

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

P064038110

FACILITY: MDOC Chippewa Complex		SRN / ID: P0640
LOCATION: 4269 W. M-80, KINCHELOE		DISTRICT: Upper Peninsula
CITY: KINCHELOE		COUNTY: CHIPPEWA
CONTACT: RICHARD BURD , BOILER OPERATOR		ACTIVITY DATE: 12/21/2016
STAFF: Joel Asher	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Facility inspection per PTI #206-15.		
RESOLVED COMPLAINTS:		

On 12/21/2016 I conducted an inspection of this facility. Originally I visited the site on 12/7/2016, however, Mr. Rick Burd was not available. This inspection I was able to meet with Mr. Burd who is primarily responsible for operation of the boiler for the Chippewa Correctional facility. Mr. Burd has been in this position since February 2015.

PTI #206-15 was issued to the facility on 1/12/16. This permit covers three boilers and three emergency generators subject to the RICE MACT. The PTI also limits the facility's emissions to make them a synthetic minor facility.

FG-BOILERS

All three boilers (EU-BOILER1, EU-BOILER2, and EU-BOILER3) are identical and were installed at the same time (1/1/2006). They are listed together under a flexible group. Typically only one boiler runs at a time. In the event of extreme cold, two boilers may be needed to maintain the required load.

SC II.1 limits the facility to only burning pipeline quality natural gas or fuel oil in the boilers. The boilers are not capable of burning any fuel other than natural gas or fuel oil.

SC II.2 limits the sulfur content of the fuel oil burned to not exceed 500 ppm by weight. The facility is aware of this limitation.

SC III.2 limits the facility to not burning fuel oil for not more than 500 hours per 12 month rolling time period. The boilers are fired primarily on natural gas. Periodically they will be fired on fuel oil for not more than a three day test. Maintaining the 500 hour restriction is not an issue.

SC IV.1 requires the facility to maintain a device to monitor and record the amount of natural gas used in the boilers. This is accomplished by using the gas meter on the building. Records of gas consumption are maintained.

SC VI.1 requires the facility to monitor and record the amounts and types of fuel burned on a monthly basis. These are maintained and a copy provided.

SC VI.2 requires the facility to maintain a copy of the fuel oil specifications for each delivery. Conversations were held with Mr. Burd regarding this requirement.

FG-EMGGENS

The facility has three emergency generators that are all subject to the RICE MACT. All three (EU-EMGRICE1, EU-EMGRICE2, and EU-EMGRICE3) are listed under this flexible group.

SC II.1 limits the sulfur content of the fuel oil burned to not exceed 500 ppm by weight. The facility is aware of this limitation.

SC.III.1 limits the facility to not operating the engines for more than 500 hours per year on a 12 month rolling time period. Presently each engine is run .5 hours each week for maintenance and testing. Otherwise they are only run during emergency power outages.

SC IV.1 requires each unit to have a non-resettable hour meter installed. This was observed.

SC VI.1 requires the facility to monitor and record the hours of operation for each engine on a monthly and 12 month rolling time period. Records are being kept and a copy was received.

SC VI.4 requires the facility to maintain a copy of the fuel oil specifications for each delivery. Conversations were held with Mr. Burd regarding this requirement.

SC VI.4 requires the facility to maintain specifics on each of the engines. Mr. Burd stated the information is available but in different locations. It was suggested to compile the required information and insert it into the spreadsheet that is already maintained.

FG-FACILITY

SC IV.1 requires the facility to maintain a device to monitor and record the amount of natural gas used in the boilers. This is accomplished by using the gas meter on the building. Records of gas consumption are maintained.

SC VI.1 requires the facility to maintain monthly and 12 month rolling time period calculations for NOx emissions. These are presently being done. A copy was provided.

SC VI.2 requires the facility to maintain monthly and 12 month rolling time period calculations for SO₂ emissions. These are presently being done. A copy was provided.

SC VI.3 requires the facility to maintain monthly and 12 month rolling time period calculations for CO emissions. These are presently being done. A copy was provided.

After a review of the PTI and records was completed, Mr. Burd escorted me through the facility to observe the equipment. At the time of the inspection boiler #3 was operating on natural gas. A maintenance log was observed where all maintenance issues are recorded.

The 410 kW generator (EU-EMGRICE1) was observed. This is located in the back of the building attached to the steam plant. An hour meter was observed reading 1471.4 hours.

The 250 kW generator (EU-EMGRICE2) was observed. This is located in a building to the west of the steam plant. An hour meter was observed reading 157.8 hours. Mr. Charlie Gimbal accompanied us to this unit as he had the keys for the building. During discussions, Mr. Gimbal raised the issue that the hour meter for EU-EMGRICE1 may not be operational. He also stated each generator operates an average of 34.1 hours per year.

The 250 kW generator (EU-EMGRICE3) was observed. This is located at the Hiawatha facility. An hour meter was observed reading 742.2 hours.

Mr. Burd suggested I talk with his supervisor regarding some of the issues that were raised during the inspection. We attempted to meet with Mr. Jeff Niemi, however, he was not available.

On 12/22/16, Mr. Niemi (906 495-5045) contacted me via telephone. Discussions were held regarding the following concerns: fuel oil specifications, functioning hour meters on all generators, and listing specifications for the generators. Mr. Niemi stated the requirements for fuel specifications would be obtained. He also stated he would contact the consultant who worked on obtaining the PTI to help with getting the proper specifications listed for the generators.

Regarding the hour meters, Mr. Niemi agreed this was not acceptable. He stated he would ensure the meters are replaced or maintained as needed. I also expressed my concern regarding the logging of operational hours. The records show a consistent 2.0 hours of operation for each generator each month. Based on the records each unit will operate 24 hours in a year (2 hours X 12 months). This does not coincide with Mr. Gimbal's statement that they average 34.1 hours a year. I stated I was curious how the 2.0 hours of operation number gets in the spreadsheet, is this a predetermined number or is this based on actual operational values recorded monthly.

Mr. Niemi agreed to check into the issues and address. I will follow up with him in a few weeks to determine the facility's compliance with PTI #206-15 and the Air Pollution Control Rules.

On 1/4/17 an email was received from Mr. Burd with a copy of the SDS for the diesel fuel purchased for the generators. I responded in an email that the fuel specified in the SDS (Marathon Petroleum No. 2 Ultra Low Sulfur Diesel) is appropriate and would comply with the PTI requirements. However, the SDS alone does not

demonstrate what was purchased and is in the fuel tank. I requested a copy of the purchase order, or invoice, to show fuel actually purchased.

On 1/6/17 Mr. Burd sent an email with an attachment of the fuel oil purchase invoice. This shows on 9/24/15, 3700 gallons of ultra low sulfur diesel was purchased. This documentation satisfies condition FG-EMGGENS SC.II.1.

On 1/20/17 an additional email was received from Mr. Burd regarding the natural gas usage of the boilers and the hour meters on the generators. Weekly readings are recorded for each boiler house and total natural gas consumption is logged. This documentation satisfies condition FG-BOILERS SC IV.1.


The hour meter information was submitted as follows:

"The hour meter for the steam plant at URF is broken and has been that way since the fall of 2015 as far as I can tell but is fixed now, the generator on the west side of URF started January, 2016 at 124.2 and the end of January was 125.2, end of Feb.-127.2; Mar.-129.4; Apr.-137.1; May-139; June-141.9; July-144.4; Aug.-147.8; Sept.-150.1; Oct.-152.7; Nov.-155.9; Dec.-158.3. KCF generator started January 2016 at 282.2 ended January at 283.1, nothing until July at 284.8; Aug.-287.2; Sept.-287.7, nothing for Oct. and Nov.; Dec.-288.5. The generator at Hiawatha or the new Kinross facility. It is a 250KW and the hours are at the beginning of January 2016 the hours were 714.8 and at the end of each month the hours were, Jan.-715.3, Feb.-717.4, Mar.-719.9, Apr.-721.9, May-723.9, June-726.5, July-728.5, Aug.-733.1, Sept.-735.2, Oct.-737.2, Nov.-739.8, Dec.-742.7."

This satisfies the condition FG-EMGGENS SC.IV.1 to have an hour meter on each engine and FG-EMGGENS SC.III.1 to not operate the engines for more than 500 hours per year.

With information supplied by the facility and that observed during my inspection on 12/21/2016 the facility is found to be in compliance with PTI #206-15.

NAME



DATE

1/24/17

SUPERVISOR

