

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

E223643567

FACILITY: Henry Ford Allegiance Health		SRN / ID: E2236
LOCATION: 205 N East Ave, JACKSON		DISTRICT: Jackson
CITY: JACKSON		COUNTY: JACKSON
CONTACT: George Gancsos, Jr., Director, Plant Engineering		ACTIVITY DATE: 03/08/2018
STAFF: Mike Kovalchick	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS:
SUBJECT: Inspection of Henry Ford Hospital.		
RESOLVED COMPLAINTS:		

**Minor Source: Inspection of Henry Ford Allegiance Health located at 205 N East Ave, Jackson, Michigan.**

State Registration Number (SRN): E2236

**Facility Contacts**

George Gancsos (GG), Director, Plant Engineering, 517-780-7304 [george.gancsos@allegiancehealth.org](mailto:george.gancsos@allegiancehealth.org)

**Purpose**

On March 8, 2018, I conducted a scheduled, unannounced inspection of Henry Ford Allegiance Health (Company) located in Jackson, Michigan (Jackson County). The purpose of the inspection was to determine the facility's compliance status with applicable federal and state air pollution regulations, particularly with the Michigan Natural Resources and Environmental Protection Act 451 of 1994, Part 55, Air Pollution Control and the administrative rules, and the conditions of the Company's Permit to Install (PTI) number 395-95. This facility was last inspected on October 7<sup>th</sup>, 2014.

**Facility Location**

The facility is located within the city limits of Jackson. It is immediately surrounded by a combination of other commercial and residential areas

**Arrival & Facility Contacts**

No odors or visible emissions were observed upon my approach to the facility. I arrived at approximately 9:00 am, proceeded to the facility office to request access for an inspection, provided my identification to GG. GG escorted me to his office and a pre-inspection conference was held. I informed GG of my intent to conduct a facility inspection and to review the various records required by their permit. GG extended his full cooperation during the inspection and he accompanied me during the site tour portion of the inspection.

**Regulatory Applicability**

PTI 395-95 is for ethylene oxide sterilizers. However, the facility has removed them and has no future plans to use this type of sterilizer again.

No. 4 Boiler is subject to New Source Performance Standard Dc. Requirements are minimal for this type of boiler.

No. 1, 2 and 3 Natural Gas fired boilers with No. 2 Oil used as a back-up are exempt from PTI requirements per Rule 282 (2) (b)(i).

Three No. 2 Oil fired emergency generators are subject to 40 CFR Part 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

The emergency generators are exempt from PTI requirements per Rule 285 (2) (g) as each generator is less than 10 MM BTU/hour.

**Pre-Inspection Meeting**

The pre-inspection meeting began with a discussion of changes at the facility since the last inspection.

GG indicated that the ethylene oxide sterilizers have been removed. I noted that because of their removal, we would be able to void PTI 395-95. GG indicated that they now use hydrogen peroxide and steam autoclaves to meet their sterilization needs so there are no longer any permit concerns.

GG stated that the facility is now mercury free having just removed the last mercury switches from the boilers. GG indicated that their fluorescence light bulbs are removed using company called Reycle Lights.

We discussed the boilers.

There are four natural gas fired boilers which are identified in the table below:

Boiler Number ID	Boiler Manufacturer	Boiler Install Date	Boiler Heat Input
No. 1	Cleaver Brooks	September 19, 1972	14,645,000 Btu per hour
No. 2	Cleaver Brooks	September 20, 1972	14,645,000 Btu per hour
No. 3	Cleaver Brooks	December 3, 1970	14,645,000 Btu per hour
No. 4	Hurst	Late 2005	16,732,500 Btu per hour

The first three use No. 2 Fuel oil as a back-up. They use 104.5 gallons per hour per boiler. GG indicated that they never need to operate more than one at a time with a second boiler always warmed up to be on stand-by basis. GG indicated that heating system doesn't have the capacity to be able to operate more than 2 at the same time. I indicated that I would need to do some potential to emit calculations to make sure the facility was a true minor source since there are no permits to restrict their potential to emit. They test the oil back-up for the boilers once a month. GG indicated that there is never more than a brief puff of smoke when the boilers are first fired up when using fuel oil.

There are also 3 emergency generators that used No. 2 Fuel oil. They are nearly identical rate at 1500 KW(5 million BTU/hour) in size. Name plates show that they are dated 2006 to 2008. Each generator uses 100 gallons fuel oil/hour. They are tested once a month usually for 30 minutes or so. I mentioned that there are federal requirements that apply to these generators. GG indicated that he wasn't aware of these requirements. Both the boilers and emergency generators are supplied from a single 20,000 underground storage tanks. Attachment (1) shows the most recent delivery manifest of the oil. Approximately 8000 gallons were delivered in 2017. It also notes that the sulfur content is no more than 500 ppm. (Federal requirements restrict the sulfur content to this level.)

### Onsite Inspection Narrative

GG then provide a brief site tour that consisted entirely of just viewing the emergency generators. See attached photos. The 3 generators appeared to be well maintained. Each one contained a digital display that showed the hours that each had been operated since they began operation in the 2006 to 2008 time frame. The display read 240 hours, 1402 hours and 1530 hours. This works out to an average of approximately 100 hours per generator which shows that these generators are considered emergency generators per the federal MACT ZZZZ definition.

### Post-Inspection Meeting

We had a brief post-inspection meeting. I indicated to GG that I would have PTI 395-95 voided since the sterilizers had been removed. I told him that I would look into the requirements for the emergency generators and get back to him about it. I also indicated that I would do potential to emit calculations to make sure that the facility is considered a true minor source. I thanked GG for his excellent cooperation and assistance, and I departed the facility at approximately 9:30 am.

### Recordkeeping Review

Based on information supplied during the inspection, I did PTE calculations for the S02.

Using an emission factor of 7.1 pounds S02 per 1000 gallons of fuel oil.

Maximum hour fuel usage is 209 gallons per hour X 8760 hours = 1,830,840 maximum fuel oil usage per year.

$(1,830,840 / 1000) * 7.1 * 1/2000 = 6.4$  tons S02/year

Doing a similar calculation for NOx using an emission factor of 20 pounds NOX per 1000 gallons of fuel oil yields 18 tons per year.

Similar calculations can be made for the three emergency generators but assuming the commonly used 500 hours per year for emergency generators for potential to emit purposes would add only a small contribution to both the NOx and SO2 numbers.

Refer to <https://dnr.wi.gov/topic/SmallBusiness/documents/air/EmissionsWorksheet.xls> for emissions calculations method.

Based on these calculations, it appears that the facility is a true minor source.

Reviewing this federal regulation shows the emergency generators are subject to a number of requirements. <https://www.law.cornell.edu/cfr/text/40/part-60/subpart-III> The Company appears to be meeting maintenance record keeping requirements and having a meter to show hours that the generator has been operated but didn't provide evidence that initial notification has been filed or an initial performance test had been conducted on the generators. The applicable regulation is as follows:

*(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.*

There is also no indication that the engines carry an existing EPA certification.

### **Compliance Summary**

Based upon the facility inspection, review of the records, and review of applicable requirements, the Company appears to be in compliance except for the following:

NSPS Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines which applies to the 3 emergency generators.

A Violation Notice (VN) will be sent to the company and they will be given 21 days to respond.

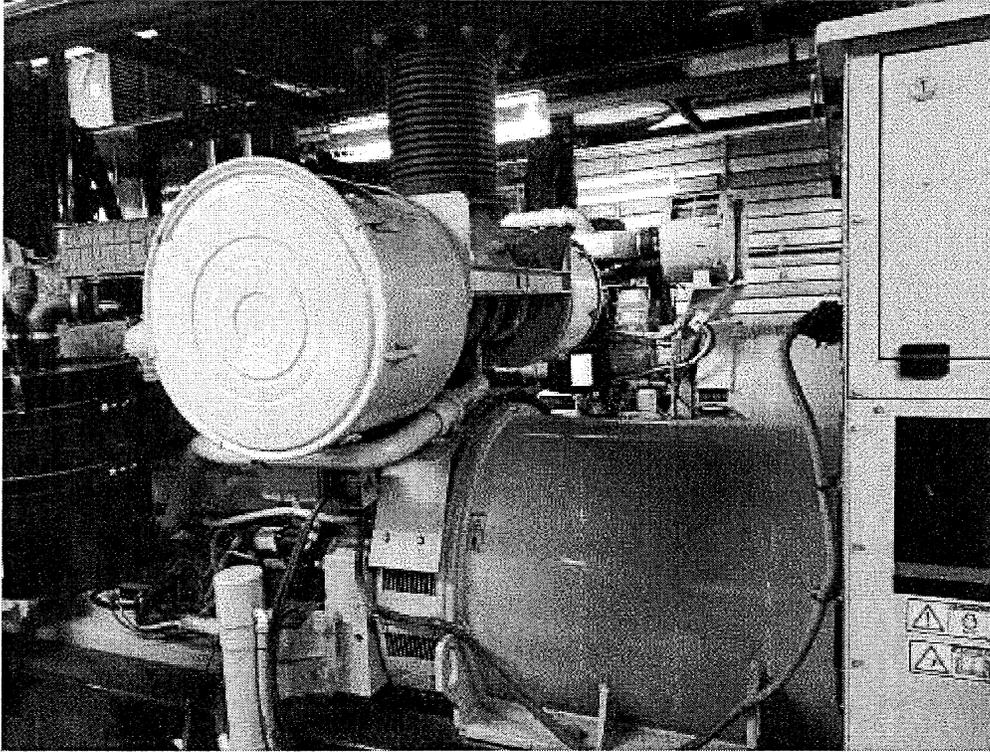


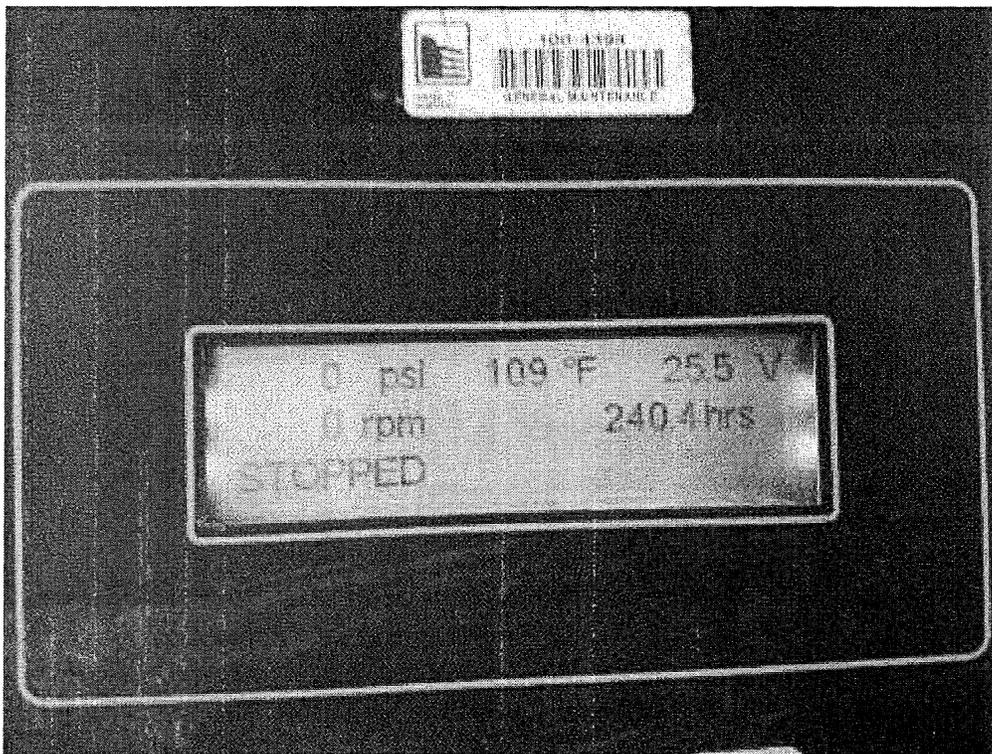
Image 1(Emergency generator) : Emergency generator



Image 2(Hour Meter) : Hour meter for one of the generators



**Image 3(Hour meter)** : Hour meter for one of the generators.



**Image 4(Hour meter)** : Hour meter for one of the generators.

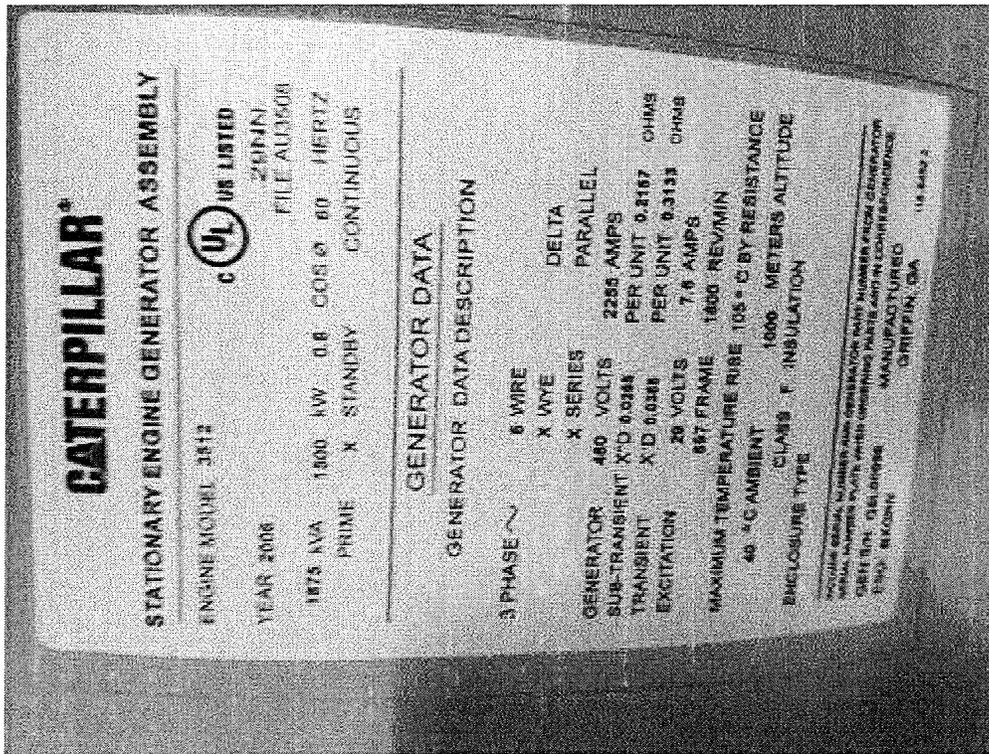


Image 5(Name plate) : Name plate for one of the generators.

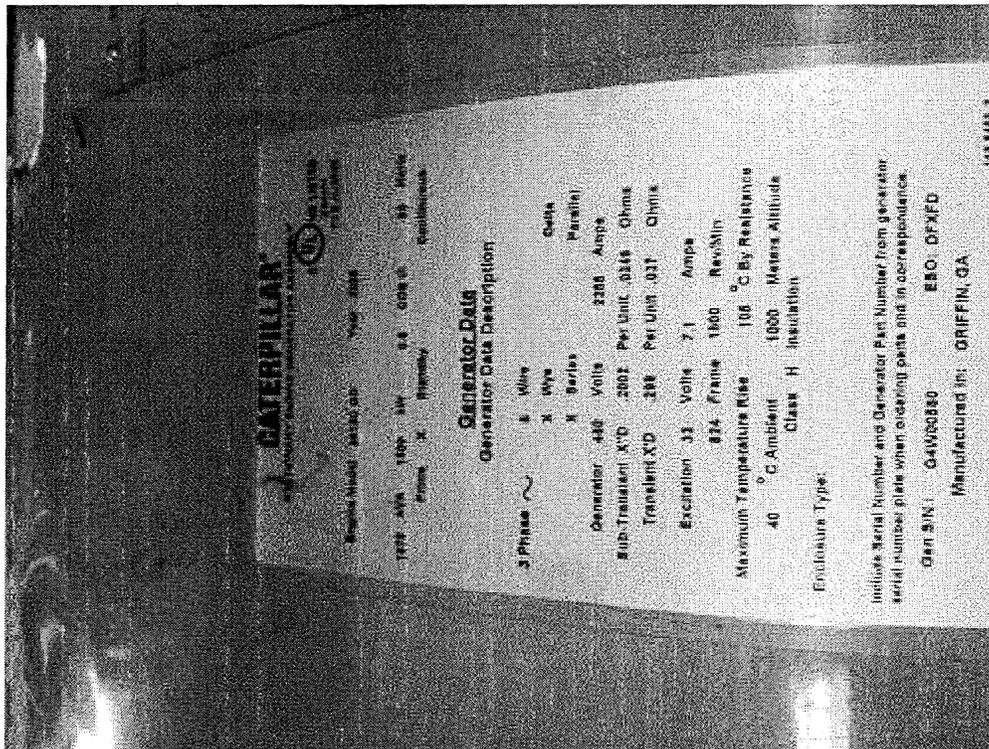
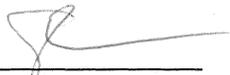


Image 6(Name plate) : Name plate for one of the emergency generators.

NAME M. Kovalchuk

DATE 3/8/2018

SUPERVISOR 

**KELLY FUELS, INC.**

2030 FOURTH ST.  
JACKSON, MI 49203  
(517) 787-1210

(517) 788-4800

LAST FOUR DELIVERIES	
DATE	GALLONS
08/18/17	00
07/24/17	114
04/18/17	319
04/04/17	7,399

ACCOUNT NO.	CUSTOMER P.O.	TANK SIZE	KF/WC	TERMS	BUDGET
41760	357879	550		Net 10th	

ALLEGIANCE HEALTH - *surgery center*  
205 N EAST AVE *1125 E North Chicago Ave*  
Jackson, MI 49201  
(517) 788-4987  
**Generators**

FILL FACTOR →

*Subject to correction.*

DD FACTOR 500 PPM SULFUR LSD. OFF-ROAD EXEMPT USE ONLY.

CUSTOMER SIGNATURE  
CUSTOMER'S COPY

DRIVER NO.	INVOICE NO.
<i>Ron</i>	0073194
DELIVERY DATE	
<i>12/8/17</i>	
GAL. ORDERED	GAL. DELIVERED
<i>1</i>	<i>284</i>
PRODUCT	116
	Ultra Low Dyed Diesel 2
RATE	AMOUNT
<i>2.499</i>	<i>709.72</i>
BASE RATE	
FED. TAX	
ST. TAX	
SALES/PPD	
TOTAL AMOUNT	<i>709.72</i>
PAYMENT RECEIVED	

*Winterized*

YOUR SALE NUMBER

GALLON READING • FINISH

*Attachment (1)*

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02844