

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

N683330812

FACILITY: Wolverine Power, Gaylord Generating Station		SRN / ID: N6833
LOCATION: 2700 Millbocker Road, GAYLORD		DISTRICT: Gaylord
CITY: GAYLORD		COUNTY: OTSEGO
CONTACT: Brian Warner, Vice President - Environmental Strategy		ACTIVITY DATE: 08/26/2015
STAFF: Becky Radulski	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: scheduled inspection and records review		
RESOLVED COMPLAINTS:		

On August 31, 2015 N6833 Wolverine Power Supply Cooperative, Wolverine Power Gaylord Generating Station was inspected for compliance with ROP MI-ROP-N6833-2010. The facility is located at 2700 Millbocker Road, Gaylord, Otsego County.

The site was inspected from the fence line. The site is fenced and gated, no one was present during the inspection. I emailed Jim Tucker, Chief Operator of the Gaylord/Tower Generating Plants (cell 231-499-1150), who is currently on vacation and indicated staff may have been working on the new site near Elmira. When Jim returns an additional site visit will be arranged during a time when the turbines are operating.

The facility is a peaking station with three natural gas turbines and three diesel startup engines. The diesel startup engines are blackstart capable. Also on site is a heater treater which is exempt under 285(b)(1).

The equipment of the ROP is all readily visible from the fence. The three turbines were not in operation. Since this is a peaking plant it works on demand. During previous visits and during the most recent stack test there were no visible emissions present. Based on previous inspections, the grounds appear to have no new equipment onsite.

This source is major for NO<sub>x</sub>, and is not major for HAPS.

This source has an ROP going through renewal. The new ROP will be ending the EPA review and be issued as Final at the beginning of September.

#### SOURCE WIDE CONDITIONS

VI 1 and 2 - facility total NO<sub>x</sub>, tons per calendar month, tons per 12-month rolling (224 ton limit per 12 month rolling): The facility calculates NO<sub>x</sub> emissions for the facility, records are attached. Monthly totals ranged from 0 to 14.26 tons, while the 12 month rolling average as of August 2013 is 25.24 tons.

#### FGSTARTER, BACKGROUND AND FLEXIBLE GROUP CONDITIONS

FGSTARTER consists of three 500 horsepower diesel engines (EUSTARTER01, EUSTARTER02, EUSTARTER03) used for starting the FGTURBINES. The engines are 'black start' engines which allows the peaking plant to be started during a power outage. The engines are subject to 40 CFR Part 63 Subpart ZZZZ, the RICE MACT. The 2015 ROP that will be issued in September contains a table called FGRICEMACT. Although the table is not in the current 2010 ROP, the facility still needs to comply with this MACT.

III.1 and VI.1 - diesel fuel shall have sulfur content less than 0.05% by weight: The facility has fuel delivered to a large tank at the Tower facility, then trucks it to Gaylord's plant. After receiving a delivery to Tower, the fuel is sent for a sulfur analysis. The results have been requested from the facility which should be rec'd when Jim Tucker returns.

III.2 - each engine shall operate less than 100 hrs per year: The diesel engines operate approximately 15 minutes when starting the corresponding turbine (includes start up then a 5 minute cool down time). 12 month rolling hours of operation for the 3 diesel engines combined is approximately 16 hrs.

VI.2 - records of heat input to FGSTARTER per calendar month: Heat input is calculated and recorded by the facility per calendar month. Records are attached.

VI.3 - calculate and record NO<sub>x</sub> per calendar month: NO<sub>x</sub> is calculated and recorded for FGSTARTER each calendar month. Records are attached. Since the engines do not operate often the emissions are low - 0 to 0.058 tons per month.

**FGTURBINE, BACKGROUND AND FLEXIBLE GROUP CONDITIONS**

FGTURBINE consists of three general electric frame 5N simple cycle combustion turbines fired by natural gas. Heat input is rated at 351 million BTU/hr and each is rated at 23,400 kW. The turbines were installed in 2001. The turbines are not subject to NSPS 40 CFR Part 60 Subpart KKKK as they were manufactured prior to 2-18-2005 and have not been modified or reconstructed. The turbines are not subject to NSPS 40 CFR Part 60 Subpart GG as they were manufactured prior to 10-3-1977 and have not been modified.

III.1 - shall use only sweet natural gas: The turbines are set up to only use natural gas. The gas is direct from the pipeline and is sweet natural gas.

V.1 - Testing: Testing took place in 2014. There were no issues with the test data.

VI.1 - monitor and record natural gas: The facility monitors and records the natural gas combusted in each of the three turbines per calendar month. Due to the peaking nature of the facility, the usage ranges from 0 to 31,281,991 cubic feet. March 2015 was the heaviest month. The most recent month, July, had 12,492,900 combined for all 3 turbines.

VI.2 - calculate and record monthly heat input to each turbine: Heat input is calculated for each turbine and recorded. Records are attached.

VI.3 - calculate and record the combined NOx emissions, tons per 12-month rolling: based on July, NOx emissions for the turbines was 29.6 tons, 12 month rolling. Records are attached.

VIII.1, 2 and 3 - stack dimensions: The ROP requires a maximum of 154.2 inches diameter and 45 feet height above ground. Based on visual estimate the stacks on the three turbines meet these requirements.

**MAERS**

2015 MAERS Submittal was reviewed. no issues.

Based on the site inspection and site review, the facility meets the requirements of MI-ROP-N6833-2010.

NAME Becky Radulski

DATE 8/31/15

SUPERVISOR

