

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

N624959661

<b>FACILITY:</b> Wolverine Power, Vestaburg Power Plant		<b>SRN / ID:</b> N6249
<b>LOCATION:</b> 8614 Vestaburg Road NE, VESTABURG		<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> VESTABURG		<b>COUNTY:</b> MONTCALM
<b>CONTACT:</b> CORNELIUS BORNMAN , CHEIF OPERATOR		<b>ACTIVITY DATE:</b> 09/01/2021
<b>STAFF:</b> Kaitlyn DeVries	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> The purpose of this inspection was to determine compliance with permit to install (PTI) Number 388-08B and other applicable air quality rules and regulations.		
<b>RESOLVED COMPLAINTS:</b>		

On Wednesday September 1, 2021, Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) staff Kaitlyn DeVries (KD) conducted an unannounced, scheduled inspection of Wolverine Power – Vestaburg Power Plant located at 8614 Vestaburg Road NE, Vestaburg Michigan. The purpose of this inspection was to determine compliance with permit to install (PTI) Number 388-08B and other applicable air quality rules and regulations.

Prior to arriving on site, KD observed the area for any opacity and odors; none were noted. KD arrived on site around 10:00 am and met with Mr. Cornelius Bornman, Chief Operator, who accompanied KD on the inspection and provided the associated records.

**Facility Description**

Wolverine Power – Vestaburg Power Plant (Wolverine) is an electric power producing facility that has one (1) GE Frame 5 dual fuel simple cycle combustion turbine. While this unit is dual fuel, the unit primarily runs on natural gas. During the opening meeting of the Mr. Bornman asked what the obligations would be if, and he didn’t foresee this happening, Wolverine operated the unit on entirely diesel fuel. KD reminded him that this unit was permitted as a dual fuel unit, and all of the requirements in the permit would apply, and compliance with the permit would be expected.

The site formerly had two (2) Worthington VEE 16 Diesel generating units that have now been decommissioned. Additional information on the decommissioning can be found in the compliance evaluation portion of this report.

This facility is a peaking facility, meaning it runs infrequently, running when electricity demand is high. The facility was not running any equipment at the time of the inspection.

**Regulatory Analysis**

Wolverine currently holds one (1) permit, Opt-Out PTI No. 388-08A, and contains a synthetic minor limit for NOx. The facility is considered a minor source for all other criteria pollutants and for hazardous air pollutants. The now decommissioned Worthington engines were subject to the national emissions standards for hazardous air pollutants promulgated under 40 CFR Part 63 Subpart ZZZZ for reciprocating internal combustion engines for area sources, for which the AQD does not have delegation. If Wolverine put these back into service, this regulation would become applicable again.

**Compliance Evaluation**

Emissions from the facility are limited to 88 tons per year (tpy) based upon a 12-month rolling time period for Nitrogen oxides (NO<sub>x</sub>). Mr. Bornman had the records readily available, and the records indicate The facility has emitted 7.26 tons of NO<sub>x</sub>, as of July 2021 based on the 12-month rolling time period. June 2021 had the highest 12-month rolling emissions at 10.78 tons. According to Mr. Bornman, Wolverine had run most recently in August, but that data was not yet available; July was also a month that had more hours of operation as well. Wolverine is properly tracking hours of operation, fuel usage, and emissions.

As previously mentioned, this site is considered a peaking station and is therefore exempt from Rule 801. A peaking unit has an average capacity factor of not more than 10% during the previous 3 calendar years and a capacity factor of not more than 20% in each of those calendar years. Wolverine is tracking this and the three-year average for the past three years is less than 1%.

The diesel fuel used for startup, is Ultra Low Sulfur Diesel, which has a maximum sulfur content of 15 ppm (0.00015% sulfur in oil), and according to Mr. Bornman, Wolverine has not received any fuel in quite a while. The use of the Ultra-Low Sulfur Diesel fuel demonstrates compliance with the sulfur dioxide emission rate of 0.30 pounds per million BTU heat input, based upon a 24-hour period as that is equivalent to using fuel oil with a 0.03% sulfur content and a heat value of 18,000 BTUs per pound. The fuel that is on site is kept in the two (2) 30,000-gallon storage tanks. These tanks are exempt from Rule 201 permitting under Rule 284(2)(d). These tanks are also not subject to the new source performance standards (NSPS) promulgated under 40 CFR Part 60 Subpart Kb for volatile organic liquid storage vessels (including petroleum liquid storage vessels) due to the capacity of the tanks since 60.110b (d)(4) excludes vessels with a design capacity of less than or equal to 1,589.874m<sup>3</sup> used for petroleum.

The stack for the turbine, while not explicitly measured, appeared to be of correct dimension. The emissions from the two (2) previously mentioned decommissioned Worthington engines, if operational, would be included in the 88 tpy NO<sub>x</sub> emission limit. KD was able to see that the fuel line was disconnected and the air line to support startup was also disconnected. Mr. Bornman also showed KD that the substation that was connected to the engines was also removed, so extensive work would be required if these units were ever to become operational. At this time Wolverine does not have any intentions of making them operational. The AQD had previously received a call from Wolverine Staff on June 13, 2019, indicating that these units had been decommissioned as well.

The 2020 MAERS data was reviewed as part of this full compliance evaluation and the emissions are consistent with what was reported during this inspection.

Wolverine also has one (1) cold cleaner, which is exempt from rule 201 permitting under Rule 281 (2)(h). The unit was closed and not in use at the time of the inspection.

### **Compliance Determination**

Based on the observations made during the inspection and a subsequent review of the records it appears that Wolverine Power – Vestaburg Power Plant is compliant with PTI No. 388-08A and other applicable air quality rules and regulations.

NAME Kaitlyn Davis

DATE 9/2/2021

SUPERVISOR HH