 MMBtu/hr), thus the reason for issuance of PTI 142-16. The State of Michigan does not have delegated authority from EPA to enforce the area source RICE MACT Subpart ZZZZ at this time.

The engines are not subject to the NSPS Subpart IIII regulation because of the manufacture and construction dates.

The Eaton Rapids Electric Department (Eaton Rapids) currently has 2 Fairbanks Morse generators and 1 parts washer. See Table 1 for engine specifics.

Table 1. Generators

Unit No	Engine	Dual Fuel	PTI	Installation Date	Manufacture Date	**Hours**	Federal Regulation
EUENGINE1	Fairbanks Morse 38DD8-1/8 1920 HP Serial # 969685	Diesel/ Natural gas	142-16	1992	1960	499.3	Area Source MACT Subpart ZZZZ
EUENGINE2	Fairbanks Morse 38DD8-1/8 2880 HP Serial # 970493	Diesel/ Natural gas	142-16	1991	1960	2390.05	Area Source MACT Subpart ZZZZ

Inspection
At approximately 1:00 p.m. on February 4, 2020 I met with Rob Pierce, Generator Operator. This was an announced inspection to ensure that someone would be at the electric plant when I arrived.

PTI 142-16: 2 Fairbanks Morse Dual-Fired Engines
Jon Flower, former electric superintendent, said the two engines were installed in the early 1990's by a lawyer who owned the equipment, but now the City of Eaton Rapids has ownership of the engines. They have a contract with the Michigan Power Producers Association (MPPA), who will request that the engines be run for various energy demands, particularly when there are system integrity failures. This plant currently provides power support to Magnesium Products of America in Eaton Rapids during power interruptions. J. Flower said that the electric plant only supplies 2 MW to Magnesium Products at any given time, which is not enough power to run the entire facility but is enough to provide a backup power supply when necessary.

During this inspection, R. Pierce said that MPPA will only call Eaton Rapids when they are needed for peak shaving activities as well as providing power to Magnesium Products of America. He said they are currently working on procedures that would allow Eaton Rapids to black start the engines: providing power to the city when Consumers loses a turbine, thus resulting in a loss of power.

There are currently no Emission Limits, Testing/Sampling or Reporting requirements under PTI 142-16.

Material Limits
Eaton Rapids is limited to burning only diesel fuel oil, natural gas, or a combination in either of the engines. Eaton Rapids' 2 generators are dual-fueled (natural gas and diesel). During the 2016 inspection, J. Flower said that they use ultra-low sulfur diesel to start the engines (pilot oil ignition), and once the engines reach 1/3 load the fuel is switched to natural gas. I verified with R. Pierce that only diesel fuel and natural gas are used in these units and that diesel fuel is still used only for startups. All startups include ensuring that the engine is operating properly on diesel before switching to natural gas.

Process/Operational Restrictions and Monitoring/Recordkeeping
Each engine is limited to 500 hours of operating time per 12-month rolling period, as determined at the end of each calendar month. Calculations of hours run on the engines are required to be completed by the last day of the calendar month for the previous calendar month.

R. Pierce provided me with excel spreadsheets, attached, that include monthly operating hours for each engine and calendar year totals for 2017, 2018 and 2019. The 12-month rolling calculations were not done. I will work with R. Pierce to ensure 12-month rolling operating hours calculations are done for future inspections. I used Eaton Rapids' operating hours records to calculate 12-month rolling totals. The highest 12-month rolling operating hours total for EUENGINE1 between 2017 and 2019 was 27.5 hours for the 12-month period January 2019 – December 2019. The highest 12-month rolling operating hours total for EUENGINE2 between 2017 and 2019 was 22.45 hours for the 12-monht period January 2019 – December 2019.

Both engines meet the limit of 500 hours per 12-month rolling period.

Design/Equipment Parameters
The nameplate capacity of EUENGINE1 and EUENGINE2 shall not exceed 1360 kW and 2000 kW, respectively. I verified with R. Pierce that these two nameplate capacities are still the same as they were during the 2016 inspection, thus meeting the permit requirement not to exceed these two kW capacities.

Eaton Rapids is required to install a non-resettable hours meter on EUENGINE1 and EUENGINE2. EUENGINE1 has an analogue hours meter whereas EUENGINE2 has a digital hours recording system. R. Pierce said EUENGINE2's analog meter was replaced with a digital output in December 2019. They plan to ensure the digital system meets their needs before converting EUENGINE1's analog hours meter to digital. Table 1 contains the total hours each engine has operated, based on their respective hours meters outputs.

Stack/Vent Restrictions
EUENGINE1 is required to have a minimum stack height of 33.5' above ground; EUENGINE2 is required to have a minimum stack height of 22' above ground. During the inspection I observed that EUENGINE1's stack height was approximately 15' higher than EUENGINE2's stack height and both stack heights appeared to meet their respective stack height requirements.

Parts Washer

Eaton Rapids Electric Department has 1 cold cleaner located in the engine building that has the dimensions 1.5'x2.5', or 3.75 ft2. This unit is exempt from a permit to install per Rule 281(2)(h) because its air/vapor interface is less than 10 ft2. J. The parts washer lid is required to be closed, and was closed during the inspection.

Compliance Statement: Eaton Rapids Electric Department is currently in compliance with PTI 142-16 at this time.

NAME Mathew Lyon DATE 2/7/2020 SUPERVISOR B. M.