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

B283851581

FACILITY: Veolia Energy Grand Rapids, LLC		**SRN / ID:** B2838
LOCATION: 156 W Fulton Ave, GRAND RAPIDS		**DISTRICT:** Grand Rapids
CITY: GRAND RAPIDS		**COUNTY:** KENT
CONTACT: Larry Gephart , Plant Manager		**ACTIVITY DATE:** 12/03/2019
STAFF: Kaitlyn DeVries	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: The purpose of the inspection was to determine compliance with Renewable Operating Permit MI-ROP-B2838-2015 and other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

On Tuesday December 3, 2019 Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) staff Kaitlyn DeVries (KD) conducted an unannounced, scheduled inspection of Veolia Energy Grand Rapids, LLC. The purpose of the inspection was to determine compliance with Renewable Operating Permit MI-ROP-B2838-2015 and other applicable air quality rules and regulations.

KD arrived at the facility at 9:45 am and met with Mr. Larry Gephart, Plant Manager. Prior to entrance into the facility, KD observed the perimeter for excess odors and emissions. None were noted, other than the condensed water vapor coming from the stack.

Facility Description

Veolia Energy Grand Rapids, LLC (Veolia) is a district heating and cooling facility that provides steam to meet the heating and cooling demands of a defined portion of downtown Grand Rapids, Michigan. The service area is expanding, but includes GVSU's downtown campus, MSU's Campus, and St. Mary's Hospital. Veolia has four (4) boilers that burn either natural gas or oil to produce the steam. Veolia took stringent fuel oil restrictions on the boilers, therefore defining them as natural gas only boilers as regulated under the National Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers, 40 CFR Part 63 Subpart JJJJJ; thus, Veolia is not subject to those provisions.

Per conversations with Mr. Gephart, Veolia has recently been acquired by a different company and they will be changing names; however, he did not know what the new name would be. KD reminded Mr. Gephart that the Renewable Operating Permit (ROP) issued to Veolia would be expiring in 2020, and that the permit needed to be renewed. KD went on to say that if there are any questions regarding the renewal process, KD would be more than happy to set up a pre-application meeting to go over any questions or concerns. Mr. Gephart indicated that he would pass that information along.

Regulatory Analysis

Veolia is a major source, subject to the Title V program, and currently holds MI-ROP-B2838-2015. Veolia is a major source of carbon monoxide (CO) and nitrogen oxides (NOx). Veolia is not currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18 since the process equipment was constructed prior to June 19, 1978. However, if there are modifications of the process equipment, the source may be subject to the PSD requirements.

Compliance Evaluation

FG-UNITS-01-04

This flexible group is comprised of four (4) natural gas/fuel oil-fired boilers. Units 1, 2, and 3, are 120 mmBTU/hr boilers capable of producing 100,000 pounds of steam per hour. Unit 4 is a 180 mmBTU/hr boiler capable of producing 150,000 pounds of steam per hour. Units 3 and 4 were in operation at the time of the inspection. According to Mr. Gephart, and the associated records, no fuel oil has been used in the boilers in the past year. Mr. Gephart assured KD that in the event that Veolia needs to use fuel oil, he will contact AQD prior to use. Since no fuel oil has been used, no sulfur content records, or associated fuel oil records will be evaluated.

Prior to going to the boilers, the process water gets treated to remove any impurities. The treatment process includes going through a reverse osmosis (RO) system, and pH adjustment. The treatment of the process water is exempt from Rule 201 permitting under Rule 285(2)(m).

Veolia properly tracks the monthly and 12-month rolling natural gas usage for each boiler, and records indicate that the 12-month rolling usage for all boilers combined was 951,287,255 ft^3. Veolia also tracks the corresponding natural gas BTU content from each bill received from the supplier. In conjunction with tracking the natural gas usage, Veolia tracks emissions data for both natural gas, and if fuel oil were to be used, steam production, and the daily heat input. All records are kept on a daily basis. The emissions reported (attached) are consistent with what has been reported for the 2017 MAERS cycle.

The boilers are tuned annually to achieve maximum operating capacity and efficiency. Unit 3 was being tuned while KD was onsite for the inspection. Unit 2 was supposed to be tuned on December 2, 2019, but there was an equipment failure, and Veolia was waiting for a new part. Mr. Gephart told KD that as soon as the new part was installed, that unit would be tuned. The other two (2) units (Units 1 and 4) would be tuned in the coming weeks. Additionally, units 2, 3, and 4 are exhausted through an economizer, which also increases the unit's efficiency. The economizer was originally installed in 2008 under Rule 201 exemption Rule 285(2)(b). However, in 2018, there was an issue at the facility, causing the economizer to fail, which required the unit to be replaced. A new economizer was installed using the same exemption. The economizer recovers the heat from the air, gets put into the water, which is the recirculated back through the system, thus allowing the overall system to be at least 10% more efficient. Overall the plant was running at 92.4% efficiency. At the time of the inspection, the economizer inlet had a temperature of 262°F, and the outlet had a temperature of 120°F. Unit 4 also has an oxygen trim system and was operating ab 2.9% O_2 at the time of the inspection.

EU-UNIT-05

This emission unit is an EPA Certified Kohler Power Systems natural gas fired emergency generator that is used in the event of a power failure. The 184-kW emergency generator is exempt from Rule 201 permitting under Rule 285(2)(g). This unit is, however, subject to the provision of 40 CFR Part 60 Subpart JJJJ, the Standards of Performance for Reciprocating Internal Combustion Engines (RICE). Additionally, this engine is subject to the NESHAP for reciprocating internal combustion engines 40 CFR Part 63 Subpart ZZZZ. Compliance with the provisions of Subpart JJJJ demonstrates compliance with the provisions of Subpart ZZZZ. The certification ensures compliance with the emission limits of 2 g/hp-hr for NOx, 4 g-hp-hr for CO, and 1 g/hp-hr for VOC (excluding HCHO). A non-resettable hour meter is installed in the unit, and per the records, the unit runs very minimally having only ran for six (6) hours in all of 2018 and ran for only 30 minutes per month during 2019.

Stack dimensions, while not explicitly measured, appeared to be correct.

EU-PARTSCLEANER

This emission unit has been incorporated into the ROP to allow for flexibility if the facility were to choose to install one of these units. However, presently there are not any emission units at the facility subject to these provisions.

Compliance Determination

Based on the observations made during the inspection and a subsequent review of the records, it appears as if Veolia Energy Grand Rapids, LLC is in compliance with MI-ROP-B2838-2015.

NAME _____ DATE 12/15/2019 SUPERVISOR _____