

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

B280774819

<b>FACILITY:</b> DTE Electric Company - Putnam Peaking Facility		<b>SRN / ID:</b> B2807
<b>LOCATION:</b> 5660 MERTZ RD, MAYVILLE		<b>DISTRICT:</b> Bay City
<b>CITY:</b> MAYVILLE		<b>COUNTY:</b> TUSCOLA
<b>CONTACT:</b> Zack Josefiak , Environmental Engineer		<b>ACTIVITY DATE:</b> 11/21/2024
<b>STAFF:</b> Emily Crimmins	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MAJOR
<b>SUBJECT:</b> On-site inspection of MI-ROP-B2807-2023		
<b>RESOLVED COMPLAINTS:</b>		

### **Putnam Peaking Facility Inspection**

On November 21, 2024, Michigan's Department of Environment, Great Lakes and Energy Air Quality Division (EGLE-AQD) Staff Emily Crimmins (EC), assisted by Haley Willman (HW) conducted a scheduled on-site 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-B2807-2023. Requested records were provided by Zack Josefiak, Environmental Engineer of DTE Peaker Division. At the time of inspection and records review, DTE Electric Company- Putnam Peaking Facility appears to be in compliance with Permit No. MI-ROP-B2807-2023.

### **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 on the local grid. The site consists of five diesel/ No.2 fuel oil generators and their associated fuel tanks. On-site was also one 30,000gal diesel fuel storage tank contained in an aboveground spill containment with liner, and an outbuilding. Each diesel fired compression ignition reciprocating internal combustion engine (CI RICE) is a MP45 20 cylinder, rated at 3,600 horsepower. A 2.75megawatt 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.

### **Site Inspection**

AQD staff arrived on-site at approximately 10:55am. Weather conditions were cloudy, slightly breezy with temperature of 36 degrees Fahrenheit. We entered the site with DTE Staff Doug Hanks (Peaker Site Operator) and Zack Josefiak (Environmental Engineer, Peaker Division). EC and HW wore required safety gear (FR suit, steel toe boot, hard hat, protective eyewear) and completed the required safety procedure with DTE. We stepped outside and DTE staff escorted us to each engine. Five engines with oxidation catalyst and stacks were present. None of the engines were running at the time of inspection. One No.2 fuel oil/diesel storage tank was present. DTE staff escorted us to each engine to collect current engine hours from each unit (see table below).

ROP identifier	Unit name	Engine run hours	Run hours since last inspection
EU00001	DG 11-1	17,219	36
EU00002	DG 11-2	16,826	48
EU00003	DG 11-3	16,596	48
EU00004	DG 11-4	16,912	46
EU00005	DG 11-5	16,004	41

A visual inspection of the remainder of the site was completed. We exited the site at 11:10am.

#### Records Review

A records request was submitted prior to conducting an on-site inspection. The following records were received on November 20, 2024:

- Fuel Oil Supply Agreement dated for January 1, 2024 to December 31, 2026
- Putnam Catalyst Compliance Data for January 2024 to July 2024
- Maintenance Records for the last 24 months from DTE's Maximo Work Order System
- 40 CFR, Part 63, NESHAP Subpart ZZZZ RICE MACT Emissions Compliance Testing Report for 5 Peaking Units- DTE Energy Putnam Peaking Station dated July 15, 2024
- Total number of hours operated between October 2022 and October 2024 (listed in table above)

Records for fuel oil supply illustrate that No. 2 fuel oil/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. Values recorded for pressure drops across all five catalysts are within 2 inches H<sub>2</sub>O of initial performance test values. Records for catalyst inlet temperature are reduced to four-hour rolling averages. Additionally, values for four-hour rolling averages of catalyst inlet temperature for all five emission units range from 588.3605°F to 813.9304°F, except for one deviation, 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. Facility personnel reported that as of September 2024, one deviation of Special Condition VI.4.c. occurred over the last 24 months and has been reported to EGLE Bay City District Office for Semi-Annual ROP Compliance reporting. A Violation Notice was not issued for this deviation due to the corrective action taken by the facility to avoid future deviations. 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 October 9, 2024. 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 June 17-20, 2024. Results showed a CO reduction of 70% or more for all five catalysts, compliant with ROP requirements.

NAME Emily Steimmins DATE 12/04/2024 SUPERVISOR Mike J. [Signature]