

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

N743436781

FACILITY: City of Grand Rapids Drinking Water Treatment Fac.		SRN / ID: N7434
LOCATION: 17350 LAKE MICHIGAN DR., WEST OLIVE		DISTRICT: Grand Rapids
CITY: WEST OLIVE		COUNTY: OTTAWA
CONTACT: Chad Reenders , Acting Operator in Charge		ACTIVITY DATE: 09/21/2016
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro and Adam Shaffer arrived at the facility to conduct an unannounced, scheduled inspection. Several of the prior facility contacts were no longer at the site, however Scott Novitsky, Electrician II was still there and able to get additional facility staff to join us. This included Chad Reenders, Acting Operator in Charge, Dave Ferguson, Doug Gay and Paul Tanzegrau. The DEQ Environmental Inspections: Rights and Responsibilities brochure was passed out and briefly discussed.

This facility is the City of Grand Rapids, Lake Michigan Drinking Water Filtration Plant which houses three Caterpillar 2.25 MW diesel fired generators. The generators are permitted for use as both emergency electricity generators and for peak shaving generators. Peak shaving is where the facility uses the electricity produced on-site during peak electricity cost hours because it is cheaper to make power than to buy power during those times. These diesel fired generators are permitted pursuant to General Permit to Install No. 50-05, as modified in 2009.

During the opening conference, a few points were discussed. The permit and the requirements were presented, specifically the limitation of 0.05 percent by weight on an annual average sulfur content. Facility staff was able to immediately retrieve the contract information on the purchasing of fuel that specifies that no fuel with a sulfur content greater than 0.05 percent by weight may be delivered to the facility. Additionally, the facility produced the bill of lading from the last shipment of ultra-low sulfur diesel fuel dated 3/3/2016. This fuel had 15 ppm sulfur content which is equivalent to 0.0015% by weight and demonstrates compliance with the permit.

The permit has an emission limit of 515 lb NOx/gallon diesel fuel. These units have not conducted stack testing at this time, but meet this limit through the use of recordkeeping.

Currently they do not sell power to the electric utility however they do have an agreement with Midcontinent Independent System Operator (MISO). If MISO needs more power to send to somewhere else, they may ask the City to reduce their power load. The City can do that by taking a pump off-line, or by generating electricity by using the engines. They have not utilized the electric generation option yet, they have complied with MISO by taking a pump off-line. Taking a pump off line is also called load shedding.

Also during this time, I asked the facility representatives if they were familiar with the Reciprocating Internal Combustion Engine (RICE) Maximum Achievable Control Technology (MACT) for area sources. They were not familiar with the regulation. It was clarified that the State of Michigan AQD does not have delegated authority over area sources subject to the RICE MACT, however based on the category of use of the engines on site it is recommended that they look into how it would affect them. The reason why is that these engines are not just emergency units, they are permitted to be used for peak shaving, which may exclude them from the emergency category in the area source RICE MACT. I also specified that I would not be determining compliance with the RICE MACT as a part of this inspection. Mr. Reenders was e-mailed the link to the EPA RICE MACT tool, and the DEQ website for more information. I also confirmed with AQD Permit Section staff that this facility is a minor source of hazardous air pollutants.

We discussed the possibility of re-permitting the engines so that they would not have peak shaving capability. This is unlikely. The facility staff will forward the information on to Joellen Thompson, Water System Manager for review.

Our group walked to the building that houses the three Caterpillar engines. There, Mr. Novitsky and Mr. Tanzegrau detailed operations. The units are equipped with non-resettable hour meters as required.

The engines are operated approximately once a week for one hour, and the yearly average for each engine is ~ 40 hours. During the test run, the electricity is used to help power the facility operations. We discussed the current fuel usage and how it is being tracked. The facility uses the Pneumercator liquid level control system to gauge the fuel oil in both 12,000 gallon storage tanks. After it leaves one of two large storage tanks, the fuel is held in a smaller, 300 gallon, nurse tank which each engine is equipped with. The Pneumercator liquid level control system information is printed off at the end of each weekly operation so that the facility staff knows exactly how much fuel has been burned.

Mr. Novitsky also maintains a written log of all maintenance conducted and fuel used per run. At full load these engines can burn 136 gallons/hour, however Mr. Novitsky doesn't operate them at full load and they burn a 60-90 gallons/hour.

The three engines consume approximately 10,800 gallons of fuel per year, which is below the permit limit of 136,000 gallons. Suggestions on keeping 12-month rolling fuel usage records were made and Mr. Novitsky indicated he'd update his current spreadsheet to include this information. This will be cross referenced with information obtained from the Pneumercator system.

The facility appeared to be in compliance with the Michigan Air Pollution Control Rules and PTI No. 50-05 at the time of the inspection.

NAME Asu Tanzegrau

DATE 9-27-16 SUPERVISOR [Signature]