

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

B426030843

FACILITY: L'ANSE WARDEN ELECTRIC COMPANY LLC		SRN / ID: B4260
LOCATION: 157 S MAIN STREET, LANSE		DISTRICT: Upper Peninsula
CITY: LANSE		COUNTY: BARAGA
CONTACT: John Polkky , Plant/Fuel Supply Supervisor		ACTIVITY DATE: 08/27/2015
STAFF: Ed Lancaster	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Began unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

L'Anse Warden Electric Company is a small, biomass-fueled electrical generator. The operations at the plant are currently covered by ROP No. MI-ROP-B4260-2011 and PTI No. 168-07D, issued October 25, 2012. PTI 168-07D updated the conditions for EU-BOILER#1, by allowing the use of pentachlorophenol treated wood as a fuel. The company submitted a renewal application for their ROP on February 11, 2015. The draft renewal is currently in the 30-day public comment period, which began on August 10, 2015.

Prior to entering the facility, on 27 August, I walked around the perimeter of the property and noted fugitive emissions coming from the approximate 18-inch gap between the cyclone stack and capture hood (see photo below). These emissions were intermittent, as the fuel types are kept separate and there is a break between when RR ties, wood chips or the pentachlorophenol RR ties are being blown over.

I then entered the property and met with Mr. John Polkky, Fuel Procurement Supervisor, and informed him I was there to do an air compliance inspection and informed him of my observations regarding the fugitive dust. As we walked out to the cyclone, Mr. Polkky informed me the company was aware of the issue and were planning to address it during an upcoming planned maintenance outage, September 13th through the 18th, as part of the conditions in EU-FUEL. He later showed me the bell-shaped hood they planned to modify and install during the outage. Mr. Polkky added for the rest of my inspection he would be more comfortable if the plant manager was present. I rescheduled to return the following Wednesday, on September 2nd.

On my return trip I met with JR Richardson and the new Operations Manager, Chris Anderson. The company made available recent production, monitor and recordkeeping data as required in Special Condition (SC) Nos. VI.1 through 9 and VII.1 and 2. I began the inspection by asking for clarification on two concerns that have been brought up during the public comment period, i.e., "soot blowing" and a "blasting noise" that occurs occasionally. "Soot blowing" was explained as a method for cleaning the boiler tubes to maintain boiler efficiency, it consists of using high pressure steam to clean the boiler tubes. The company has found that conducting this operation every 8-hours (three times per day) keeps the boiler operating at its most efficient. The "blasting" noise occurs during normal maintenance outages, when an explosive contractor is brought in to remove the slag build-up from the boiler. Local officials and the police department are notified when the blasting is scheduled.

In reviewing the EU-BOILER emission limits from the company records (MAERS, CEMS data, monthly calculations and last stack test results) the company was in compliance with conditions I.1-13. Converting the natural gas consumed in 2014 from cubic feet to btu per hour and comparing it to the other fuel inputs, natural gas was 1.1% of the annual heat input of the boiler (SC No. II.1). The daily and annual tire derived fuel (TDF) inputs were 1.35 tons per hour and 10,861 tons per year for 2014, both within SC Nos. II. 2 and 3 limits. Similarly, the RR tie inputs were well below their limits (SC Nos. II. 4, 5 and 8) consuming 7.2 tons per hour, 57,871 tons per year and 0.22 tons per hour, respectively. The company no longer uses fines and bark as a fuel (SC Nos. II. 6 and 7) because their use causes problems with boiler efficiency.

The company reported the maximum heat input for the boiler in 2014 was 2,568,967 MMBTU (SC No. III. 1), through August of this year the heat input is 1,486,773 MMBTU.

At the time of the inspection steam production was 195,000 pounds per hour and steam pressure was

872 psig. Terry, the boiler operator pointed out on the monitors that the company was sending 35 MMBTU per hour of steam to CertainTeed for their operations. The plant was averaging about 15 MW of electrical power. Of this 1.3 MW is used to operate the plant, 2.3 MW powers CertainTeed, 0.37 MW powers the fuel yard and the remainder is sold to the grid. The CO CEMS running average was 0.155 ppm and the COMS was below 2%. The meters calibrate every 4 hours and a full calibration happens everyday at 0800 hours, according to Terry. The fuel supply mix was 50:50 wood chips and RR ties, less than 10% TDF, and 0.25 tons of pentachlorophenol RR ties, being fed at 20 tons per hour (SC Nos III.4 and 5). When asked Terry responded that natural gas is used mostly during start-up and shut down operations (SC Nos. III.2 and 3).

The multicyclone and the three series section ESP are currently oversized for the system as they were installed when the boiler was coal-fired. With this excess capacity one of the sections of the ESP could be taken off-line and they could still meet their opacity limits (SC No. IV.1).

The company is scheduled to conduct their stack test on September 24, 2015, ahead of the deadline in SC No. V.1. In addition, through fuel analysis the company has provided SO₂ and HCl emission rates (SC No. V.2). The permit, in SC No. V.3, nor the Fuel Procurement and Monitoring Plan define a timeframe for "periodic sampling and analysis".

The ash from the ESP and boiler are mixed with water to form a slurry. The ash slurry is hauled to provide daily cover at a landfill.



Image 1(LWEC Cyclone) : View of LWEC cyclone fuel receiving hopper, note space between stack and hood.
Photo taken 8/27/2015, looking south.



Image 2(LWEC new hood) : Replacement hood for cyclone fuel receiving hopper. Photo taken on 8/27/2015.

NAME Ed Lancaster

DATE 11/23/15

SUPERVISOR _____