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

B301273138

FACILITY: DETROIT THERMAL BLVD HEATING PLANT		SRN / ID: B3012
LOCATION: 475 BALTIMORE St, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Christopher (Chris) Clark, Compliance Coordinator		ACTIVITY DATE: 08/16/2024
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-site inspection.		
RESOLVED COMPLAINTS:		

### Introduction

On Friday August 16, 2024, I (AQD staff Sam Liveson) conducted an announced, scheduled inspection of Detroit Thermal Boulevard Heating Plant (DT Boulevard), located at 475 Baltimore Street in Detroit, Michigan. The purpose of this inspection was to determine the facility's compliance with the federal Clean Air Act; Part 55, Air Pollution Control, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; the Michigan Air Pollution Control Rules (Rules); and PTI No. 361-97.

The inspection was announced to ensure a staff person was at the facility. I arrived at the facility at about 11:00 AM. Weather was rainy. At the facility, I met with Christopher Clark, Compliance Coordinator; and Adam Collette, Superintendent. I provided my state-issued identification and stated the purpose of my visit.

### Facility Description

DT Boulevard is owned by the same company as Detroit Thermal Beacon Heating Plant (DT Beacon) (SRN B2814). DT Boulevard provides steam to customers located at the north end of the system. During construction of the I-94 bridge, the Cass steam line was removed, so that DT Beacon and DT Boulevard are now two separate hubs.

There are seven boilers at DT Boulevard. From my walkthrough and talking with staff, these boilers all appear to be the same model, and appeared to be numbered #1 through #7. Adam explained five of the seven are currently available to operate. #1 and #3 are not currently operable due to work on the boilers. Boilers #2, #4, and #6 exhaust to the west stack. Boilers #5 and #7 exhaust to the east stack. I observed boiler ductwork. During the inspection, boiler #2 was operating. The other boilers were not operating. I observed that load on Boiler #2 was 57% at 11:42 AM.

Boilers are natural gas fired. Staff explained there is no secondary fuel. There is no diesel tank on site. Staff explained boilers are not low-NOx boilers; there is no flue gas recirculation. Talking with Adam, it may be more appropriate to refer to these units as steam generating units rather than boilers, because boilers generally have tanks. Instead of having tanks, these units heat water directly to steam via coils and pressure. I'll refer to these units as boilers to be consistent with PTI 361-97.

There are no cold cleaners or emergency engines on site. Water softening occurs on site to remove calcium and magnesium via brine.

### Compliance Evaluation

The facility has PTI No. 361-97 for the steam generating units on site. Wayne County Installation Permit (WCIP) C-11770 was voided on October 22, 2024, per the facility request to void it received on August 27, 2024.

### PTI 361-97 Special Conditions and Compliance Status

Below is a summary of each special condition from PTI 361-97, and an explanation of the facility's compliance status.

SC 13: NOx emission rate from the seven boilers shall not exceed 97.8 tons per year on a 12-month rolling time period.

COMPLIANCE. Chris provided 12-month rolling NOx emissions calculations for June 2023 through July 2024. The maximum 12-month rolling NOx emissions were 16.40 tons NOx in June 2024.

SC 14, 15, and 22: The NOx emission rate from the 4 boilers associated with the west stack shall not exceed 0.13 lb/MM Btu, nor 12.76 lb/hour. The NOx emission rate from the 3 boilers associated with the east stack shall not exceed 0.13 lb/MM Btu, nor 9.57 lb/hour. Testing to be completed within 180 days after commencement of trial operation.

COMPLIANCE. Testing was completed on April 30, 1998. NOx emissions were as follows: West Stack: 0.11 lb/MM Btu and 10.60 lb/hour; East Stack: 0.11 lb/MM Btu and 7.97 lb/hour.

SC 16, 17, and 23: Particulate emissions from the 4 boilers associated with the west stack shall not exceed 0.02 pounds per 1,000 lb of exhaust gas, calculated on a dry basis, nor 1.36 lb/hour. Particulate emissions from the 3 boilers associated with the east stack shall not exceed 0.02 pounds per 1,000 lb of exhaust gas, calculated on a dry basis, nor 1.02 lb/hour. Testing if requested.

NOT EVALUATED. At this time, the AQD has not requested particulate emissions testing.

SC 18: Visible emissions shall not exceed 10% opacity based on a 6 minute average.

COMPLIANCE. Observing the two stacks during the inspection, I did not observe any opacity. Chris and Adam explained they have never noticed any opacity while these boilers are operating.

SC 19: Shall only the boilers with natural gas.

COMPLIANCE. Boilers are natural gas fired. Staff explained there is no secondary fuel. There is no diesel tank on site.

SC 20 and 21: Natural gas usage not to exceed 126.7 million cubic feet per month. Monthly records to be maintained.

COMPLIANCE. Chris provided monthly records of natural gas usage for July 2022 through July 2024. Records indicate the maximum monthly natural gas combustion for all boilers was 43.759 million cubic feet.

To track natural gas usage, staff explained there are two DTE meters on site. The staff gets monthly usage from DTE. Additionally, operations staff take a reading of the gas meters once per shift. We visited the two meters with totalizers. DTE meter #1 indicated 3008107 CCF at 11:40 AM. DTE meter #2 indicated 02506207 CCF at 11:46 AM.

SC 24: Exhaust gases from the seven boilers shall be discharged unobstructed vertically upwards to the ambient air from 2 individual stacks with a maximum diameter of 48 inches at an exit point not less than 120 feet above ground level.

COMPLIANCE. I observed the two stacks during the inspection. Stacks were unobstructed and exhausted vertically to ambient air. Based on my visual observation, stack dimensions appeared similar to those in the permit.

SC 25: Initial notification for 40 CFR Part 60, Subparts A and Dc to be submitted within 15 days after startup to the Air Quality Division.

COMPLIANCE. The permit file for PTI 361-97 includes the notification, received by AQD on March 13, 1998, of completion of Boulevard Heating Plant in Detroit on March 5, 1998.

#### **40 CFR Part 60 Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

The steam generating units at the facility are subject to Subpart De per §60.40c. Their individual heat input capacity is 24.7 MMBtu/hr. Per 40 CFR 60.48c(g)(2), the facility shall maintain monthly records of the amount of fuel combusted each month. The facility maintains records of natural gas combustion.

#### **40 CFR Part 63, Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boiler Area Sources**

Boilers do not appear to be subject to 40 CFR Part 63, Subpart JJJJJJ because the boilers are gas-fired boilers per 40 CFR 63.11195(e).

**Conclusion**

Based on the AQD inspection and records review, DT Boulevard appears to be in compliance with the federal Clean Air Act, Michigan NREPA, the Michigan Air Pollution Control Rules, and facility PTI No. 361-97.

NAME DATE 10/22/24SUPERVISOR JK