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

K128342489

FACILITY: Beaumont Trenton MEDICAL CENTER		**SRN / ID:** K1283
LOCATION: 5450 FORT STREET, TRENTON		**DISTRICT:** Detroit
CITY: TRENTON		**COUNTY:** WAYNE
CONTACT: Robert Guay , Facilities Manager		**ACTIVITY DATE:** 11/28/2017
STAFF: Todd Zynda	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

PURPOSE OF INSPECTION: Scheduled
INSPECTED BY: Todd Zynda (AQD)
PERSONNEL PRESENT: Robert Guay, Facilities Manager
FACILITY PHONE NUMBER: (734) 671-3847
FACILITY FAX NUMBER: (734) 642-2126
CONTACT EMAIL: Rober.Guay@Beaumont.org
FACILITY WEBSITE: www.beaumont.org

FACILITY BACKGROUND

Beaumont Hospital Trenton (BHT), formally Oakwood Southshore Medical Center (OSMC), has been serving the Downriver community for 56 years. The 193-bed hospital opened its doors in 1961. BHT offers services ranging from 24-hour emergency care, cardiac care, women's health, surgical services, and rehabilitation medicine. Property surrounding BHT is primarily residential, with some commercial/industrial facilities to the south.

COMPLAINT/COMPLIANCE HISTORY

There are no records of complaints for this facility on file.

The facility was inspected on June 19, 2013. A result of the inspection the facility was issued a violation notice on June 25, 2013 for noncompliance with 40 CFR Part 60, Subpart Dc. The facility corrected the Subpart Dc compliance issues and the violation notice was resolved on November 6, 2013.

OUTSTANDING CONSENT ORDERS

None

OUTSTANDING VNs

None

INSPECTION NARRATIVE

On November 28, 2017 the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) inspector Mr. Todd Zynda conducted an inspection of BHT located at 5450 Fort Street, Trenton, Michigan. During the inspection Mr. Robert Guay, Facilities Manager, provided information and tour of facility operations relating to air quality permits and regulations.

The inspection was conducted to determine the facility's compliance with the Clean Air Act and Natural Resources and Environmental Protection Act (NREPA), Act 451, Part 55. BHT operates three boilers and tw emergency generators. During the inspection, no visible emissions were observed. Connected to BHT is the Beaumont Surgery Center Trenton (BSCT), which operates one boiler and one emergency generator.

Sterilizers

According to Mr. Guay, the facility no longer operates sterilization equipment that uses ethylene oxide. A sterilization is conducted using steam/autoclave units.

Boilers

BHT operated three boilers that have the ability to burn both natural gas and No. 2 fuel oil. According to M Guay, the boilers have not fired fuel oil in over two years, but Beaumont is in the process of preparing the boilers to fire fuel oil as back up in the next month or so. Mr. Guay provided a demonstration of inspectior records of the 8,000-gallon UST tank that stores fuel oil for the boilers. The tank was recently inspected in preparation of using fuel oil again as a backup fuel. During the inspection, the boilers appeared to be operating in good condition. According to Mr. Guay, Beaumont is exploring the idea of replacing all three boilers in the coming years. Mr. Guay was informed that any new boilers may be subject to 40 CFR Part 6(Subpart Dc. A copy of the Subpart Dc was sent via email on November 30, 2017.

Additionally, a boiler is located in the BSCT building. The BSCT Boiler operates on natural gas only. Tabl 1 provides a summary of boilers at the facility, including the installation date and rated heat input capacity in British thermal units per hour (Btu/hr).

Table 1			
ID	**Btu/hr**	**Installation Date**	**Comments**
Boiler 1	**8,368,750**	**1959**	
Boiler 2	**8,368,750**	**1959**	
Boiler 3	**13,390,000**	**1969**	**2007 reconstruction - Subject to NSPS Subpart Dc**
BSCT Boiler	**1,595,000**	**2004**	

Emergency Generators

The facility has three emergency generators that were observed during the inspection. The generator identification, the rated kilowatts (KW), manufacturer, and model are outlined below in Table 2.

Table 2				
ID	**Manufacturer**	**Model**	**KW**	**Installation Date**
BSCT Generator	**GenPower**	**300REOZV**	**300**	**1/15/2004**
600KW	**CAT**	**3412CDITA**	**600**	**5/9/2005**
650KW	**CAT**	**C27**	**650**	**9/17/2008**

All emergency generators operate using No. 2 fuel oil and have non-resettable hour meters. According to Mr. Guay, the generators are tested monthly for one hour and loaded tested for two or more hours annuall Maintenance records and an example of monthly operation logs for each generator were observed during the inspection. During the inspection, none of the generators were in operation, but appeared to be in goc condition.

Based on the installation date, emergency generator 650KW appears to be subject to 40 CFR, Part 60, Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"

APPLICABLE REGULATIONS

<u>40 CFR Part 60, Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"</u>

Boiler 3 is subject to this regulation as it was reconstructed during 2007.

§60.48c(a) – COMPLIANCE - Owner shall submit notification of the date of construction or reconstruction and actual startup as provided by §60.7 of this part). An initial notification was received July 17, 2013.

§60.48c(f) - NOT APPLICABLE - If fuel supplier certification is used to demonstrate compliance with sulfur dioxide (SO_2) emissions, records of fuel supplier certification to be provided. BHT has not fired fuel oil in over 2 years.

§60.48(g) - COMPLIANCE - Owner or operator shall record and maintain the amount of each fuel combuste BHT maintains the necessary records of fuel combusted in Boiler 3 as required by Subpart Dc. Records were provided via email on December 20, 2017.

40 CFR Part 60, Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Generator 650KW CAT Model C27 is subject to this regulation as the engine was manufactured after April 2006 (40 CFR 60.4200)

§60.4205 - COMPLIANCE - Owner/operator must comply with emission standards specified in this subpart. Emissions Performance Data provided as part of the inspection on June 19, 2013 for Generator 650 KW CAT Model C27 indicates that the manufacturer certified emissions meet emissions in Table 1 of Subpart I

§60.4209(a) – COMPLIANCE - Install a non-resettable hour meter The unit is installed with a non-resettabl hour meter.

§60.4211(e). COMPLIANCE - Limit maintenance checks and readiness testing to 100 hours per year. The facility appears to meet maintenance and readiness testing requirement.

40 CFR Part 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"

The AQD is not the delegated authority for this area source MACT. Therefore, emergency engines and applicable portions of Subpart ZZZZ were not evaluated for compliance.

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

The AQD is not the delegated authority for this area source MACT. Therefore, boilers and applicable portions of Subpart JJJJJ were not evaluated for compliance.

PERMIT TO INSTALL EXEMPT EQUIPMENT

Boilers
The boilers present at the facility (Table 1) are exempt from permit to install (PTI) requirements under the following Rules.

R336.1282(2)(b)(i): "Permit to install does not apply to.. Sweet natural gas, liquefied petroleum gas, or a combination thereof and the equipment has a rated heat input capacity of not more than 50,000,000 Btu pe hour."

R336.1282(2)(b)(ii): Fuel-burning equipment which is used for space heating, service water heating, electri power generation, oil and gas production or processing, or indirect heating and which burns only...Numbe 1 fuel oil, number 2 fuel oil, distillate oil, or a combination thereof which contains not more than 0.40% sulfur by weight and the equipment has a rated heat input capacity of not more than 20,000,000 Btu/hour.

Emergency Generators
The largest capacity generator operates at 650KW per hour. Based on calculations, the 650 KW/hr power output rating is equivalent to 2.2 million British thermal units per hour (MMBtu/hr) rated input. At a 25% efficiency conversion, the maximum converted rating is approximately 8.8 MMBtu/hr. Based on the calculated rating, the emergency generators at the facility are exempt from PTI under the following Rules.

R336.1285(2)(g): "Permit to install does not apply to...Internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input."

Sterilizers

The sterilizers present at the facility are steam (autoclave) units and are exempt from PTI requirements under the following Rule.

R336.1281(2)(i): "Sterilization equipment at medical and pharmaceutical facilities using steam, hydrogen peroxide, peracetic acid, or a combination thereof."

APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS

Not Applicable. All lots are paved.

POTENTIAL TO EMIT EVALUATION

The facility potential to emit for NOx, $SO_{2,}$ and CO was evaluated as part of this inspection.

Table 1 - Potential to Emit Calculations

Boiler Rated Heat Input (BTU/hr)	Fuel Oil Heating Value (Btu/gal)	gallons fuel per year	Nox emisssion factor (lb/gal)	NOx PTE tpy	SO2 emission Factor	SO2 PTE tpy
8,368,750	140,000	523,645	0.02	5.24	0.0426	11.1536
8,368,750	140,000	523,645	0.02	5.24	0.0426	11.1536
13,390,000	140,000	837,831	0.02	8.38	0.0426	17.8458
					SO2 PTE	40.1530
Generators		NOx (pound per hour)	Emergency Hours			
BSCT Generator (300 KW)		10 (conservative estimate)	500 hours	2.50		
600 KW		11.54	500 hours	2.89		
650 KW		12.22	500 hours	3.06		
			NOx PTE	27.29		

Boiler Rated Heat Input (BTU/hr)	Natural Gas Heating Value (Btu/SCF)	million cubic feet per year	NOx emisssion factor (lb/MMCF)	NOx PTE tpy	CO emission Factor (lb/MMCF)	CO PTE tpy
8,368,750	1,050	69.82	100	3.49	84	2.9
8,368,750	1,050	69.82	100	3.49	84	2.9
13,390,000	1,050	111.71	100	5.59	84	4.6
1,595,000	1,050	13.31	100	0.67	84	0.5
			NOx PTE	13.23	CO PTE	11.1

Based on PTE evaluation above, the facility appears to be a true minor source.

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FINAL COMPLIANCE DETERMINATION:

At this time, BHT appears to be in compliance with Federal and State air quality regulations.

NAME _____ DATE 1/2/18 SUPERVISOR JK