

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

E416954856

FACILITY: Bronson Methodist Hospital		SRN / ID: E4169
LOCATION: 601 John St, KALAMAZOO		DISTRICT: Kalamazoo
CITY: KALAMAZOO		COUNTY: KALAMAZOO
CONTACT: Diana Peters, EOC Supervisor		ACTIVITY DATE: 03/10/2020
STAFF: Rachel Benaway	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced, self-initiated inspection for verification of compliance with air use PTI #252-10.		
RESOLVED COMPLAINTS:		

Bronson Methodist Hospital is a minor source of NOx. Bronson has one air use permit on file. PTI #252-10 is for five (5) diesel emergency generator engines. Diana Peters is the Environmental Safety contact and Dave Dewaters is the Manager of Facilities.

The facility has three (3) grandfathered boilers (Boilers #1-3), all installed in 1965 with a nameplate capacity of 15,000 lb steam/hr (14.6 MMBtu/hr). Boiler #4 was installed in 1973 and has a nameplate capacity of 20,000 lb steam/hr (19.4 MMBtu/hr) which also qualifies for an exempt status (R 336.1282(2)(b)). All boilers run on natural gas with No. 2 fuel oil for backup. The facility provided fuel analysis reports that show the fuel they purchase is ULSD at 15ppm (0.0015% by wt.) maximum sulfur and 40.0 min cetane index. The facility has three (3) exempt storage tanks on site for the No. 2 oil. Maintenance actions and preventative measures are tracked in a consistent manner.

PTI #252-10: All units are Cummins Gensets, diesel-fired only. The hospital's naming convention, the reading of the hours meters, and the location of the units are as follows:

Generator Name	Hours Meter	Description: Heat input capacity / Location	# of Starts
EU-NC#1	627.1	1,000kW (34 MMBtu/hr) (1,341 hp) North campus, separate room with switch boards	1,073
EU-NC#2	140.9	1,500kW (51 MMBtu/hr) (2,011 hp) North campus, room next door to EU-NC#1	820
EU-NC#3	461	500kW (1.7 Btu/hr) (670 hp) Hallway in basement	647
EU-SC#1	114.6	1,000kW (34 MMBtu/hr) (1,341 hp) South Campus, basement hallway	
EU-SC#2	114.4	1,500kW (51 MMBtu/hr) (2,011 hp) South campus, basement	

Permit conditions:

All generators burn diesel fuel only (SC II.1). The combined fuel use does not exceed 183,839 gallon per 12-month rolling time (SC II.2). The highest 12-month rolling time fuel usage reported from 2018-2019 was 4,385.16 gallons (Jan-Dec 2019).

(SC III.1) The facility has a 100-hour limit on each engine for maintenance purposes. The facility is tracking all monthly load tests, weekly inspections, and general maintenance actions. Maintenance logs were reviewed during this inspection and a demonstration of these records as well as test logs were provided.

Each unit has a non-resettable hours meter to track operating hours (SC IV.1). No unit exceeds the nameplate capacity of 755 brake horsepower (SC IV.2).

The facility keeps fuel supplier certificates showing the sulfur content of the fuel oil (SC VI.2). The facility is recording the hours of operation, time, and purpose for engine use (SC VI.4). The facility is calculating NOx emissions from each unit and for FG-GENERATORS on a monthly and 12-month rolling time period (SC VI.5). FG-GENERATORS has a NOx limit of 37.6 tpy on a 12-month rolling time period. Between 2018-2019, the highest monthly NOx emission calculated was 0.30388 tons (September 2018) and the highest 12-month rolling time period NOx emission calculated was 0.89455 tons (Jan-Dec 2019).

The facility's 12-month rolling time NOx emissions totals for FG-GENERATORS is in compliance with the permit limit.

Records were provided showing the fuel usage for each engine and for FG-GENERATORS (SC VI.6). Between 2018-2019, the highest amount of fuel used by an individual engine was 417.13 gallons (EU-SC#2, September

2018) and as already stated, the highest 12-month rolling time fuel usage was 4,385.16 gallons (Jan-Dec 2019).

At this time, the facility appears to be in compliance with this air use permit.

NAME Rachel Senaway DATE 8/31/2020 SUPERVISOR RIL 9/9/20