

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: On-site Inspection

B728772139

FACILITY: Sturgis Municipal Power Plant		SRN / ID: B7287
LOCATION: 505 West Chicago Rd., STURGIS		DISTRICT: Kalamazoo
CITY: STURGIS		COUNTY: SAINT JOSEPH
CONTACT: Chris McArthur , Electric Superintendent		ACTIVITY DATE: 05/16/2024
STAFF: Jared Edgerton	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced air quality inspection for FCE		
RESOLVED COMPLAINTS:		

On May 16<sup>th</sup>, 2024, Air Quality Division (AQD) staff (Jared Edgerton) arrived at 505 West Chicago Rd, Sturgis Michigan at 11:30 AM to conduct an unannounced air quality inspection of Sturgis Municipal Power Plant. The purpose of this inspection was to determine the facility's compliance with MI-ROP-B7287-2019 and federal air pollution control regulations 40 CFR Part 63 Subpart ZZZZ. There were no noticeable odors or visible emissions upon arrival. Staff met with Mark Happel, plant operator. He was the only contact on site at the facility, and he answered all operation questions.

This facility is operated by 4 employees, on 1 shift, 7AM – 3PM Monday through Friday. The facility is a power generating plant which runs when needed. Mr. Happel told staff that the plant runs more in the summer when the demand for energy is higher.

The facility is a Major source for nitrogen oxides, as well as a minor source for HAPs, sulfur oxides, carbon monoxide, lead, particulate matter, and volatile organic compounds. The following discusses the results of the on-site inspection and review of the records.

**Inspection:**

Staff was led by Mr. Happel to an adjacent room which contained EU-ENG-6. This dual-fuel engine generator fires No. 2 fuel oil and natural gas. The nameplate capacity is 8,295 BHP with a 6,000 KW generator. The engine is cooled by non-contact water. A diesel oxidation catalyst is used to control carbon monoxide under RICE NESHAP (40 CFR, Part 63, Subpart ZZZZ) regulations. The engine is run a minimum once per month for two hours for maintenance purposes, and up to 150 hours per year. During these monthly tests the engine runs on diesel for about 45 minutes. Afterwards the fuel is switched to 95% gas and 5% diesel.

A visible emissions test was conducted the day before the inspection occurred, and Mr. Happel told staff that it appeared the facility was compliant with permitted limits. During the inspection, EU-ENG-6 was not running. The inspection continued outside of the building, where EU-OIL-TANK is located. This tank has the ability to store up to 30,000 gallons of No. 2 fuel oil. The tank is above ground, and had been recently coated with new paint. During the inspection walkthrough the tank appeared to be in be in good condition and properly maintained.

Once back inside the main building, staff was led to FG-COLDCLEANERS. There is one degreaser at the facility, located in the corner of maintenance area. The facility shall not use cleaning solvents containing more than 5% by weight of halogenated compounds. Mr. Happel told staff that only mineral spirits are used in the degreaser. At the time of the inspection, the lid was closed, and a

new rule sticker was provided to replace the worn one on the unit. The degreaser is not heated and was installed in 2003.

Staff ended the inspection by informing Mr. Happel that there would be a records review portion of the inspection. A records request was sent to the facility by email and was received by staff within the time given. A summary of the record review is listed below.

#### **Conclusion of Inspection / Records Request Determination:**

At the time of the inspection, based on what was observed during the walk-through, all equipment used within the facility appear to be maintained properly to comply with permit requirements. There are recordkeeping requirements in ROP No. MI-ROP-B7287-2019 under EU-ENG-6, EU-OIL-TANK, and FG-COLDCLEANERS. Sturgis Municipal Power Plant is required to limit emissions for NO<sub>x</sub> and CO under EU-ENG-6 conditions. There is also a material limit for amount of sulfur that can be present in the No. 2 fuel oil. Summarized below are the results of the records request. Records were received for the last two years.

#### **Records for EU-ENG-6**

1. Submit records for the amount of electricity produced in KW-hr on a monthly and 12 month rolling time period.
  - Appears compliant? – Yes. Records are being kept monthly and 12 month rolling with totals below the 13.1 million KW-hr of electricity per year limit.
2. Submit records for natural gas consumption rate, in cubic feet or million cubic feet, based on a monthly and 12 month rolling time period.
  - Appears compliant? – Yes. Records are being kept monthly and 12 month rolling. Records sufficiently meet the requirements.
3. Submit records for the No.2 fuel oil consumption rate, in gallons, on a monthly, and 12 month rolling time period
  - Appears compliant? – Yes. Records are being kept, and are sufficient to meet the requirements.
4. Submit records of No. 2 fuel oil specification and/ or a fuel oil analysis for the last delivery.
  - Appears compliant? – Yes. Records are being kept. Paragon Laboratories performed the last analysis of the fuel. The most recent samples were taken on January 2, 2024. The results of these samples were received January 26, 2024. The sulfur content of the samples taken was 10.6 ppm (0.00106%).
5. Submit records for the measurement of the pressure drop across the catalyst once per month
  - Appears compliant? – Yes. Records are being kept and are acceptable.
6. Please provide a site-specific monitoring plan as described in the “Design/Equipment Parameters” section 4.2
  - Appears compliant? – Yes. A monitoring plan was submitted and is being kept by the facility. Document was acceptable.

#### **Records for EU-ENG-6 (40 CFR Part 63, Subpart ZZZZ required)**

1. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
  - Appears compliant? – Yes. Facility had no malfunctions to report.
2. Records of performance tests and performance evaluations
  - Appears compliant? – Yes. Facility uses a HapGuard device to monitor performance tests.
3. Records of all required maintenance performed on the air pollution control and monitoring equipment.
  - Appears compliant? – Yes. Facility has had no issues in the last two years.

4. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
  - Appears compliant? – Yes. Facility had no malfunctions in the last two years or corrective actions.

**Records for EU-OIL-Tank**

1. Please submit records showing the dimensions and capacity of EU-OIL-TANK.
  - a. Appears compliant? – Yes. Records are being kept and were acceptable.  
Dimensions from name plate:  
Nominal diameter: 12'  
Nominal capacity: 30,000 gallons  
Nominal height: 36'

**A picture of the name plate with data included is attached.**

**Records for FG-COLDCLEANERS**

1. Please submit a safety data sheet for the mineral solvent used in the parts washer.
  - Appears compliant? – Yes. A Safety Data Sheet is being kept by the facility. Americhem provided mineral spirits for the cleaner, and the Safety Data Sheet is acceptable.

**After reviewing what was observed during the on-site inspection and determining that the records were satisfactory to the permit requirements, it appears that the facility is currently in compliance with ROP No. MI-ROP-B7287-2019. Staff concluded the inspection at 11:45 AM. -JLE**

NAME



DATE

6/6/24

SUPERVISOR

