

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

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| FACILITY: HILLSDALE CITY OF PUBLIC UTILITIES | | SRN / ID: B7536 |
| LOCATION: 201 WATERWORKS AVE, HILLSDALE | | DISTRICT: Jackson |
| CITY: HILLSDALE | | COUNTY: HILLSDALE |
| CONTACT: Jake Hammel , Electric Superintendent | | ACTIVITY DATE: 08/17/2023 |
| STAFF: Brian Merle | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MAJOR |
| SUBJECT: Scheduled, on-site inspection | | |
| RESOLVED COMPLAINTS: | | |

Contact: Jake Hammel, Electric Superintendent, Hillsdale Board of Public Utilities
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Contact: Dylan Shays, Director of Environmental and Hydropower Compliance, American Municipal Power
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PURPOSE

I arrived at the facility with Brian Carley for a scheduled inspection and met with Jake Hammel from the Hillsdale Board of Public Utilities, Dylan Shays from AMP, and Doug Bildner, the plant operator. The purpose of this inspection was to determine compliance with ROP Number MI-ROP-B7536-2019. This facility is also an area source for the Reciprocating Internal Combustion Engine (RICE) MACT Standard (40 CFR Part 63, Subpart ZZZZ).

BACKGROUND

The City of Hillsdale Board of Public Utilities has an electrical peaking unit with two diesel engines located at 201 Waterworks Avenue. The plant is used during peak energy use to supply energy for the power grid and has been in operation since 1948. The electrical power is generated from two dual-fired engines that have an output of 5,613 KW (EU-ENG-5) and 6,000 KW (EU-ENG-6). They use No. 2 fuel oil and natural gas to run these engines. They are located near the northeast end of Baw Beese Lake and they use a cooling tower to cool the engines. They also have an exempt natural gas-fired 2.049 MMBtu boiler that they use to heat the facility during the winter and is not subject to 40 CFR Part 63 Subpart JJJJJJ (Boiler MACT for area sources) because it only fires natural gas. Units 2 and 4 have been disconnected and probably will never run again due to the engines being so old and spare parts are hard to come by. In fact, they are currently being parted out and sold to other facilities for spare parts. Unit 3 has been dismantled and removed from the site. They also have a natural gas boiler on site for heat that is exempt under

COMPLIANCE INSPECTION

We arrived at the facility at approximately 8:55 AM. We met with Jake, Dylan, and Doug, and began the inspection with a short meeting outlining what we wanted to see. We were then taken on a tour of the facility, where we were shown the decommissioned engines as well as the two still in operation under their ROP. They were not running at the time of our inspection. We then proceeded outside to look at the No. 2 fuel oil storage tank, as well as confirming the stack height at approximately 46 feet, above the minimum height of 45.5 feet as outlined in SC VIII.1. We then went back into the facility and were given the requested documents of the supplier's fuel oil analysis, the fuel oil and natural gas usage from May 2022 to June 2023, and the catalyst temperatures and pressure drop from the same time frame.

Post inspection, I reviewed their MAERS submittal of their 2022 emissions and determined that they were complying with their Section I emission limits in FG-ENG-56. For SO₂, based on the calculated emissions and the amount of diesel fuel used, I determined that the SO₂ emission rate was 0.29 lbs/MMBtu for both Engine 5 and for Engine 6, well below their emission limit of 1.67 lbs/MMBtu (SC I.1) (attachment 1). They also reported an 86.3% reduction efficiency for CO emissions on Engine 5, and 82.7% on Engine 6, which is greater than the 70% reduction efficiency as required in their ROP (SC I.2). The fuel specifications for their latest fuel shipment (SC VI.2) stated that the sulfur content of the fuel was 15 ppm (0.0015%), which is well below their limit of 1.0% sulfur content per SC II.1 (attachment 2). The monthly fuel usage rates for each engine during the period of May 2022 through June 2023 were provided (see attachment 3/4) as required by SC VI.1. I did have to clarify with Jake about their fuel usage rates, the end of year total provided differed from their MAERS reported total, but this was quickly rectified. Engine 5 was ran 6 times between 6/16/22 and

7/27/23 for between 5 and 7 hours, and Engine 6 was ran 7 times between 6/16/22 and 7/27/23 for between 2 and 8 hours (see attachment 5/6).

The most recent test occurred on September 7, 2022 for Unit 5 and September 8, 2022 for Unit 6, which both units passed (see file for stack test report). I could not find this stack test within the Jackson District files, so I had to reach out to Jake for a copy. TPU received the report on November 15th, 2022.

They used their semi-annual ROP compliance report to also report the required RICE MACT report (SC VII.5). They reported in their last semi-annual report (see file) that they did not have any malfunctions or periods where the CMS was out of control during the reporting period.

COMPLIANCE DETERMINATION

Based on the information provided during the inspection and the required reports that have been submitted, I have determined that they in compliance with all requirements in their ROP. I thanked them for time and left.

NAME



DATE

8/17/2023

SUPERVISOR

