

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

N497523797

FACILITY: Michigan Power Limited Partnership		SRN / ID: N4975
LOCATION: 5795 W. Sixth St., LUDINGTON		DISTRICT: Cadillac
CITY: LUDINGTON		COUNTY: MASON
CONTACT: Ken Tomaski , Plant Manager		ACTIVITY DATE: 12/04/2013
STAFF: Kurt Childs	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: 2013 FCE.		
RESOLVED COMPLAINTS:		

FCE Site Inspection and Records Review

I conducted a full compliance evaluation (FCE) of this facility to determine compliance with ROP MI-ROP-N4975-2008, the Air Pollution Control Rules, and applicable Federal requirements. Reporting requirement compliance was reviewed and evaluated at the time each report was received throughout the year. The 2012 MAERS report was reviewed on 5/21/2013. The site inspection and records review was conducted on December 4, 2013. I met with Mr. Ken Tomaski, Plant Manager, Mr. Daniel Cox, EH&S Specialist and Ms. Becky Sparks, Instrumentation & Electrical Technician. At the time of the inspection it appeared that the source was in compliance with the applicable requirements and that the necessary records were maintained to demonstrate this.

A more detailed evaluation by emission unit follows:

SOURCE WIDE REQUIREMENTS

Since the issuance of MI-ROP-N4975-2008 there are no longer any source wide requirements for this source.

EUFIREPUMP

The fire pump engine is a Caterpillar 3406 in-line 4-cylinder that is not equipped with a catalytic converter. The engine is subject to 40 CFR Part 63, Subpart ZZZZ. This engine only operates in the case of an emergency or for weekly testing (30 min., Subpart ZZZZ allows 100 hrs per year for non-emergency operation). The engine was not operating at the time of the inspection. The most recent weekly test was on 12-3-13 and the check list is attached. Visible emissions were normal.

I.1 – Visible emission (VE) checks during testing indicate compliance with the 10% opacity limit. VE checks are done twice daily when running and there are 2 MPLP staff certified to read visible emissions or certified readers are subcontracted from other nearby companies.

II.1 – Sulfur and BTU content of the diesel fuel is limited to 0.05% sulfur. The most recent fuel analysis (attached) from 9/19/2013 indicated a sulfur content of 0.006%.

III.1 – At the time of the inspection the fire pump engine was equipped with an hours meter and had operated for a total of 505 hours since it was installed. Usage is well below the permit limit of 500 hours per 12-month rolling time period.

III-2 - Michigan Power Limited Partnership (MPLP) has an approved PM/MAP that covers the entire source. There were no malfunctions of the fire pump during the review period.

VI.1-3 - Records of fuel sulfur content, hours of operation, and VE readings are maintained as required.

VIII.1 - Stack parameters for the fire pump engine have not changed from the previous inspection and appear to be accurate.

EUGENERATOR

The emergency generator engine is a Caterpillar 3516 DITA V-16 cylinder that is not equipped with a catalytic converter. It only operates in the case of an emergency to supply electricity for critical facility functions (lights, computer, phone, etc.) or for weekly testing (30 min.). It was not operating at the time of the inspection. The engine is subject to 40 CFR Part 63, Subpart ZZZZ. The most recent weekly test was on 12-2-13 and the check list is

attached. Visible emissions were normal.

I.1 – Visible emission (VE) checks during testing indicate compliance with the 10% opacity limit and VE checks are done twice daily.

II.1 – Sulfur and BTU content of the diesel fuel is limited to 0.05% sulfur. The most recent fuel analysis results indicated a sulfur content of 0.006%. The same fuel is used for the fire pump engine and the emergency generator engine.

III.1 – At the time of the inspection the engine had operated for a total of 646 hours since it was installed. Usage is well below the permit limit of 500 hours per 12-month rolling time period.

III.2 - Michigan Power Limited Partnership (MPLP) has an approved PM/MAP that covers the entire source. There were no malfunctions of the emergency generator during the review period.

VI.1-3 - Records of fuel sulfur content, hours of operation, and VE readings are maintained as required.

VIII.1 - Stack parameters for the generator engine have not changed from the previous inspection and appear to be accurate.

FGTURBINE/HRSG

I.1-12 and VI. 9-15 – Compliance with the NO_x, CO, VOC, and PM₁₀ emissions from the turbine/HRSG are demonstrated by CEMS and stack testing. Records of this are kept electronically and calculated through the source Data Acquisition System (DAS) (see copy of daily emission reports). Exceedences of the limit, when they occur are reported throughout the year and in quarterly excess emission reporting. (See excess emission reports). No excess emissions were reported during the last year.

I.13 and VI.1 - Opacity from the turbine/HRSG is limited to 10%. Visible emissions are checked twice daily and logged on the "Auxiliary Log Sheet".

II.1 and VI.8 – The sulfur content of the natural gas is not to exceed 2.5 grains sulfur per 100 cubic feet of gas. This is confirmed by testing from the supplier and the facility has a new 5 year contract with the suppliers to deliver gas of this quality.

III.1 - According to MPLP the HRSG cannot and does not operate unless the turbine is operating.

III.2 - The proper operation of the carbon monoxide catalyst system is evaluated during RATA testing. The CO concentrations before and after the catalyst are measured to determine the efficiency of the catalyst. The most recent catalyst efficiency was evaluated during the 11/5/2013 RATA but the results have not been finalized yet.

III.3 and 4 - AQD approved an SSM plan and a revised PM/MAP, received by AQD on 12/30/09. There were no malfunctions of the turbine/HRSG during the review period.

III.5 - Alarms are built into the DAS to ensure that start-up and shut-down do not exceed 5 hours and 1 hour respectively. The hourly operation is recorded in the daily reports.

V.1 - VOC and PM₁₀ emission test were conducted most recently on 10/22-26/2012 with satisfactory results for VOC but PM₁₀ emission rates that exceeded the permit limits. PM₁₀ emissions were retested on 1/16-17/2013 and were determined to be in compliance with the 10.4 lb/hr limit for the combined FGTURBINE/HRSG and the 7 lb/hr limit for EUTURBINE alone. The stack testing company believed the first PM₁₀ test was biased due to build-up of particulate matter in the stack. More details regarding the initial PM₁₀ test and re-test are available in the stack test reports and activity reports.

VI.2 - Records of natural gas to the Turbine/HRSG are being kept by the source on a continuous basis.

VI.17 - CEMS are calibrated and logged daily (see attached daily calibration checks log). CEMS calibration check failures were noted on the day of the inspection as well as the previous day. MPLP is investigating and will provide additional information regarding this potential equipment malfunction.

VIII.1 - There have been no changes to the stack parameters and they appear to be accurate.

NSPS Subpart Da requirements were not included in the ROP, however the record keeping is submitted quarterly with EER. The permittee was in compliance with the NSPS Subpart GG requirements in the ROP. There were no CAM excursions or exceedences during the review period.

FGBOILERS

I.1-5 – Compliance with the NO_x, CO, VOC, and PM₁₀ emissions from the boilers are demonstrated by CEMS and stack testing. Records are kept electronically and calculated through the source Data Acquisition System (DAS) (see copy of daily emission reports). Exceedences of the limit are reported throughout the year as they occur and in quarterly excess emission reporting. (See excess emission reports). No excess emissions were reported during the last year.

I.6 and VI.1 - Opacity from the Boilers is limited to 10%. Visible emissions are checked twice daily and logged on the "Auxiliary Log Sheet"(attached). At the time of the inspection there were no visible emissions from the boiler stacks.

II.1 and VI.2 - The sulfur content of the natural gas is not to exceed 2.5 grains sulfur per 100 cubic feet of gas. This is confirmed by testing from the supplier and the facility has a new 5 year contract with the suppliers to deliver gas of this quality.

III.1 - MPLP has an approved PM/MAP that covers the entire source including the boilers. There were no malfunctions of the boilers during the review period.

V.1 - CO, VOC and PM₁₀ emission test were conducted most recently in October 2012 with satisfactory results.

VI.3 - Records of natural gas to the boilers is being kept by the source on a continuous basis.

VI.4-6 - CEMS are installed operated and tested in accordance with the applicable requirements. This is verified through quarterly audits and annual RATA (see reports received records).

VI.7 - NSPS Subpart Db record keeping is submitted quarterly with EER. No excess emissions were reported during the last year.

VIII.1 – Stack parameters at the facility have not changed from the previous inspection and appear to be accurate.

Site inspection and records review indicate that this facility was in compliance with applicable air pollution requirements at the time of inspection.

NAME



DATE

12-9-13

SUPERVISOR



