

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

M198335475

FACILITY: Memorial Healthcare Center		SRN / ID: M1983
LOCATION: 826 W KING ST, OWOSSO		DISTRICT: Lansing
CITY: OWOSSO		COUNTY: SHIAWASSEE
CONTACT: Brian White, Director of Facilities Services		ACTIVITY DATE: 06/14/2016
STAFF: Julie Brunner	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection for Memorial Healthcare Center which has one permit, PTI 46-99 for an ethylene oxide (EtO) sterilizer.		
RESOLVED COMPLAINTS:		

On June 14, 2016, I conducted an unannounced, scheduled inspection of Memorial Healthcare Center (M1983) in Owosso. The last compliance inspection of the Memorial Healthcare Center was on September 14, 2010.

Contacts:

Brian White, Director of Facilities Services, 989-729-4567, bwhite@memorialhealthcare.org
Ken Kominek, Maintenance Supervisor, 989-729-4421, kkominek@memorialhealthcare.org

Facility Description and Regulatory Overview:

This facility is a medical center complex consisting of a hospital, medical cancer center, and associated support facilities. The facility is located in Owosso in a mixed use area consisting of residential and commercial properties.

Memorial Healthcare Center is a minor source of any regulated air contaminants including hazardous air pollutants (HAPs) and not subject to the Title V Renewable Operating Permit (ROP) program. Memorial Healthcare Center has one active Permit to Install (PTI): PTI 46-99. PTI 46-99 is for one (1) ethylene oxide (EtO) sterilizer to sterilize hospital equipment.

Michigan Air Emissions Reporting System (MAERS):

The facility is not required to report emission information to MAERS.

Arrival:

I arrived at approximately 1:05 PM. The weather conditions were a temperature of 79°F, partly cloudy, and low wind. No visible emissions were observed from any of the facility exhaust stacks upon arrival.

A pre-inspection meeting was conducted with Mr. Brian White (Director of Facilities Services). The facility operations were discussed. The areas that needed to be inspected were the power plant and the sterilization operations. Brian informed me that the EtO sterilizer had been disconnected and the unit would be removed from the facility. PTI 46-99 can be voided. Brian also informed me that there were three (3) emergency generators at the hospital facility. A facility tour was then taken starting with the power plant.

Boilers:

There are two (2) dual fuel-fired (natural gas and fuel oil) boilers located at the hospital. The boilers provide steam, and only one is run at a time unless temperatures are below 0°F. All are exempt pursuant to Rule 282(b) (i) and (ii).

Boiler #H2 (Center boiler) –

Cleveland-Brooks, manufacture date 1996 (Model #CB200-300, Serial #01095540)
12.55 MMBTU/hr (300 hp)
Operating at the time of inspection with 80 lbs steam going to the header.

Boiler #H3 (West boiler) –

Johnston, manufacture date Nov-1984 (Model #528, Serial #810401)
16.4 MMBTU/hr, 150 gallons/hr diesel fuel
They are planning to replace this boiler next year.

Both boilers have vertical stacks and are fired on fuel oil only for backup. Copies of the last boiler inspection check list from 12-10-2015 are attached.

There is a new maximum achievable control technology (MACT) standard, 40 CFR 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources that could apply. The applicability is listed below:

§63.11195 Are any boilers not subject to this subpart?

The types of boilers listed in paragraphs (a) through (k) of this section are not subject to this subpart and to any requirements in this subpart....

(e) A gas-fired boiler as defined in this subpart.

§63.11237 What definitions apply to this subpart?

Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

The two (2) dual fuel-fired boilers could meet the definition of gas-fired boiler. If each boiler operates on fuel oil for reliability testing purposes and the periodic testing with the fuel oil is below 48 hours per calendar year, then the boilers will not be subject to the requirements of 40 CFR 63, Subpart JJJJJJ. Records of fuel oil usage in the boilers will need to be maintained to demonstrate that the boilers meet the definition of gas-fired.

Emergency Generators:

There are three (3) diesel fuel-fired, emergency generators at the hospital and one (1) diesel fuel-fired, emergency generator at the cancer center. A copy of the generator list is attached.

	Date of Manuf.	Output	Serial #	Model #	Hours
Caterpillar (#1)	2000	400 kW	4ZR07092	3406	188
International (Gen3)	~1950	480 kW	713	UDT-817	585.5
Detroit Diesel	Installed 1984	425 kW	12VA077810	71237305	268.6
John Deere #4	Installed 2008	200 kW	6068HF85T	U	?

The Caterpillar (#1) and International (Gen3) are located in a separate room beside the boilers. A 120 gallon day oil tank is located in the room with the generators. There are 2 – 1000 gallon horizontal oil tanks located outside for the generators. The Caterpillar (#1) and International (Gen3) have vertical exhaust stacks with mufflers.

The Detroit Diesel (GM engine) sits outside the north wing of the hospital in a brown shed. It has a vertical exhaust and a 500 gallon oil tank. We were unable to find a tag with a date of manufacture on the engine, but it was installed in 1983-84 when the north wing was built.

Also, there is a small generator (John Deere #4) at the cancer center. This engine was not inspected, but it was installed in 2008 when the cancer center was built.

The generators are tested weekly (30-min run, 10-min cool down) and monthly (20 to 40 days between). They are serviced annually as part of the preventative maintenance program. Service is also recorded on a list located on the side of the gensets. Copies of the "Generator Inspection Checklist" for the last service dates on May 25 & 26, 2016 for the three (3) generators at the hospital are attached.

The sulfur content of the fuel oil used at the facility should be less than 0.0015% by weight as required by the NRLM diesel fuel standard in 40 CFR 80.510(c). For emergency generators, it is assumed that they operate no more than 500 hours per year at worst-case.

All emergency generators on-site appear to meet exemption Rule 285(g) for internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input.

Depending on the manufacture date of the engine, NSPS, 40 CFR 60, Subpart IIII - Standards of Performance

for Stationary Compression Ignition Internal Combustion Engines could apply. Some of the emergency engines may be subject to 40 CFR 60, Subpart IIII. Listed below is the applicability for reference.

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

Another new MACT for engines, 40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines does not apply because reciprocating internal combustion engines (RICE) located at an institution are not subject per 40 CFR 63.6585(f).

Sterilization:

The EtO sterilization equipment is disconnected and all supplies of EtO are gone from the facility. All sterilization is done using hydrogen peroxide in either of two (2) Sterrad[®] machines. These machines are not vented – there are no ambient air emissions. There is also one (1) high level disinfection unit which uses peracetic acid for disinfection of medical equipment. The sterilization equipment is exempt per Rule 281(i).

Departure:

I departed the facility at approximately 3:20 PM.

Summary:

The facility appeared to be in compliance with all applicable rules and regulations. PTI 46-99 for one (1) EtO sterilizer was voided on June 22, 2016.

The facility may want to review any applicable NSPS and the associated requirements that the emergency engines and any replacement boiler may be subject too.

NAME Julie L. Bremer

DATE 6/11/16

SUPERVISOR B. M.