

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

E416853951

FACILITY: Borgess Medical Center		SRN / ID: E4168
LOCATION: 1521 GULL RD, KALAMAZOO		DISTRICT: Kalamazoo
CITY: KALAMAZOO		COUNTY: KALAMAZOO
CONTACT: Nick White , Director of Facilities		ACTIVITY DATE: 03/04/2020
STAFF: Rachel Benaway	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced inspection of facility to verify compliance with air use permits.		
RESOLVED COMPLAINTS:		

Borgess Medical Center is a hospital and a minor source of NOx. Borgess has two air use permits on file. PTI #228-76 (1976) is for two (2) combination fire gas and oil boilers. General PTI #268-09 (2010) is for the diesel emergency generator engines. Nick White is the Director of Facilities and Pat Nelson is the Facility Manager.

PTI #228-76: There are three (3) boilers total, all run on natural gas with No. 2 fuel oil for backup. One boiler (#3) at 17,500 lb/hr steam (19MMBtu/hr), appears to be exempt from permitting (R 336.1282(2)(b)(ii)). The other two units have a heat input capacity of 36MMBtu/hr each. The permit has a visible emissions opacity limit (SC 12) and a sulfur content limit of the fuel oil (SC 13). 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 does track their fuel usage although the permit does not required this information to be submitted. The facility has storage tanks on site for the No. 2 oil- one (1) at 4,000 gallons and two (2) at 16,000 gallons. Maintenance actions and preventative measures are tracked. At this time, the facility appears in compliance with this air use permit.

The facility suggested there are plans to remove the smaller boiler in the next two years and to add a turbine for power generation purposes. Permits will be sought if the plans proceed. The facility has one cold cleaner in the boiler room area. This exempt unit is not heated and the top is kept down.

General PTI #265-09: Since the last inspection, three of the emergency generators (the three 400 kW units) have been decommissioned. All units are diesel-fired only. The hospital's naming convention, the reading of the hours meter and the location of the units are as follows:

Generator Name	Hours Meter	Description: Heat input capacity / Location
Gen 4	801.6	500kW (1.7 MMBtu/hr) (670 hp) Above boiler plant
Gen 5	335.5	300kW (1 MMBtu/hr) (402 hp) Off chiller garage
Gen 6	261.2	125kW (426,000 Btu/hr) (167 hp) Parking ramp
Gen 7 Cummins 20DQKC	197.2	2,000kW (18.7 MMBtu/hr) (2,682 hp) Hanger (separate building on Shaffer St.)
Gen 8 Cummins 20DQKC	194.8	2,000kW (18.7 MMBtu/hr) (2,682 hp) Hanger (separate building on Shaffer St.)

Pursuant to permit conditions:

(SC 1.8) All generators are fixed with a device to track the fuel usage on a monthly basis.

(SC 1.9) The facility is tracking all monthly load tests, weekly inspections, and general maintenance actions. Records were provided.

(SC 1.3 and 1.10) The facility has agreed to participate in an incentive program with Consumers to provide power at peak times, however, Consumers has not made this request of them yet. As previously mentioned, the facility will be purchasing a turbine to produce their own power and will be distributing excess power back to the grid. The permit limits the sulfur content of the diesel to 0.05% by weight and, as already mentioned, the fuel complies with this requirement. Sulfur content calculations will be kept pursuant to this condition when necessary.

(SC 1.4 and 1.11) The facility provided monthly records of fuel usage for all engines. The permit limits their fuel usage to 136,000 gallons per 12-month rolling time period. In 2019, the facility used a total of 1,324 gallons of fuel and in 2018, 1,310 gallons.

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

NAME Rachel Benaway DATE 3/30/2020 SUPERVISOR RIL 9/9/20