

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

N624926437

FACILITY: Wolverine Power, Vestaburg Power Plant		SRN / ID: N6249
LOCATION: 8614 Vestaburg Road NE, VESTABURG		DISTRICT: Grand Rapids
CITY: VESTABURG		COUNTY: MONTCALM
CONTACT: Dan Calverley, Site Manager		ACTIVITY DATE: 08/18/2014
STAFF: Steve Lachance	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection for FY '014. See CA_N624926437. (SLachance, 8/19/14)		
RESOLVED COMPLAINTS:		

SLachance of AQD conducted an unannounced, scheduled inspection of the facility on Monday, August 18, 2014. The purpose of the inspection was to determine the facility's compliance with Michigan Air Pollution Control Rules and PTI 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<sub>x</sub> < 88 tons/yr; records and calculations must be kept within 30 days of the end of the previous month

Comments: Records through July 2014 were readily available; see attached Wolverine Power Cooperative Memo dated 8/5/14. Current 12-month rolling emissions were calculated to be about 4 tons/year for NO<sub>x</sub>, the highest-emitting pollutant from the equipment.

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 2013 to the current MAERS report; and found these to be consistent (22.02 mmcf natural gas combusted in 2013.) See attached 2013 MAERS Support Data for EUTURBINE.

2. Emission limit – SO<sub>x</sub> < 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%. Oil shipment documentation since the previous inspection shows receipt of Ultra Low Sulfur Diesel, which has a maximum content of 15 ppm (0.00015% sulfur in oil). See attached invoices from Scotland Oil Company indicating #2ULSDDY DSL ("Ultra Low Sulfur #2 Diesel, Dyed for non-road use."). 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(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: 13.5 hours

Engine 7: 16.1 hours

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% (actual utilization rates are about 1% for the last 3.5 years).

#### **SUMMARY**

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

**ATTACHMENTS:**

- 8/5/14 Wolverine Power Cooperative Memo
- **2013 MAERS Support Data for EUTURBINE**
- **Scotland Oil Company Invoices**

NAME 

DATE 8/19/14

SUPERVISOR 

