

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

B280756589

FACILITY: DTE Electric Company - Putnam Peaking Facility		SRN / ID: B2807
LOCATION: 5660 MERTZ RD, MAYVILLE		DISTRICT: Bay City
CITY: MAYVILLE		COUNTY: TUSCOLA
CONTACT: Stefanie Ledesma , Associate Environmental Engineer		ACTIVITY DATE: 12/29/2020
STAFF: Nathanael Gentle	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection of MI-ROP-B2807-2018		
RESOLVED COMPLAINTS:		

On December 29, 2020 AQD staff conducted an onsite inspection at the DTE Electric Company – Putnam Peaking Facility. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) Administrative Rules; Renewable Operating Permit (ROP) No. MI-ROP-B2807-2018. Requested records were provided by Stefanie Ledesma (formerly Zanke), Staff Environmental Engineer.

Facility Description:

The Putnam Peaking Facility is located at 5660 Mertz Road, Mayville, Michigan 48744. The facility is used for energy production during periods of elevated demand in the local grid. The site consists of five diesel/ No.2 fuel oil generators and their associated fuel tanks. Each diesel-fired compression ignition reciprocating internal combustion engine (CI RICE) is a MP45 20 cylinder, rated at 3,600 horsepower. A 2.75 megawatt electrical generator is connected to each. All five engines were installed in June 1971. Emission reduction is achieved using oxidation catalysts, installed on all five engines in 2012. Operation of the facility is conducted remotely from the DTE Electric Company offices in Southeast Michigan. The source is a minor source for Hazardous Air Pollutants (HAPs) and a major source for greenhouse gases and NOx, the potential to emit of nitrogen oxides exceeds 100 tons per year. In addition, the facility is subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) promulgated in 40 CFR Part 63, Subparts A and ZZZZ. All five emission units were exempt from New Source Review (NSR) permitting requirements at the time of their installation. Future modifications to the equipment may be subject to NSR. No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of The Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality or 40 CFR 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations.

FG-PEAKERS: Compliant

Site Inspection

AQD staff arrived onsite at approximately 9:35 AM. The site was secured by a chain link fence with barbed wire. No DTE personnel were onsite. Five engines stacks were visible from the fence line, each visually verified to be equipped with an oxidation catalyst. No engines were operating at the time of inspection. One clear plastic tank was located between engines. The site had one large diesel storage tank and an associated fueling station. Signage at the fueling station said to call the Systems Operations Supervisor in the case of an emergency and

provided the following phone number, 1-313-235-9444. A single exterior building was located within the fenced in area.

Records Review

A records request was submitted prior to conducting an onsite inspection. The following records were received between December 14-16, 2020:

- Fuel Oil Supply Agreement dated December 9, 2016
- First Amendment to the Fuel Oil Supply Agreement dated November 29, 2018
- Oliver Catalyst Compliance Data for the last 24 months
- Maintenance Records for the last 24 months from DTE's Maximo Work Order System
- MACT ZZZZ Notification of Compliance Status dated September 21, 2018
- Test Plan Approval Letter for 40 CFR, Part 63, NESHAP Subpart ZZZZ RICE MACT compliance emissions testing dated November 17, 2020

Records for fuel oil supply illustrate that No. 2 diesel is used at the facility. Specifications provided show a sulfur content of 15 wt. ppm, meeting ROP requirements. Catalyst compliance data for the last 24 months provided show a CPMS is installed on equipment measuring pressure drop across the catalyst and catalyst inlet temperature. Records for catalyst inlet temperature are reduced to four-hour rolling averages. Values recorded for pressure drops across all five catalyst are within 2 inches H₂O of initial performance test values. Additionally, values for four-hour rolling averages of catalyst inlet temperature for all five emission units range from 523.0611063°F to 798.6070375°F, meeting the requirement that oxidation catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F during operation of FG-PEAKERS. Maintenance records are maintained. Records for the last 24 months were provided showing regular maintenance is performed, including annual inspections. The most recent annual inspection was completed on September 8, 2020. Facility personnel reported that as of December 16, 2020, no malfunctions had occurred over the last 24 months. Testing of catalyst system efficiency for each engine is required every 8,760 hours or 3 years, whichever comes first. MACT ZZZZ Notification of Compliance Status was provided for the most recent testing completed August 13-16, 2018. Results showed a CO reduction of 70% or more for all five catalysts, compliant with ROP requirements. Upcoming testing is scheduled for August 9-13, 2021.

Summary

At the time of inspection and records review, DTE Electric Company – Putnam Peaking Facility appears to be in compliance with permit number MI-ROP-B2807-2018.

NAME *Nathanael Dentel* DATE 1/6/21 SUPERVISOR *Chris Hare*