

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

D369938410

FACILITY: MCLAREN REGIONAL MEDICAL CENTER		SRN / ID: D3699
LOCATION: 401 S BALLENGER HWY, FLINT		DISTRICT: Lansing
CITY: FLINT		COUNTY: GENESEE
CONTACT: RaeLynn Hicks , Manager, Environment of Care		ACTIVITY DATE: 01/03/2017
STAFF: Nathaniel Hude	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS:
SUBJECT: Inspection follow-up after 12/14/16 after finding that the facility had boilers and emergency generators on site.		
RESOLVED COMPLAINTS:		

Inspection Report

SRN: D3699- McLaren Regional Medical Center
401 S. Ballenger Highway
Flint, MI 48532

Inspection Date:

1/3/16

Acronyms Used:

State Registration Number (SRN), Potential to Emit (PTE), Million British Thermal Units (MMBtu), Tons per Year (tpy), Sulfur Dioxide (SO₂), Renewable Operating Permit (ROP), National Emission Standards for Hazardous Air Pollutants (NESHAP), Compression Ignition (CI)

Facility Contacts:

Henry Lobb, Manager of Engineering Services, 810-342-2196, henry.lobb@mclaren.org
RaeLynn Hicks, Manager Environment of Care, 810-342-5150, raelynn.hicks@mclaren.org
Rob, Boiler Room Manager

MDEQ AQD Personnel:

Nathan Hude – 517-284-6779, huden@michigan.gov

Facility Description:

(from website) McLaren Flint is a 404-bed tertiary teaching facility located in Flint, Michigan, serving the medical needs of residents in greater Genesee County and mid-east Michigan. McLaren Flint is affiliated with Michigan State University College of Human Medicine in its medical residency programs including family practice, internal medicine, general surgery, orthopedic surgery and radiology. McLaren Flint also maintains vascular surgery and health psychology fellowship programs in partnership with Michigan State University.

Applicable Regulations:

Facility needs to conform to compliance in the following manners:
Permit to Install due to 3 boilers rated >10MMBtu;
Compliance with 40CFR60 Dc for Boiler3;
Compliance with 40CFR60 IIII for Generator4

Previous Inspections:

12/14/16, Nathan Hude, Inspect for removal of ethylene oxide sterilizers to void PTI 137-02

3/20/07, Brad Myott, Inspection identified the need for an Opt-Out PTI for the boilers due to the potential emissions of SO₂. The report was changed from compliant to non-compliant by a hand written "NC". It is unknown if a violation was sent as one could not be found on file. The contact at this time was Rande R. Lake. This inspection was logged in the previous (pre MACES) air quality database. This report was placed in a folder assigned for permits rather than the correct folder for inspections.

Previous Violations:

None found on record

Recent Complaints (within 2 years):

None found on record

Number of Violations Found During this Inspection:

1. Failure to obtain a Permit to Install for installation of 3 boilers > 10MMBtu's after August 15, 1967.
2. EU-BOILER3, failure to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc- Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.
3. EU-EMENG4, failure to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart IIII- Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Inspection Key Concerns:

None

MAERS Reporting

None

MAERS Emission Unit List

Below are the Emission Units on site that they will more than likely have to report on due to Boiler3 being subject to NSPS 40CFR60 Dc:

FG-FACILITY (referred to in regulatory findings section)

EU-BOILER1
EU-BOILER2
EU-BOILER3
EU-EMGEN1
EU-EMGEN2
EU-EMGEN3
EU-EMGEN4
EU-DTANK1
EU-DTANK2

Inspection Summary

On December 14, 2016, I performed an inspection at the hospital to confirm the removal of two ethylene oxide sterilizers in order to void PTI 137-02. During this visit, I found that the facility had 3 boilers and 4 generators. I did not inspect the generators or the boilers at that time, but instead informed the contact I would be back to do so. After returning to the office I found the 3/20/07 inspection, I contact RaeLynn and informed her of the situation. We then scheduled an inspection to occur on 1/3/17.

I arrived on 1/3/17 at approx. 10:15am. RaeLynn met me in the lobby and escorted me to her office where Henry met us shortly thereafter. I informed her of the regulations that may apply to the boilers and generators, but stated that we would need additional information such as manufacture date, installation date, Hp, MMBtu, etc to determine which regulations applied. While discussing, I provided RaeLynn a printed copy of the regulations I thought could apply. This included 40CFR60 Db, Dc, IIII; and 40CFR63 ZZZZ, JJJJJJ; I also provided RaeLynn a copy of PTI 79-10 issued to K2899 which is a hospital with similar emission units.

RaeLynn, Henry, and I then visited the emission units. While on the way to the boilers, we were joined by Rob who worked in the boiler area. The boiler room houses all three boilers, they are natural gas burning with diesel back up and are all vented out of a brick stack that I estimate to be 80 feet tall which is clearly visible from outside. Below is a summary of each boiler.

EU-BOILER1 is located to the left once you enter the boiler room; Nameplate Info:

Manufacturer: Cleaver Brooks Springfield Boiler

Model: D52

Date: 5-13-69

Serial Number: none

Unit #: WL 1310

Square Foot: 2428

Water Fall Square Foot: 440

Pressure PSI: 270

EU-BOILER2 is located to the right of EU-BOILER1; Nameplate Info:

Manufacturer: Cleaver Brooks Springfield Boiler

Model: 200D52B

Date: 8-26-69
Serial Number: M100969M
Unit #: WL 1311
Square Foot: 2428
Water Fall Square Foot: 440
Pressure PSI: 270

EU-BOILER3 is located behind EU-BOILER1 and EU-BOILER2; Nameplate Info:
Manufacturer: Cleaver Brooks Springfield Boiler
Model: D-34
Date: 1992
Serial Number: none
Unit #: W 3703
Square Foot: 1517
Water Fall Square Foot: 302
Pressure PSI: 260

The boiler back up fuel is diesel. The tank that services the boilers also services EU-EMGEN1, EU-EMGEN2, and EU-EMGEN3 (three of the four emergency generators). The tank is 10,000 gallons in capacity and is exempt per R336.1284(d). For the purposes of identification, the tank is referenced as EU-DTANK1 throughout this report. The tank is located outside to the east of the brick stack servicing the boilers.

We then walked to the locations of the emergency generators.

EU-EMGEN1 is located in "Machine Room 18" which is outside of the main hospital building to the east of the brick stack servicing the boilers and north of EU-DTANK1. There is a nameplate on the valve cover that provided minimal information. Nameplate Info:

Manufacturer: Detroit Diesel
Model: 716737000
Serial Number: unknown
Cylinders: 16
Horsepower (Hp): unknown
Kilo-watt (kW): 400
Manufacture Date: unknown (though quite old)
Installation Date: 1969
Hour Meter: yes, analog non-resettable, 562.9 hours

EU-EMGEN2 is located in "#31 Machine Room" area to the left of EU-EMGEN2, which is inside of the main hospital building. The nameplate is located on the left side of the engine on the water pump casing. Nameplate Info:

Manufacturer: Cummins Diesel
Model: NTA-855-GS
Serial Number: 10875829
Cylinders: 6
Horsepower (Hp): unknown
Kilo-watt (kW): 275
Manufacture Date: 10/1979
Installation Date: 1983
Hour Meter: yes, analog non-resettable, 331.0 hours

EU-EMGEN3 is also located in the "#31 Machine Room" area which is inside of the main hospital building, to the right of EU-EMGEN2. The nameplate is located on the right front side of the engine. Nameplate Info:

Manufacturer: Cummins Diesel
Model: VTA1710GS2
Serial Number: 58607
Cylinders: 8
Horsepower (Hp): 900
Kilo-watt (kW): 600
Manufacture Date: 1/1982
Installation Date: 1983
Hour Meter: yes, digital, not on to record hours

EUEMGEN4 is located in a separate room off the receiving dock inside of the main hospital building. This device has its own fuel tank with a capacity of 3000 gallons. For the purpose of this report the tank will be labeled EU-DTANK2 and is exempt per R336.1284(d).

EUEMGEN4 Nameplate Info:

Manufacturer: Detroit Diesel

Model: Series 60, 14.0L – Tier 3

Serial Number: unknown

Unit Number: 06R0983650

Engine Family: 7DDXL14.0VLD

Cylinders: not recorded

Horsepower (Hp): 685

Kilo-watt (kW): 511

Manufacture Date: 9/2007

Installation Date: 2007

Hour Meter: yes, digital, not on to record hours

After I collected the information about the emission units, I informed Raelynn that I would need to review the information and look into which regulations applied and that I would be in contact. I also agreed to send her a list of consultants which is online on our DEQ website; I sent this link on 1/3/17. I also emailed both Raelynn and Henry a copy of the 3/20/07 inspection report for their records on 1/5/17.

The following information requests were made to assist in regulatory determinations:

1/5/17: Installation dates for EU-EMGEN1, EU-EMGEN2, EU-EMGEN3, and EU-EMGEN4. Response received: 1/6/17, EU-EMGEN1 1969, EU-EMGEN2 1983, EU-EMGEN3 1983, and EU-EMGEN4 2007.

1/6/17: Supplier provided diesel fuel sulfur content summary for determining SO2 PTE. Response Received: 1/18/17 with a sulfur content of 15ppm or 0.0015%

1/6/17: Fuel usage for each boiler and usage for each engine for past 5 years (2012-2016) to ensure major status was not exceeded. Response Received: a consolidated list of all fuel used per year was provided on 1/10/17 with the largest consumption being 1,895 gallons in 2014.

Regulatory Findings:

FG-FACILITY, EU-BOILER1, EU-BOILER2, and EU-BOILER3:

All boilers were installed after the State of Michigan grandfather date of 1967. Yet due to being >10MMBtu are required to be permitted.

I performed a PTE for the facility which included the 3 boilers operating 8760 hours using the MMBtu from the 3/20/07 report and the 4 generators operating 500 hours per EPA memo dated 9/6/95 regarding PTE for emergency engines, yet excluded the 2 diesel storage tanks. Using a diesel fuel with 15ppm of sulfur (or 0.0015%), I believe that in combination of all units the PTE is below significant and Major thresholds.

EU-BOILER3

Is subject to the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc- Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. This is due to paragraph 60.40c(a) stating the regulation applies to “each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989. EU-BOILER3 was installed in 1992.

EU-BOILER1, EU-BOILER2

Is not subject to the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc- Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. This is due to paragraph 60.40c(a) stating the regulation applies to “each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989. EU-BOILER1 and EU-BOILER2 were both installed in 1969.

EU-BOILER1, EU-BOILER2, and EU-BOILER3:

Is not subject to the 40 CFR 63 Subpart JJJJJJ- NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources. This is due to paragraph 63.11195(e) as “gas fired” boilers which is defined in 63.11237. “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 for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.”

EU-BOILER1, EU-BOILER2, and EU-BOILER3:

Is not subject to Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts KKKK- due to not being turbines; nor AAAA, CCCC or BBBB due to not combusting waste.

EU-EMGEN1, EU-EMGEN2, EU-EMGEN3, and EU-EMGEN4

Is not subject to 40 CFR 63 Subpart ZZZZ- NESHAP due to paragraph 63.6585(f)(3) which excludes classification of "institutional emergency stationary RICE located at an area source of HAP emissions"

EU-EMGEN4

Is subject to 40 CFR Part 60 Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines due to being a 2007 model year emergency CI ICE <30l/cyl, constructed after July 11, 2006 and manufactured after April 1, 2006.

EU-EMGEN1, EU-EMGEN2, EU-EMGEN3, and EU-EMGEN4

Is not subject to Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart JJJJ due to being CI engines, JJJJ addresses spark ignition engines.

Based on these findings, violations will be cited as discussed earlier in this report.

NAME 

DATE 1-25-17

SUPERVISOR 

