

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

N624938613

FACILITY: Wolverine Power, Vestaburg Power Plant		SRN / ID: N6249
LOCATION: 8614 Vestaburg Road NE, VESTABURG		DISTRICT: Grand Rapids
CITY: VESTABURG		COUNTY: MONTCALM
CONTACT: CORNELIUS BORNMAN, OPERATOR		ACTIVITY DATE: 02/10/2017
STAFF: Steve Lachance	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled FCE for FY '017. See CA_N624938613. (SLachance, 2/13/17)		
RESOLVED COMPLAINTS:		

SLachance of AQD conducted an unannounced, scheduled inspection of the facility on Friday, February 10, 2017. The purpose of the inspection was to determine the facility's compliance with Michigan Air Pollution Control Rules and PTI No. 388-98A. This PTI is an "Opt-Out" Permit that maintains the source as "minor" with respect to TitleV/ROP/NESHAP. No opacity or odors were observed at the time of the inspection; but none of the regulated equipment was in operation. Facility Operator, Mr. Cornelius Bornman, assisted and accompanied AQD staff during the inspection.

FACILITY DESCRIPTION

This facility has the capacity to generate electric power using two existing reciprocating engines and one dual-fuel turbine engine.

- Engine #6 – 29 MMbtu/hr; Worthington V16, 4190 hp; burns diesel; installed in approximately 1960. Very low utilization.
- Engine #7 - 29 MMbtu/hr; Worthington V16, 4218 hp; burns diesel; installed in approximately 1962. Very low utilization.
- Turbine #8 - 219600 MWH; burns natural gas or diesel; installed in approximately 1999. While dual-fueled, in practice, this operates exclusively on natural gas. A diesel cranking engine operates briefly to start this turbine. This equipment is located across the road from the other engines, but is contiguous, and therefore part of the stationary source.

COMPLIANCE EVALUATION

Per Special Conditions of PTI No. 388-98A:

1. Emission limit – NO_x < 88 tons/yr; records and calculations must be kept within 30 days of the end of the previous month

Comments: Records through January 2017 were readily available; see attached Wolverine Power Cooperative/Vestaburg Facility records including Capacity Factor Worksheet; Plant Fuel Use and NO_x Emissions; Operating Report for December 2016; and Unit #8 Log Sheet for January 2017. 12-month rolling emissions for 2016 were calculated to be about 26 tons/year for NO_x, the highest-emitting pollutant from the equipment. This compares to the site-wide limit of 88 tons per 12-month rolling period. Note, utilization for 2016 was greater

than 2013-2015, combined. Operations (other than monthly testing) are concentrated during the periods of hottest weather.

As noted above, no regulated equipment was running at the time of the inspection.

These records appear to be complete and reflect low facility utilization.

SL compared the compiled emissions/operations statement for 2015 to the most recent MAERS report; and found these to be consistent (4 tons NOx emitted.) See attached 2015 MAERS Support Data.

2. Emission limit – SOx < 0.30 lb/mmBTU = 0.3% sulfur content and a heat value of 18,000 BTU's /lb

Comments: During a previous inspection fuel used had a documented, compliant, maximum sulfur content of 0.05%. Mr. Bornman stated that no oil has been received on-site since the August 2014 inspection by AQD. At that time, AQD received oil shipment documentation from Scotland Oil Company showing receipt of Ultra Low Sulfur Diesel, which has a maximum content of 15 ppm (0.00015% sulfur in oil). SL therefore concludes that the facility is complying with this requirement.

3. Stack – Turbine shall be discharged unobstructed vertically upward, max diameter 154 in, min height 39 ft.

Comments: The stack height appeared to be appropriate; as constructed; no physical changes.

OTHER EQUIPMENT/MISCELLANEOUS

The facility also utilizes a natural gas boiler (approximately 3.15 MMbtu/hr) for jacket water heating and various small space heaters, all using natural gas. As Gas1 Units, these are all exempt from regulation per the Area Source Boiler MACT, 40 CFR 63, Subpart JJJJJJ.

There are two 30,000 gallon storage tanks containing diesel. They appear to be exempt from permitting under Rule 284(2)(d).

With respect to the RICE MACT, the two engines are now subject even though they are at an area source. These engines are not subject to emission limits but are subject to maintenance requirements; use of restricted sulfur in oil; and non-resettable hour meters. These indicate the following usage rates since May 6, 2013;

Engine 6: 21.9 hours (was 13.5 hours in 2014)

Engine 7: 20.2 hours (was 16.1 hours in 2014)

The site is considered a peaking station, and therefore is exempt from Rule 801. It is well under the defined "peaking unit" capacity of 10% / 20% (per attached documentation from the facility, actual utilization rates were about 3.27% in 2016 and about 1.34% for the last 3 years).

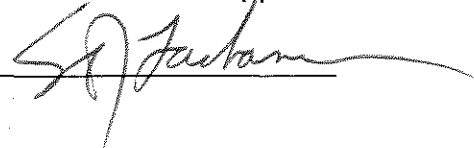
SUMMARY

At this time, SL considers the facility to be in compliance with applicable air quality rules and regulations.

ATTACHMENTS:

- Wolverine Power Cooperative Memo - Vestaburg Unit 8 Capacity Factor Worksheet
- Vestaburg Plant Fuel Usage and NOx Emissions
- December 2016 Operating Report
- Jaunaury 2017 Unit #8 Log Sheet
- 2015 MAERS Support Data

NAME



DATE

2/13/17

SUPERVISOR

