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

B195057006

FACILITY: Clinton River WRRF		**SRN / ID:** B1950
LOCATION: 155 N OPDYKE ROAD, PONTIAC		**DISTRICT:** Warren
CITY: PONTIAC		**COUNTY:** OAKLAND
CONTACT: Mike Daniels , Chief WRC Water Resources Recovery		**ACTIVITY DATE:** 02/19/2021
STAFF: Sebastian Kallumkal	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Friday, February 19th, 2021, I, Michigan Department of Environment, Great Lakes and Energy-Air Quality Division (EGLE-AQD) staff Sebastian Kallumkal conducted a scheduled inspection at the Clinton River Resource Recovery Facility-Pontiac Waste Treatment Plant (B1950) located at 155 North Opdyke Road, Pontiac, Michigan. The purpose of the inspection was to evaluate facility's compliance with requirements of of the Federal Clean Air Act; Article II, Air Pollution Control, Part 55 of Act 451 of 1994, and the requirements of the Opt-out Permit to Install (PTI) No. 195-15A.

On Monday, February 8, 2021, I reviewed the records submitted previously via emails, but determined that instead of calculating emissions and fuel usages based on a 12-month rolling period, the facility calculated 12-month rolling averages. After discussions, the calculations were revised, and copies were received during the onsite inspection.

PTI 195-95A is an opt-out permit to limit facility's Oxides of Nitrogen (NOx) emissions to 89 tons per year (TPY). The facility has a few natural gas-fired reciprocating internal combustion engines (RICE) used as back up emergency power generators, couple of WAUKESHA RICEs providing auxiliary power to air blowers fueled by either digester gas (methane) or natural gas, boilers fueled by either natural gas or digester gas (process gas), and a flare to burn off excess digester gas.

I received the two emails with records from Mike Daniels (AQD Contact) on January 8 and 14, 2021 with emissions calculations and fuel usage records. As part of the evaluation, and to request clarification on the records, I contacted the facility. Assistant Chief Greg Knauf and Ken Burch, IPP Supervisor, informed me the following:

EUBOILER1 and EUBOILER2 were decommissioned and dismantled in 12/6/2018 and EUBOILER3 was decommissioned and dismantled in 5/24/2019, as part of the "Biosolids Handling and Septage Receiving Facility Project". Installed three new boilers identified as EUBOILER6 (same heat input rate = 2.67 MMBTU/hr) fueled by digester gas and/or natural gas on Nov. 3, 2019. These boilers have a common meter to monitor natural usage and another meter to monitor the digester gas usage. These boilers are not currently running on digester gas because of some mechanical issues. The Waukesha engines (EUWAUKENG1 and EUWAUKENG2) hadn't run on digester gas since the beginning of 2020 because digester gas was not available and currently not being operated due to some mechanical issues.

I arrived at the facility at about 11:30 AM. At the facility, Mike Daniels, Chief, WRC Water Resource Recovery, Greg Knauf, Asst. Chief, Kenneth Burch, Industrial Pretreatment Supervisor. I identified myself, provided credentials and stated the purpose of my inspection. Due to COVID-19 protocols, we all wore facial masks and kept social distancing.

During the pre-inspection meeting we discussed the plant operations and changes at the plant. The facility analyses metals in the sludge as required by Part 503 of the Clean Water Act, quarterly and mercury 8 times per year. He told me that the "Biosolids Handling and Septage Receiving Facility Project" had been completed. The sludge from the treatment processes undergoes thermal hydrolysis (apply high temperature and pressure using steam)

to destroy pathogens and digestor process to convert sludge to Class A biosolids. Three new boilers 2.67 MMBTU/hr each, natural gas and/or digestor gas fueled) were installed.

These boilers are used for generating steam for the thermal hydrolysis process and to heat the building. Currently these boilers are run only on natural gas. The digestor gas is flared. The Waukesha engines (one in Auburn Plant and other one in East Blvd Plant) which provide auxiliary power to air blowers had not been run for a couple of years other than for maintenance purposes. The air blower compressors are mainly run by electric motors. The corrected emissions records required by PTI No. 195-15A was provided.

CRRF-Pontiac Wastewater Treatment Plant is a non-industrial; publicly owned treatment works (POTW). It receives wastewater from Pontiac and Sylvan Lake communities. It has two plants: Auburn Plant located at 155 N. Opdyke Road and the East Blvd. Plant located at 274 Martin Luther King, Jr. Blvd. Part of the influent (2-9 MGD) goes to the East Blvd. Plant while the 15-17 MGD goes to the Auburn Plant. The facility also has a retention basin to absorb increase in sewage flow. The wastewater undergoes various treatment processes. The sludge from the wastewater treatment is converted to Class A biosolids in the digester process and is trucked out for farmland applications (3-4 times a year). Any run off from the sludge area is collected in the WWTP's grit tank via storm drains.

This facility has an inoperable sewage sludge incinerator which has been decommissioned (disconnected gas supply line and incinerator feed line) since May 2015. He told me that the incinerator has not been removed from the facility yet because of the cost of dismantling and relocating.

For future projects, Mike indicated that they may install two new digester gas fired RICEs to generate electricity for the plant. I advised him to contact AQD staff before installing these engines to verify compliance with state and federal air quality regulations.

After the pre-inspection meeting, Mike and Greg accompanied me for an inspection of the facility. We passed by the two NSPS subject emergency generators and to the new biosolids building. The three newly installed boilers are located on the second floor. They were operating at the time of the inspection. On the way back, I observed that the flare was operating with yellow flame. I did not observe any visible emission (smoke) from the flare.

The emergency generators at these plants are subject to RICE MACT for area sources (40 CFR 63, Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) and New Source Performance Standards (40 CFR 60, Subpart JJJJ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines).

EGLE/AQD does not have delegated authority to verify compliance with the area source RICE MACT requirements. Therefore, the facility should direct any questions or reports related to the area source RICE MACT to EPA Region 5 office in Chicago, Illinois. In its website, EGLE/AQD has provided information regarding area source RICE MACT. Please refer to this information to verify facility's RICE MACT applicability and compliance.

The information is located at:

https://www.michigan.gov/egle/0,9429,7-135-3310_70317-254013--,00.html

http://www.michigan.gov/EGLE, click on "AIR', click on "Compliance" on the left side of the page, click on "Engine Guidance" located under "Compliance Resources by Topic".

PTI No. 195-15A

FGENGINES

Any existing stationary emergency RICE located at an area source should comply with 40 CFR 63, Subpart ZZZZ and new or reconstructed stationary emergency RICE located at an area source should comply with 40 CFR 60, Subpart JJJJ.

The facility is keeping records of the hours of operation for each engine that is recorded through the non-resettable hour meter. The fuel usages for these engines are also maintained.

Compliance with Area Source RICE MACT (40 CFR 63, Subpart ZZZZ) was not verified as EGLE-AQD does not have delegated authority for this area source MACT.

The new emergency RICEs (EUENGINE5 and EUENGINE6) were tested on September 27, 2018 to verify comply with the NSPS (40 CFR 60, Subpart JJJJ) requirements. For continued compliance, I advised him to review information in 40 CFR, Subpart JJJJ.

On January 6, 2021, I sent him for his review *"Summary of Requirement 40 CFR part 60, subpart JJJJ -Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (For engines greater than or equal to 100 and less than 500 horsepower (except gasoline engines and liquefied petroleum gas engines), constructed after June 12, 2006 and manufactured on or after July 1, 2008)* to understand how to show continuous compliance with the NSPS requirements.

The facility previously submitted information to show that the two Waukesha engines, which runs the compressors for the aeration units at the East Blvd. plant and at the Auburn Plant, were not reconstructed or modified, as defined in 40 CFR 60, Subpart A.

FGFACILITY

This flexible group includes 5 boilers (EUBOILER 1- 5), FGENGINES (EUENGINE1-9, EUWAUKENG1, EUWAUKENG2) and the flare. Gas-fired boilers which burn gaseous fuel not combined with any solid fuels and only burn liquid fuel during periods of gas curtailment, gas supply interruption and periodic testing up to 48 hours per year, are not covered under 40 CFR 63, Subpart JJJJJJ (6J)- Area Source Boiler NESHAP. So, these boilers are not subject to 40 CFR 63, Subpart JJJJJJ requirements. Three (EUBOILER1-3) of these five boilers were decommissioned and dismantled. They also installed three new boilers identified as EUBOILER6 (heat input = 2.67 MMBtu/hr each) in November 2019. These new gas-fired boilers are also not subject to area MACT Subpart JJJJJJ requirements.

The NOx emissions from FGFACILITY are limited to 89 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. The facility submitted records of hours operated, natural gas usage, and NOx emission calculations. The total NOx emissions for January to December 2020 was 5.43 Tons.

Discussion:

The three newly installed steam generating boilers which are currently fueled by natural gas could be exempt from permit to install requirements (R336.1201) pursuant to R336.1282(2)(b)(i) which states in part…

R 336.1282 Permit to install exemptions; furnaces, ovens, and heaters.

Rule 282. (1) This rule does not apply if prohibited by R 336.1278 and unless the requirements of R 336.1278a have been met.

(2) The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the following:

(a)…

(b) Fuel-burning equipment which is used for space heating, service water heating, electric power generation, oil and gas production or processing, or indirect heating and which burns only the following fuels:

(i) Sweet natural gas, synthetic natural gas, liquefied petroleum gas, or a combination thereof and the equipment has a rated heat input capacity of not more than 50,000,000 Btu per hour.

This exemption does not include use of digester gas as fuel. The facility needs to apply for a permit to install (PTI) for these boilers these are capable of using dual fuels (natural gas and digester gas). The current permit can be modified to include these three new boilers and remove the three dismantled boilers. The PTI application can be accessed from EGLE-AQD website. An email was sent to the facility to evaluate the permit to install applicability for these new boilers and requested to apply for a permit within 30 days of the email.

On February 25, 2021, I talked to Mike about the permit to install applicability for these boilers and he agreed to apply for a permit by March 20, 2021. I emailed him the permit to install application and a web link to access application and related information.

Conclusion:

As described above, the facility installed three natural gas fired boilers for generating steam to be used in the digestor process and to heat the building. These boilers are capable of using natural gas and digester gas. Boilers fueled by digester gas is required to have a permit to install. A violation notice will not be sent if the facility applies for a permit to install by March 20, 2021.

Facility appears to be in compliance with the requirements of federal standards 40 CFR 60, Subpart JJJJ for the two new emergency generators. The facility needs to comply with the requirements of 40 CFR 63, Subpart ZZZZ for the RICEs.

NAME Sebastian Kallemkal DATE 02/25/2021 SUPERVISOR Joyce K