

B3012

MAVILY

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 AIR QUALITY DIVISION  
 ACTIVITY REPORT: Scheduled Inspection

B301247240

FACILITY: DETROIT THERMAL BLVD HEATING PLANT		SRN / ID: B3012
LOCATION: 475 BALTIMORE St, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Mark Fletcher , Director, EHS		ACTIVITY DATE: 12/11/2018
STAFF: Todd Zynda	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: December 11, 2018 Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Targeted Inspection

INSPECTED BY: Todd Zynda, AQD

PERSONNEL PRESENT: Brandon Chase, Environmental Specialist; Floyd Moon, Operator; Mark Fletcher, Director, Environmental, Health & Safety; Scott Venman, Barr Engineering

FACILITY WEBSITE: www.detroitthermal.com

**FACILITY BACKGROUND**

Detroit Thermal Boulevard Heating Plant (DTBHP), a subsidiary of Detroit Renewable Energy, is located in New Center Detroit, at 555 W. Baltimore Avenue. The facility is not regularly staffed, but is visited periodically by Detroit Thermal staff from other Detroit Thermal locations. The facility is capable of operating 24 hours a day, 7 days a week. The facility is used as a substation for the steam distribution network. In severe weather, the boilers are fired to make up for the falling steam temperatures. Boosting of steam temperature does not happen often. The facility is equipped with seven forced draft, natural gas fired, 600 boiler horsepower Clayton Model No. E-604 steam generators (boilers). The plant is capable of generating 145,000 pounds of steam per hour and distributing a load of 129,000 pounds steam per hour. No condensate is returned to the plant after it is sent to customer systems. The facility boilers are permitted by Permit to Install (PTI) 361-97 and Wayne County Installation Permit (WCIP) C-11700. Both permits limit NOx emissions to less than 100 tons, opting out of the Title V program.

The facility also operates four natural gas fired roof top heaters rated at 2250 British thermal unit (BTU) per hour.

**COMPLAINT/COMPLIANCE HISTORY**

The facility was recently inspected on March 26, 2015. The facility was found to be in compliance at that time.

There have been no complaints about this facility since the last inspection.

**OUTSTANDING CONSENT ORDERS**

None

**OUTSTANDING VIOLATION NOTICES**

None

**INSPECTION NARRATIVE**

On December 11, 2018 the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) inspector, Mr. Todd Zynda conducted an inspection of DTBHP at 555 W. Baltimore Avenue, Detroit, Michigan. During the inspection, Mr. Brandon Chase, Environmental Specialist, Mr. Floyd Moon, Operator, Mr. Mark Fletcher, Director, Environmental, Health & Safety, and Mr. Scott Venman, Barr Engineering, provided information and a tour of facility operations relating to air quality permits. The inspection was conducted to determine the facility's compliance with the Natural Resources and Environmental Protection Act (NREPA), Act 451, Part 55, and PTI 361-97 and WCIP C-11700.

At 10:55 AM, Mr. Zynda arrived onsite and performed outside observations. No visible emissions were observed at the facility. No odors were detected during the site inspection. At 11:00 AM Mr. Zynda entered the facility,

stated the purpose for the inspection, and was greeted by Mr. Chase, Mr. Moon, Mr. Fletcher, and Mr. Venman.

The inspection was conducted in conjunction with the inspection of the Detroit Thermal Beacon Heating Plant. Mr. Zynda provided an inspection checklist for items contained within PTI 367-97 and WCIP C-11770. The records required to demonstrate compliance with permit conditions were discussed. According to the facility, the boilers have not operated in over two years. Records provided indicate that some natural gas is utilized during the winter months. The company states that the natural gas usage has only been for the 4 roof top heaters.

Following the opening meeting, a tour of the facility was provided. At this time the boilers were observed. The boilers were not in operation. The building was heated as a result of the roof top heaters. According to Mr. Moon, only 2 of the 7 boilers are potentially operational. The remaining 5 boilers would need repair prior to operation. The roof top heaters were not observed during the inspection.

## **APPLICABLE RULES/PERMIT CONDITIONS**

### PTI 361-97 and WCIP C-11700

The special conditions of PTI 361-97 (issued September 23, 1997) and WCIP C-11700 (issued November 11, 1998) are essentially the same. For ease of review, the Special Conditions (SC) of PTI 361-97 are listed below as appropriate. For brevity, permit conditions and the language of federal and state rules have been paraphrased.

SC 13. **COMPLIANCE.** NO<sub>x</sub> emission rate from the seven boilers shall not exceed 97.8 tons per year on a 12-month rolling time period. The facility provided records from November 2016 through November 2018. During the 2 year period the boilers did not operate.

SC 14, 15 and 22. **COMPLIANCE.** The NO<sub>x</sub> emission rate from the 4 boilers associated with the west stack shall not exceed 0.13 lb/MMBtu, nor 12.76 lb/hour. The NO<sub>x</sub> emission rate from the 3 boilers associated with the east stack shall not exceed 0.13 lb/MMBtu, nor 9.57 lb/hour. Testing to be completed within 180 days after commencement of trial operation. Testing was completed on April 30, 1998. NO<sub>x</sub> emissions were as follows: West Stack – 0.11 lb/MMBtu and 10.60 lb/hour, East Stack – 0.11 lb/MMBtu and 7.97 lb/hour.

SC 16, 17, and 23. **NOT EVALUATED.** 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. At this time, the AQD has not requested particulate emissions testing.

SC 18. **COMPLIANCE.** Visible emissions shall not exceed 10% opacity based on 6 minute average. During the inspection opacity was not observed. The boilers have not operated for over two years.

SC 19, 20, and 21. **COMPLIANCE.** Shall only the boilers with natural gas. Natural gas usage not to exceed 126.7 million cubic feet per month. Monthly records to be maintained. The boilers only fire natural gas when operating. The boilers have not operated for more than two years.

SC 24. **COMPLIANCE.** 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. During the inspection the stacks appeared to meet the specifications. Measurements were not collected.

SC 25. **COMPLIANCE.** Initial notification for 40 CFR Part 60, Subparts A and Dc to be submitted within 15 days after startup. The initial notification could not be located in facility files. However, past inspection reports indicate that this requirement has been met.

### **40 CFR Part 60, Subpart Dc**

The boilers at the facility are subject to Subpart Dc per §60.40c.

40 CFR 60.48c(g)(2) – **COMPLIANCE** – Shall maintain monthly records of the amount of fuel combusted each month. The facility maintains records of natural gas combustion. The boilers have not fired natural gas for over two years.

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

Subpart JJJJJJ applies to boilers not classified as “gas-fired boilers” at area sources. The boilers at the facility are permitted as natural gas boilers. The AQD is not the delegated authority for Subpart JJJJJJ.

**PERMIT TO INSTALL EXEMPT EQUIPMENT**

Roof Heaters

The four roof heaters are exempt from PTI requirements under the following rule.

R336.1282(2)(b)(i): “Fuel burning equipment which is used for space heating...which burns only the following fuels... sweet natural gas...and the equipment has a rated heat input capacity of not more than 50,000,000 Btu per hour”

According to correspondence from the facility (attached) each heater has a rated heat input capacity of 2250 Btu per hour.

**NOx POTENTIAL TO EMIT**

Since PTI 361-97 and WCIP C-11700 are not true Title V opt-out permits with FGFACILITY, but rather a Title V opt-out by summation the below PTE was calculated demonstrating NOx emissions are less than Title V thresholds (NOx – 100 tpy).

NOx PTE of 4 heaters = 2250 Btu/hr x scf/1050 Btu x 94 lb/10<sup>6</sup> scf (AP-42 Table 1.4-1) x 8760 hr x 4 units = 7.05 lb per year = 0.004 tpy

Facility PTE = 97.8 tpy (boilers as permitted) + 0.004 tpy (heaters) = 97.804 tpy

**APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS:**

Not applicable. All lots are paved.

**MAERS REPORT REVIEW:**

The 2017 Michigan Air Emission Reporting System (MAERS) report was submitted on time. At the time of MAERS review, the AQD noted that overall emissions decreased from 2016. It is believed that the facility reports natural gas usage for the roof top heaters, as records indicate that the boilers have not operated in over two years.

**FINAL COMPLIANCE DETERMINATION:**

At this time, DTBHP appears to be in compliance with PTI 361-97 and WCIP C-11700.

NAME  DATE 1/4/19 SUPERVISOR JR