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

N168531204

FACILITY: TES Filer City Station		**SRN / ID:** N1685
LOCATION: 700 Mee Street, FILER CITY		**DISTRICT:** Cadillac
CITY: FILER CITY		**COUNTY:** MANISTEE
CONTACT: Rick Brown ,		**ACTIVITY DATE:** 09/16/2015
STAFF: Kurt Childs	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: 2015 FCE site inspection and records review.		
RESOLVED COMPLAINTS:		

2015 Full Compliance Evaluation (FCE)

AQD staff (Kurt Childs and Caryn Owens) traveled to the TES Filer City Station to perform an inspection and records review. The purpose of the inspection was to determine the facility's compliance with Renewable Operating Permit No. MI-ROP-N1685-2015. Mr. Rick Brown accompanied AQD staff during the inspection.

At the time of the inspection the plant was down for an outage, primarily to install modifications to the boilers that will facilitate the installation of gas burners in the future. This activity is covered by PTI 110-14A and ROP Minor Modification 201500132.

A. SOURCEWIDE CONDITIONS

1. Process/Operational Restrictions - the permittee must implement and maintain a fugitive dust plan. The fugitive dust plan has been implemented and maintained, the AQD has also received and approved a copy of the plan as of August 2012.

2. Monitoring/Recordkeeping - Facility staff are required to maintain records of dust suppressant applied to storage piles and roadways as well as dates in which the roadways and parking areas are swept. A log book in the maintenance shack contains dates of any dust suppressant application or roadway/parking lot sweepings. At the time of the inspection the roadways were clean, roads and areas around the plant are now all paved. Additional sprinklers have been added to the coal/coke storage area which now provide complete coverage. At the time of the inspection there were no visible emissions from storage piles or from the plant yard and roads.

3. Reporting - All reports submitted by the facility were previously reviewed and documented.

B. EULIMESTORAGE - Lime storage and handling system. The lime is used in the boiler scrubbers to reduce sulfur dioxide emissions.

1. Emission Limits - Particulate matter emissions from the lime storage silo is limited to 0.03 grains per dry standard cubic foot of exhaust gases and the visible emission limit from the entire lime storage and handling system is 5% opacity based upon a six minute average. The method of compliance for the limits are non-certified visible emissions observations. If any visible emissions are observed, facility personnel record its presence and take corrective actions. No VE exceedences noted.

2. Process/Operational Restrictions - Lime storage and handling baghouse must be installed, maintained and operated properly. The baghouse has been installed and operating for many years, proper operation is verified through visible emission observations.

3. Testing/Sampling - Non-certified visible emission observations are required to be performed at least once each time the silo is being filled and stack testing may be required upon request of the AQD. The log book located in the control room contained adequate documentation to demonstrate that the observations are being performed when the silo is being filled. Log book entries reviewed during the inspection indicate the baghouse has operated properly.

Stack testing has not been requested by the AQD.

4. Reporting - All reports required pursuant to this emission unit were previously reviewed and documented. Since stack testing has not been requested there are no stack test reports for the period under review.

C. EUASHUNLOAD - Ash unloading system.

1. Emission Limits - Particulate matter emissions from the ash unloading baghouse are limited to 0.03 grains per dry standard cubic foot of exhaust gases and the visible emission limit from the entire ash unloading system is 5% opacity based upon a six minute average. The method of compliance for the limits are non-certified visible emissions observations. If any visible emissions are observed, facility personnel record its presence and take corrective actions. No VE exceedences noted.

2. Process/Operational Restrictions - Ash unloading baghouse must be installed, maintained and operated properly. The baghouse has been installed and operating for many years, proper operation is verified through visible emission observations.

3. Testing/Sampling - Non-certified visible emission observations are required to be performed at least once each time the system is being filled and stack testing may be required upon request of the AQD. The log book located in the control room contained adequate documentation to demonstrate that the observations are being performed. Log book entries reviewed during the inspection indicate the baghouse has operated properly.

Stack testing has not been requested by the AQD.

4. Reporting - All reports required pursuant to this emission unit were previously reviewed and documented. Since stack testing has not been requested there are no stack test reports for the period under review.

D. EUMERGEN

The source is an area source under 40 CFR part 63, Subpart ZZZZ (RICE MACT) for which the AQD does not have delegation. During the inspection it was noted however, that the engine is equipped with a non-resettable hours meter which had 978 hours on it and that TES maintains records of maintenance and hours of operation.

E. EUFIREPUMP

The source is an area source under 40 CFR part 63, Subpart ZZZZ (RICE MACT) for which the AQD does not have delegation. During the inspection it was noted however, that the engine is equipped with a non-resettable hours meter which had 550 hours on it and that TES maintains records of maintenance and hours of operation.

F. FGBOILERS

Boilers #1 and #2 which are spreader stoker designs and burn multiple fuel types. Pollution control equipment associated with the boilers consist of dry scrubbers and baghouses.

1. Emissions Limits -

Particulate matter emissions are limited to 0.03 pounds per million BTU heat input and 11.5 pounds per hour. Demonstration of compliance with the limits is performed via stack testing. Stack testing was last performed in August 2012 and indicated that the PM emissions from Boiler #1 were 0.002 pounds per million BTU heat input and 0.6 pounds per hour. Boiler #2 emissions were 0.003 pounds per million BTU heat input and 1.1 pounds per hour.

Visible emissions from the boiler are limited to 10% opacity based upon a six minute average. Records

reviewed at the time of the inspection indicated six minute average visible emissions from Boiler #1 and Boiler #2 were less than 2% as recorded by the CEMS.

Sulfur dioxide (SO_2) emissions from each boiler are limited to 0.5 pounds per million BTU heat input (based upon a 30-day average) and 0.7 pounds per million BTU heat input (based upon a 24 hour daily average). Total SO_2 emissions from both boilers combined are 6.45 tons per day and 1681.9 tons per year (based upon a 12 month rolling time period). Furthermore, SO_2 emissions must be 10% of the potential SO_2 emission rate, based upon a 30 day rolling average. In other words, the facility must reduce the SO_2 emissions from each boiler by at least 90%. The facility implements a continuous emission monitoring system (CEMS) to demonstrate compliance with the numerous emission limits. At the time of the inspection, the facility was determined to be in compliance with the SO_2 emission limits based upon an observation of the data acquisition system (DAS) records. Records indicated the SO_2 reduction was in excess of 90% (emissions less than 10% of the potential emission rate).

Nitrogen oxides (NO_x) emissions from each boiler is limited to 0.60 pounds per million BTU heat input, based upon a 30 day rolling average. NO_x emissions are also limited to 2,018 tons per 12 month rolling time period from both boilers combined. Similar to SO_2, the NO_x emissions are monitored and recorded via a CEMS to demonstrate compliance with the emission limits. Records reviewed at the time of the inspection indicated NO_x emissions from the Boilers were in the 0.4 pounds per million BTU range.

Carbon monoxide (CO) emissions from each boiler is limited to 0.3 pounds per million BTU heat input, based upon a 24 hour rolling average and 115.2 pounds per hour based upon a 24 hour rolling average. Total CO emissions from the boilers is limited to 1,009.2 tons per 12 month rolling time period. As with SO_2 and NO_x, CO emissions are also monitored and recorded by the CEMS. Records of CO emissions from Boiler#1 reviewed during the inspection were around 0.078 pounds per million BTU and 32.7 pounds per hour.

Total non-methane hydrocarbon emissions from each boiler is limited to 4.6 pounds per hour. The method used to determine compliance with the limit is stack testing. Stack testing was last performed in August 2012 and indicated that TNMHC emissions are 0.48 pounds per hour from Boiler #1 and 0.32 pounds per hour from Boiler #2.

2. Material Limits -
The maximum sulfur content of the coal is 3% based upon a heating value of 12,200 BTU per pound of coal. Not Reviewed.

The charge rate of wood to the boilers cannot exceed 820,000 pounds (410 tons) per day. Records reviewed (attached) indicate that the material limit has not been exceeded. The highest daily average value for September was 94.43 tons.

The tire derived fuel (TDF) feed rate is limited to 2 tons per hour, based upon a daily average per boiler. Records reviewed indicate the highest average TDF feed rate to Boiler #1 was 1.875 tons per hour and 1.8 tons per hour to Boiler #2.

Construction and demolition material (C/D material) is limited to 200,000 pounds per day and 18,282 tons per 12 month rolling time period per boiler. The facility has not burned C/D material since initial testing and records show that no material has been burned.

Petroleum coke is limited to 130,800 pounds (65.4 tons) per day per boiler. Records show the total amount of petroleum coke burned each day (66 tons) in both boilers combined.

3. Process/Operational Restrictions - The facility is not allowed to operate the boilers unless an MMP is implemented and maintained. An amended MMP was previously submitted to and approved by AQD staff.

The facility is also not allowed to operate the boilers unless the baghouses and scrubbers are installed

and operating properly. Based on the low opacity readings, it can be assumed that the baghouses are operating properly. Based on the SO2 reduction efficiency of greater than 90% It appears that the scrubbers are operating properly.

COMS and CEMS are required to be operated and data recorded during all periods of operation. This is addressed in the quarterly excess emission reports which have been reviewed as received.

4. Design/Operational Parameters - There are design/Operational requirements for the COMS and CEMS. These requirements are addressed in the excess emission reports and during stack testing and RATA's.

5. Testing/Sampling - Stack testing is required for particulate matter and non-methane hydrocarbon emission rates. The testing was performed in August 2012 and demonstrated compliance with the emission limits.

6. Monitoring and Recordkeeping - Visible emissions, SO_2, NO_x, and CO are all continuously monitored and recorded using a COM and CEMS as required by the ROP. The monitors operate at all times with the exception of monitor downtime which is reported quarterly.

The COMS are used as a Compliance Assurance Monitoring (CAM) indicator for proper functioning of the baghouses. CAM reports have been submitted and reviewed.

The boilers are equipped with exhaust gas flow rate monitors and records are maintained in the daily summaries provided by the DAS.

7. Reporting - All reporting required by the ROP was previously submitted and reviewed by AQD staff.

8. Stack/Vent Restrictions - The height and diameter of the stacks appeared to be in compliance with the requirements contained in the ROP.

9. Other Requirements - Comply with CAM and CAIR, future applicable requirements for 40 CFR Part 63, Subpart UUUUU - Coal and Oil Fired Steam Generating Units (April 16, 2016). CAM and CAIR compliance verified through reporting.

E. FGFUELSTORAGE - This flexible group contains all fuel storage and handling equipment.

1. Emission Limits - Visible emissions from the petroleum coke storage pile is limited to 5% opacity. AQD staff observed no visible emissions during the inspection. Facility personnel perform non-certified visible emissions from the storage pile and handling equipment at least once per day and make note in a logbook of the observations and any corrective actions taken. If there are any visible emissions observed from the petroleum coke storage pile, the front end loader operator triggers the sprinkler system remotely. Additional sprinklers have been added to the system to provide complete coverage of the storage area.

2. Testing/Sampling - As mentioned previously, non-certified visible emissions observations from the petroleum coke storage pile and the wood handling baghouse are performed at least once per day. The observations are noted in a logbook in the control room as well as any corrective actions, if performed. The C/D material storage is included in the VE requirement but there is currently not any C/D material on site.

3. Reporting - The only reporting requirements are the ROP deviation, semi-annual and annual reports. All reports required to be submitted were previously reviewed and documented.

4. Other Requirements - TES must comply with the C/D waste wood monitoring plan. The plan has been submitted and approved but, as indicated previously, C/D material is not currently being used or in storage.

Compliance with 40 CFR, Part 60 Subpart Y for Coal Preparation and Processing Plants is also required. Applicability and compliance with this NSPS was not reviewed at this time.

CONCLUSION - As a result of this FCE it appears the source is in compliance with ROP No. MI-ROP-N1685-20015 at this time.

NAME _____ DATE 9-22-15 SUPERVISOR _____