K1271
MAWILS

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

K127128862

FACILITY: HENRY FORD HOSPITAL		**SRN / ID:** K1271
LOCATION: 2799 W GRAND BLVD, DETROIT		**DISTRICT:** Detroit
CITY: DETROIT		**COUNTY:** WAYNE
CONTACT: Dan Murakami , Director, Plant Operations		**ACTIVITY DATE:** 02/25/2015
STAFF: Terseer Hemben	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: ETO, Boilers and Generators		
RESOLVED COMPLAINTS:		

INSPECTED BY : **Terseer Hemben, MDEQ**

PERSONNEL PRESENT : **Daniel Murakumi, Ford Hospital**

Catherine Semer, HFH

FACILITY PHONE NUMBER : **(313)-916-2204**

FACILITY FAX : **(313) -916-4319**

DATES OF INSPECTION : **2/25/2015**

Précis: The following regulatory basis was applied in this compliance inspection and evaluation:

MI-ROP-K1271-2012: Federal-40 CFR 60, Subpart A & IIII (ICE-NSPS), 40 CFR 72, Subpart 40 CFR 52, 40 CFR 63, Subpart A & ZZZZ, 40 CFR Subpart 80, 40 CFR Subpart 89

State Rule- NSPS, R205, R207, R201, R1370, R402, R2001, R910, R912, R2003, R2004, R220, R224, R225, R702, R290

Permit# 179-14

FACILITY BACKGROUND:

Henry Ford Hospital (HFH) is a full service/teaching hospital. The HFH utilizes a sterilizing system to reduce levels of medical wastes, especially contaminated fabrics, paper and cleaning materials. The purpose for operating waste sterilization is to reduce the level of illness and disease transmission within the hospital traffic. The system requires adequate power supply to sustain waste reduction processes. Boiler systems serving the HFH systems have combined capacity to deliver 1500 pounds of steam per hour. are on file.

Henry Ford Hospital upgraded the boilers to 3 Nebraska types and removed generators from systems site, except for the newly approved 1000kw EUNGINE under installation. The boilers are rated at 88.4 MMBtu/hr. each, and operable using natural gas or No. 2 fuel oil. Logistically, only two boilers are permitted and configured to operate simultaneously. Each Boiler is limited to 1000 hours per year or fuel oil gallon equivalent, or 1,234,000 gallons per year for the whole boiler group. The HFH operates three supplementary engines (generators) rated 750 kW, 1500 kW, 1600 kW, respectively, and three others at

2000 kW each. The engines are flexibly grouped as FGENGINES. The engines are used only for emergency electrical power supply purposes and standard operating tests. HFH environmental team informed some of the engines will be replaced, and details of modifications will be furnished.

Calculations of NOx and CO emissions for the facility boilers were based on vendor guarantees on equipment's efficiency. Calculations for the remaining criteria pollutants emission were based on AP 42 factors from Chapter 1.3, with the SO2 emission factor incorporating the sulfur content of 0.03%. Calculations of emissions for the emergency generators were based on tier 1 and 2 stationary diesel engine standard promulgated by USEP, with the exception of lead and SO2, which are both based on fuel analysis. All diesel fuel used on site was permitted to have a sulfur content of no greater than 0.03%.

The system uses one common stack for the three boilers and each generator has its own stack. The applicable rules for equipment are Rule 201, 301, and 901. Additionally, NSPS subpart Dc requires sulfur content of no greater than 0.5 %, PM emissions of no greater than 0.1 lb/MMBtu, and opacity of no greater than 20% on a six-minute average, except for one 6-minute average per hour of no greater than 27%. DEQ-AQD determines compliance based on emission limits, operational, and fuel limits that are maintained through recordkeeping. The NSPS compliance is demonstrated through fuel restrictions, NAAQS, increment, and Rule 225 compliance is demonstrated through modeling.

The HFH operates two ethylene Oxide Sterilizers. One oxidizer has a capacity of 6.4 cubic feet, and the second has a capacity of 4.6 cubic feet. Power supply configuration is mapped to handle unforeseen power needs. Generators listed in the report explain details of power supply mapping. Conditions of the operating permit were incorporated into the initial ROP application that was recently modified.

Inspection Narrative

I arrived at the HFH facility at 1110 hours. Temperature at the hour was 15 F, with wind speed 4 mph coming from the NW and humidity 51%. Purpose of the visit was to conduct a scheduled annual compliance inspection. I was admitted onto the site by Ms. Catherine Semer and Mr. Dan Murakami joined us for the pre-inspection conference. Mr. Murakami informed the facility had not made modifications to equipment or system for the last 12 months. We went through the inspection agenda and set the time line for the Company to submit requested records to the AQD office. We concluded the meeting with a post-inspection conference and left the facility at 1220 hours. Requested records were submitted on March 13, 2015. Mr. Dan Murakami provided two vouchers to offset the parking fee as usual courtesy of HFH to all business visitors to the facility; however staff did not apply the tickets to Valet parking. Staff redeemed the parking fees with cash and saved the tickets as memorable good gesture. The unused tickets are attached to report as highlights of HFH team's expression of hospitality while on the facility premises for business.

COMPLAINT/COMPLIANCE HISTORY:

There have not been recent complaints involving the HFH operations since incineration unit was replaced with sterilization process. The HFH environmental team showed appreciable sensitivity to compliance requirements.

OUTSTANDING CONSENT ORDERS:

None

OUTSTANDING LOV'S:
None

OPERATING SCHEDULE/PRODUCTION RATE:

Henry Ford Hospital boilers are configured to operate 24 hours per day, and 7 days a week. The facility delivers an output of 15,000 pounds of steam per hour per boiler. Logistically, two Nebraska boilers are regularly scheduled to simultaneously deliver to the designed power need.

PROCESS DESCRIPTION:

As described in the facility background.

EQUIPMENT AND PROCESS CONTROL:

Table 1. lists the equipment in permitted and process conditions:

EMISSION Unit/Group ID	EU Description	Installation Date	ControlDevice	STACK ID
EUENGINE9	1600 kW diesel fried reciprocating engine.	September 2006	Operating limits/Material limits	SVENGINE9
EUENGINE10	750kw diesel fired reciprocating engine generator	September, 2006	Operating limits/Material limits	SVENGINE10
EUENGINE 11	900 kW diesel fired reciprocating engine generator.	March 2007	Operating limits/Material limits	SVENGINE11
EUENGINE 12a	2000kW diesel fired reciprocating engine generator.	Yet to be Installed	NA	SVENGINE 12a
EUENGINE 12b	2000 kW diesel fired reciprocating engine generator	Yet to be Installed	NA	SVENGINE 12b
EUENGINE 14	2000 kW diesel fired reciprocating	Yet to be Installed	NA	SVEENGINE 14
EUNGINE15	engine generator	Installation not yet completed	NA	-
EUBOILER4	E & R Building: A 1000 kw diesel fired emergency generator	8/1/08		FGBOILERS
	Boiler 1: 88.4 MMBTU/hr. Nebraska Boiler,			

EUBOILER5	#2 fuel oil and natural gas fired Boiler 2: 88.4 MMBTU/hr. Nebraska Boiler,	9/1/08	FGBOILERS
EUBOILER6	#2 fuel oil and natural gas fired Boiler 3: 88.4 MMBTU/hr. Nebraska Boiler, #2 fuel oil and natural gas fired	4/1/13	FGBOILERS

APPLICABLE RULES/PERMIT# MI-ROP-K1271-2012 CONDITIONS:

The information collected during HFH inspection was evaluated consistent with the permit conditions. The following observations were made and determined HFH was:-

1. In compliance - HFH demonstrated there had not been any modification to any EUENGINES system or process at the facility in the last 12 months. Response received from HFH stated EUENGINES had not undergone any modifications [Response #1].

2. In compliance - HFH demonstrated the emission of NOx in the EUENGINE12a system did not exceed 9.2 g/kw-hr.hr [SC. 1.1]. Response from HFH indicated the maximum NOx emission at full prime was 7.10 g/kw-hr.hr. [Attachment#1].

3. In compliance - HFH demonstrated the maximum CO emissions in EUENGINE12a did not exceed 11.4 g/kw-hr.hr [SC. 1.2]. Response from HFH indicated the maximum CO emission at full prime was 1.0 g/kw-hr.hr. [Attachment#1].

4. In compliance - HFH demonstrated the maximum PM emissions in EUENGINE12a did not exceed 0.54 g/kw-hr.hr [SC. 1.3]. Response from HFH indicated the maximum PM emission at full prime was 0.10 g/kw-hh.hr. [Attachment#1].

5. In compliance – HFH demonstrated the maximum HC emissions in EUENGINE12a did not exceed 1.3 g/kw-hr.hr [SC. 1.4]. Response from HFH indicated the maximum HC emission at full prime was 0.18 g/kw-hh.hr. [Attachment#1].

6. In compliance - HFH demonstrated permittee met the specifications and requirements of 40 CFR 80.510 for all current diesel fuels [SC II.1]. Response from HFH indicated the vendor's receipts confirmed deliveries of dyed ultra-low sulfur fuel oil. Fuel was transportation grade diesel fuel with specifications below the maximum sulfur content limit compared to current transportation grade limit of 15 ppm sulfur [Response# 6, Attachment#2].

7. In compliance - HFH demonstrated the permittee burned only diesel fuel with a maximum sulfur content of 15 ppm in EUENGINE12a [SC. I1.2]. Response from HFH indicated the fuel was transportation grade diesel which has specifications below the maximum sulfur content of 15 ppm [Response# 7, Attachment#2].

8. In compliance - HFH demonstrated the permittee operated EUENGINE12a in accordance with its manufacturer's written instructions or by operating procedures developed by the permittee that were approved by the manufacturer [SC. III.1]. Response from HFH indicated the facility operated and maintained the unit following procedures that met or exceeded the manufacturer's instructions [Attachment 3].

9. In compliance - HFH demonstrated permittee did not change or revise the operating instructions, procedures or settings for EUENGINE12a unless permitted by the manufacturer in writing [SC.III.2]. Response from HFH stated HFH did not change or revise the operating instructions, procedures or setting for this unit [Response# 9].

10. In compliance -HFH demonstrated permittee did not operate EUENGINE12a for more than 100 hours per engine per 12-month rolling time period as determined at the end of each calendar month during maintenance checks and readiness testing, and not more than a total of 500 hours of operation per 12 - month rolling time period as determined at the end of each calendar month **[SC. III.3].** Response from HFH stated that the condition was met. Recordkeeping forms indicate the unit was run for 14.3 hours from January 2014 to December 2014. The hours of operations were below the limit [Attachment# 4].

11. In compliance- HFH demonstrated permittee operated EUENGINE12a in accordance with manufacturer's recommendations for safe and proper operation to maximize emissions during periods of start - up, shut down and malfunction **[SC. III.4].** Response for HFH indicated the facility operated EUENGINE12a in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of start-up, shut down and malfunction. HFH operated and maintained the unit by procedures that met or exceeded the manufacturer's instructions [Attachment# 3].

12. In compliance- HFH demonstrated the nameplate capacity from EUENGINE12a did not exceed 2000 kW with heat input of 20 MMBtu/hr.hr **[SC. III.5].** Response from HFH stated the condition was met [Attachment# 1]. The inspector visually inspected and confirmed the nameplate on EUENGINE12a did not exceed 2000KW with rated heat input 20 MMBtu/hr.

13. In compliance – HFH demonstrated permittee equipped the EUENGINE12a with a non-resettable hour meter to track the number of operating hours [SC. VI.1]. Response from HFH stated condition was met. This unit and all emergency generators were equipped with non-resettable hour meters [Attachment# 5].

14. In compliance –HFH did not need to demonstrate permittee ensured the EUENGINE12a particulate filter complied with SC I.3, and was installed with a backpressure monitor that

notifies the owner/operator when the high backpressure limit of the engine was approached **[SC. VI.2]]**. Response from HFH stated no filter was installed or necessary [Response# 14].

15. In compliance – HFH demonstrated permittee monitored the hours of operation of EUENGINE12a on monthly basis in a manner that was acceptable to the District Supervisor, Air Quality Division **[SC. VI.3]**. Response from HFH stated the condition was met. Response is same as in Question# 10 [Response# 15].

16. In compliance – HFH demonstrated permittee kept, in satisfactory manner, the following records on file and ready to make it available to the Department upon request:

(a) Presented engine certification according to 40 CFR Part 89 or Part 94, as applicable, for the same engine model year and maximum and engine power. The engine must be installed and configured according to the manufacturer's specifications. **[SC. VI.4a]**. Compliance was based on the manufacturer's guarantees [Attachment# 6]

(b) Presented records of performance test results for each pollutant for a test conducted on a similar engine, and the test must have been conducted correctly using the same methods specified in 40 CFR part 60, Subpart IIII **[SC. VI.4b]**. Compliance was based on the manufacturer's guarantees [Attachment# 6]. .

(c) Presented records of engine manufacturer data indicating compliance with these standards **[SC. VI.4c]**. Compliance was based on the manufacturer's guarantees [Attachment# 6].

(d) Provided records of control device vendor data indicating compliance with these standards, as applicable **[SC. VI.4d]**. Compliance was based on the manufacturer's guarantees [Attachment# 6]

(e) Conducted an initial test to demonstrate compliance with emission standards according to the requirements of 60.4212, as applicable **[SC. VI.4e]**. Compliance was based on the manufacturer's guarantees [Attachment# 6].

17. In compliance - HFH demonstrated permittee kept records of sulfur content, in percent by weight, of the fuel oil; and Permittee kept a separate record of the sulfur content for each shipment of the fuel oil received; all records were kept on file for a period of at least five years and available at the Department upon request **[SC.VI.5]**. Response from HFH stated condition was met. Response was same as in Question# 7 [Response# 17].

18. In compliance – HFH demonstrated permittee promptly reported deviations pursuant to general Conditions 21 and 22 parts A **[SC.VII.1]**. Response from HFH presented ROP

Certification and Deviation Reports along with the certified mail receipts in compliance with the deadlines for submittal [Attachment# 7].

19. In compliance – HFH demonstrated permittee performed Semiannual reporting of monitoring and deviations pursuant to general Condition 23 of Part; the report was postmarked or received by appropriate AQD District office by March 15 for reporting period July 1 to December 31; and September 15 for reporting period January 1 to June 30 **[SC. VII.2].** Response was same as in Question# 18 [Response# 19].

20. In compliance –HFH demonstrated permittee performed Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A; the report was postmarked or received by appropriate AQD District office by March 15 for the previous calendar year **[SC. VII.3].** Response was same as in Question # 19 [Response# 20].

21. In compliance- HFH demonstrated within 30 days of after completion of the installation, construction, reconstruction, relocation, or modification authorized by the Permit to Install, the permittee or the authorized agent pursuant to Rule 204 notified the AQD District Supervisor, in writing of the composition of the activity, and the completion of installation, construction, reconstruction, relocation, or modification occurred not later than commencement of trial operation of EUENGINE12a **[SC. VII.4].** Response from HFH stated condition was met. This unit folded into ROP from previous permit [Response# 21].

22. In compliance – HFH demonstrated exhaust gases from stack SVENGINE12a were discharged unobstructed vertically upwards to the ambient air unless otherwise noted **[SC. VIII.1].** Response from HFH indicated condition was met. Visual inspection confirmed the assessment **[Response# 22].**

23. In compliance -HFH demonstrated permittee complied with all applicable requirements of New Source Performance Standards for Diesel Fired reciprocating Internal Combustion Engines by compliance date(s) specified in the standards **[SC. IX].** Response from HFH stated condition was met. The unit had non-settable hour meter, operated as emergency generator, and operated and maintained in accordance with manufacturer's specification [Attachment# 8-Summary sheet].

24. In compliance- HFH demonstrated the emission of Ethylene Oxide NOx in the EUTOSTER1 did not exceed 0.006 lb. /hr. based on hourly averaging **[SC. I.1].** Response from HFH stated the facility operated in compliance. The sterilizer used 0.22 lbs. of Ethylene Oxide in a cycle. An exhaust cycle lasted 1.5 hours. Therefore 0.22 lbs. /1.5 hours with control efficiency of 99% equaling 0.00014 lbs./hr.[Response# 24].

25. In compliance – HFH demonstrated the emission of Ethylene Oxide in the EUTOSTER1 did not exceed 0.0001 ton/month based on monthly combination of all sterilization process **[SC. I.2].** HFH stated the facility operated in compliance. The emission of Ethylene Oxide in the EUTOSTER1 was 0.000001 ton/month [Attachment 10].

26. In compliance –HFH demonstrated the emission of Ethylene Oxide in the EUTOSTER did not exceed 0.141 lb. /month based on monthly combination of all sterilization processes **[SC. I.3]**. HFH stated the facility operated in compliance [Attachment# 10].

27. In compliance – HFH did not need to demonstrate the emission of HCFC in the EUTOSTER1 did not exceed 62.3 lbs. /hr. based on monthly combination of all sterilization processes **[SC. I.4]**. HFH stated the Sterilizer used only 100% ETO [Response# 27].

28. IN compliance – HFH did not need to demonstrate the emission of HCFC in the EUEUTOSTER1 did not exceed 0.75 tons/hr. based on monthly combination of all sterilization processes **[SC. I.5]**. Response was same as in Question# 27 [Response # 28].

29. In compliance- HFH demonstrated the use of Ethylene Oxide in the EUTOSTER1 did not exceed 6.5 lbs. /day based on daily basis **[SC. II.1]**. Response from HFH stated the condition was met. The use of ETO was 0.22 lbs. per day [Attachment# 10].

30. In compliance –HFH demonstrated the use of Ethylene Oxide in the EUTOSTER1 did not exceed 141.1lbs./month bases on monthly combination of all sterilization processes **[SC. II.2]**. Records submitted by HFH indicated the maximum amount of Ethylene Oxide used in the EUTOSTER1 was 3.52 lbs. in October, 2014 [Attachment# 10, Response# 30].

31. In compliance - HFH did not need to demonstrate the use of HCFC in the EUTOSTER1 did not exceed 69.23 lb. /day based on daily basis [SC. II.3]. Response was same as in Question#27.

32. In compliance – HFH did not need to demonstrate the use of HCFC in the EUTOSTER1 did not exceed 1,500 lb. /month based on monthly combination of all sterilization processes [SC. II.4]. Response was same as in Question# 31.

33. In compliance – HFH demonstrated the permittee did not operate the EUTOSTER1 or AERATOR(s) unless the catalytic oxidizer was installed, maintained, and operated properly according to the manufacturer's specifications. Note that proper required a minimum of 99% reduction by weight of ethylene oxide emissions to the atmosphere, and a copy of the manufacturer's specifications for the control device should be maintained on file **[SC. III.1]**. HFH stated the ETO catalytic oxidizer was installed interactively programed to be operational only when the Sterilizer was in use and working properly.

34. In compliance –HFH demonstrated the permittee did not operate the sterilizer (s) and/or aerator unless a closed loop recirculating fluid vacuum pump, an air ejector system or other method of drawing a vacuum and evacuating the sterilizer chamber that prevented the discharge of any ethylene oxide to a waste water stream was installed and operating properly

[SC. III.2]. Response from HFH stated the Sterilizer was an AMSCO Eagle 3017 type that discharged no waste water [Response# 34].

35. In compliance – HFH demonstrated permittee used a sterilant gas, which consisted of 100% ethylene oxide or an ethylene oxide/inert gas mixture. Note that acceptable inert gases include 2-chloro-1, 1, 1, 2-tetrafluoroethane (HCFC-124, carbon dioxide, or and HCFC blend, which included only toxic air contaminants for which the initial threshold screening level (ITSL) was equal to or greater than 5000 micrograms per cubic meter on a 24 hour average **[SC. III.3].** Response from HFH indicated the Hospital used canisters marked with 100% ETO [Response# 35].

36. In compliance - HFH demonstrated the permittee operated Ethylene oxide sterilizers with a capacity that did not exceed 30 cu. ft. associated aeration equipment and a pollution control device **[SC. IV.1].** Response from HFH stated the condition was met. The ETO listed in the permit application dscribed as AMSCO 50 CFM Disposer for Eagle Model 3017 EQ Sterilizer/Aerator had the sterilizer with capacity 4.8 cubic feet. ETO specifications are listed in attachment# 9 -Supplement showing capacity limit of 4.8 cubic ft.

37. In compliance – HFH demonstrated the permittee operated catalytic oxidizer that was guaranteed by the manufacturer to reduce ethylene oxide emissions by at least 99.9% **[SC. IV.2].** Response from HFH stated condition was met. In ETO Disposer, a single AMSCO 50 CFM Disposer served the ESTOSTER1 [Attachment# 11].

38. In compliance- HFH did not need to demonstrate permittee tested ethylene oxide emissions and control device efficiency within 60 days as requested by AQD (if applicable), and tests results were submitted to the Division within 60 days following the last date of the test **[SC. V.1].** Response from HFH stated no testing was requested from DEQ-AQD. AQD confirmed there was no cause for the request to be made during the compliance period.

39. In compliance – HFH demonstrated permittee maintained daily and monthly sterilant usage data including the amount in pounds per cycle of ethylene oxide and any inert gas used **[SC. VI.1].** Response from HFH stated daily and monthly tracking was shown on the forms in Attachment# 10 [Response# 39].

40. In compliance – HFH demonstrated permittee calculated monthly emissions of ethylene oxide in pounds as outlined in Appendix 7 **[SC. VI.2].** Response from HFH stated condition was met. Response was same as in Question# 39].

41. In compliance - HFH demonstrated permittee monitored an operating parameter of the control device, based on either manufacturer's specifications or performance test, which assured at least 99.9% reduction of ethylene oxide emissions and a copy, was maintained on file **[SC. VI.3]**. Response from HFH was same as in Question# 33.

42. In compliance -HFH demonstrated, for processes controlled by a catalytic oxidizer, permittee continuously monitored the oxidation temperature at the outlet to the catalyst bed **[SC. VIa].** Response from HFH stated the condition was met. The ETO general permit from MDEQ stated February 12, 2004-changed the format of the special conditions and removed the temperature recording requirement for catalytic oxidizers. HFH added that most catalytic oxidizers monitor the catalyst bed temperature and prevent operation or further introduction of ETO if the operating temperature was low. HFH probably need to aply for a PTI to operate under the new conditions.

43. In compliance – HFH demonstrated permittee recorded date, duration, and description of any malfunction of the equipment of the control equipment, any maintenance performed, any replacement of catalyst or scrubber liquor, or any testing results **[SC. VI.4].** Response from HFH stated the condition was met. ETO system maintenance documentation was provided [Attachment # 12].

44. In compliance – HFH demonstrated permittee recorded the date and description of any malfunction or new installation of a sterilizer, aerator or control device **[SC. VI.5].** Response from HFH stated condition was met. There has been no new installation of ETO stabilizer, aerator or control device [Attachment# 12; Response# 44].

45. In compliance –HFH demonstrated the permittee kept, in a satisfactory manner, operating records on file and made available to the AQD Supervisor upon request **[SC. VI.6].** Response was same as in Question# 44.

46. In compliance – HFH demonstrated permittee promptly reported deviations pursuant to general Conditions 21 and 22 of part A **[SC. VII.1].** Response from HFH was same as in Question# 18.

47. In compliance – HFH demonstrated permittee reported Semiannual monitoring and deviations pursuant to general Condition 23 of Part A, and report should have been postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January to June 30 **[SC. VII.2].** Response was same as in Question# 46].

48. In compliance –HFH demonstrated permittee reported Annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and the report should have been postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year **[SC. VII.3].** Response from HFH was same as in Question# 46].

49. In compliance - HFH demonstrated the exhaust stack gases from stack SVSTACK listed in the ROP was discharged unobstructed vertically upwards to the ambient air unless otherwise noted **[SC. VIII.1].** Response from HFH stated condition was met. Visual inspection confirmed the assessment.

EUWPAVGEN8

50. In compliance – HFH demonstrated the maximum amount of SO2 emission from EUWPAVGEN8 did not exceed 0.33 lb. /MMBTU heat input based on instantaneous assessment **[SC. I.1].**]. Response from HFH was same as in Question# 17.

51. In compliance - HFH demonstrated the permittee burned distillate oil with a maximum sulfur [SC. I.2]. Response from HFH was same as in Question# 50.

52. In compliance – HFH demonstrated content of sulfur in the fuel oil used in EUWPAVGEN8 did not exceed 0.30% by weight **[SC.II 1].** Response was same as in Question# 51.

53. In compliance-HFH demonstrated permittee did not use more than 58,500 gallons of distillate oil per 12-month rolling time period as determined at the end of each calendar month, and a written record of the fuel usage was kept on file for a period of at least five years to be made available to the AQD upon request **[SC. II.2].** Response from HFH stated the condition was met. The unit used 652 gallons in 2014 [Response# 53].

54. In compliance – HFH demonstrated permittee did not operate EUWPAVGEN8 for more than 500 hours per 12 month rolling time period as determined at the end of each calendar month, and a written log of hours of operation were kept on file for a period of at least five years to be made available to the AQD upon request **[SC. III.1].** Response from HFH the stated condition was met. The unit operated 14 hours for testing only in the months of January through December 31, 2014 [Attachment# 4].

55. In compliance - HFH demonstrated permittee operated the emergency generator only at such times when all or portion of the normal electric power was interrupted or during periods of maintenance checks and operator training **[SC. III.2]**. Response from HFH stated the condition was met. Attachment# 4 reflects the records of operations and events.

56. In compliance - HFH demonstrated permittee maintained monthly records of the sulfur content of distillate oil on file **[SC. VI.1].** Response from HFH stated the condition was met. Response was same as in Question# 6 [Response# 56].

57. In compliance –HFH demonstrated permittee promptly reported deviations pursuant to General Conditions 21 and 22 of Part A **[SC. VII.1].** Response from HFH was same as in Question# 19 [Response# 57].

58. In compliance - HFH demonstrated permittee reported Semiannual monitoring and deviations pursuant to Condition 23 of Part A, the report postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for

reporting period January to June 30 **[SC. VII.2]** Response from HFH was same as in Question# 57.

59. In compliance – HFH demonstrated permittee reported annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and report postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year **[SC. VII.3].** Response was same as in Question# 57.

60. In compliance – HFH demonstrated the exhaust gases from SVSTACK in EUWPAVGEN8 were discharged unobstructed vertically upwards to the ambient air unless otherwise noted **[SC. VIII.1].** Response from HFH stated the condition was met. Visual inspection confirmed the assessment.

EUBUNITGEN

61. In compliance – HFH demonstrated the maximum emission of NOx in EUBUNITGEN was 13.8 lb. /hr. based on hourly emissions **[SC. I.1].** Response from HFH indicated compliance. The performance data submitted by HFH indicated the highest NOx emission at normal speed of 1800 RPM was 7.28 lb'hr.[Attachment# 15 Pg. 4].

62. In compliance - HFH demonstrated the maximum emissions of NOx in EUBUNITGEN was 3.5 tpy based on annually emissions **[SC. I.2].** Response from HFH stated the condition was met. Emissions of NOx were 0.1 tons per year based on the annual emission calculations (January1 through December 31) [Attachment# 4].

63. In compliance - HFH demonstrated the maximum emissions of SO2 in EUBUNITGEN were 1.0 lb. /hr. based on hourly emissions **[SC. I.3].** Response from HFH indicated the the SO2 emissions reported sa Particulate Matter was 0.39 lb/hr. [Attachment # 15, page 4].

64. In compliance – HFH demonstrated the maximum emissions of SO2 in EUBUNITGEN were 0.25 lb. /hr. based on annually emissions **[SC. I.4].** Calculations made from data provided by HFH indicated the highest SO2 annual emissions ampounted to 0.0000 (0.000000013 exact) tpy [Attachment# 4].

65. In compliance - HFH demonstrated permitttee met the specifications and requirements of 40 CFR 80.510(b) for all current diesel fuels **[SC. II.1].** Response from HFH stated the condition was met through fuel receipts and assays depicting deliveries of dyed ultra low sulfur fuel oil grade (diesel) that fared below 15 ppm sulfur content (Response# 65, Attachment# 2).

66. In compliance - HFH demonstrated the permitttee only burned diesel fuel with a maximum sulfur content of 15 ppm in EUBUNITGEN **[SC. II.2].** Response# 66 from HFH indicated the

facility burned the dyed ultra low sulfur diesel fuel with maximum sulfur content 0f 15 ppm. Attachment# 2 list deliveries of the ultra low sulfur diesel fuel for the unit at the facility.

67. In compliance – HFH demonstrated the permitttee did not generate electricity for more than 500 hours per 12-month rolling time period, and every month's hours of electrical generation was kept on file for a period of five years and available to the AQD upon request **[SC. III.1].** Response from HFH stated the condition was met. This unit operated for 16 hours during testing only in 2014 [Attachment# 4].

68. In compliance – HFH demonstrated the permitttee maintained records of sulfur content on file for every shipment **[SC. VI.1].** Response was same as in Question# 6.

69. In compliance - HFH demonstrated permittee promptly reported deviations pursuant to General Conditions 21 and 22 of Part A **[SC. VII.1].** Response was same as in Question# 57.

70. In compliance – HFH demonstrated permittee reported Semiannual monitoring and deviations pursuant to Condition 23 of Part A, the report postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January to June 30 **[SC. VII.2].** Response was same as in Question# 57.

71. In compliance - HFH demonstrated permittee reported annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and report postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year [**SC. VII.3**]. Response was same as in in Question# 57.

72. In compliance – HFH demonstrated the exhaust gases from SVSTACK in EUBUNITGEN were discharged unobstructed vertically upwards to the ambient air unless otherwise noted **[SC. VIII.1].** Response from HFH stated the condition was met. EUBUNITGEN does not have a conventional stack, however, the EU is a stand alone unit with an exhaust pipe the discharges gases vertically upward to the ambient air.

73. In compliance - HFH demonstrated EUCLVBOILER had been removed from facility prior to this inspection visit **[SC. I.1].** Response from HFH confirmed the unit was removed from facility in April 2013. Visual inspection confirmed the removal.

FGPEAKSHAVERS

74. In compliance – HFH demonstrated the maximum emissions of NOx in FGPEAKSVAVERS did not exceed 13.5 tpy based on 12-month rolling time period as determined at the end of each calendar year **[SC. I.1].** Response from HFH stated a notification of change form was submitted to MDEQ and EPA stating the units were disengaged and longer in service in April 2013. Specifically, EUENGINE1, EUENGINE2, EUENGINE3 comprising the 3 electrical generators used for peak shaving or emergency power supply installed in 1967 were disengaged, but not yet dismantled.

75. In compliance – HFH did not need to demonstrate the sulfur content of fuel oil used in FGPEAKSHAVERS did not exceed 0.05 percent by weight based on instantaneous assessment. **[SC. II.1].** HFH stated the units were permanently out of service.

76. In compliance – HFH did not need to demonstrate permittee did not operate engines included in FGPEAKSHAVERS for more than a combined total of 1,500 hours per 12-month rolling time period as determined at the end of each calendar month **[SC. III.1].** Response was same as in Question# 75.

77. In compliance – HFH did not need to demonstrate permittee analyzed the following once during any calendar year where the fuel oil usage exceeded 5000 gallons:

    (a) Sulfur content of fuel oil **[SC. V.1a].** Response was same as in Question# 76.

    (b) Fuel oil heating value [SC. V.1b]. Response was same as in Question# 75.

78. In compliance - HFH did not need to demonstrate within 12 months of ROP issuance the permittee verified the NOx emission rates from one generator by testing at owner's expense in accordance with EPA Federal Reference Test Methods; and maintained plans to conduct second test before the end of permit term if the first test showed NOx emissions greater than 90% of the emission limit **[SC. V.2].** Response was same as in Question# 75.

79. In compliance – HFH did not need to demonstrate permittee monitored and recorded in a satisfactory manner the hours of operation for the FGPEAKSHAVERS on a monthly basis **[SC. VI.1].** Response was same as in Question# 75.

80. In compliance – HFH did not need to demonstrate that for each of the following fuel shipment permittee maintained monthly records:

    (a) Quantity of No. 2 fuel oil received in gallons **[SC. VI.2a]**. Response was same as in Question# 75.

    (b) Quantity of No. 2 fuel oil individual boiler usage in gallons **[SC. VI.2b].** Response was same as in Question# 75.

    (c) Fuel supplier certification records listing sulfur content, in weight percent, and heating value for all fuel shipments received **[SC. VI.2c].** Response was same as in Question# 75.

81. In compliance – HFH did not need to demonstrate permittee promptly reported deviations pursuant to General Conditions 21 and 22 of Part A **[SC. VII.1].** Response was same as in Question# 75.

82. In compliance – HFH did not need to demonstrate permittee reported Semiannual monitoring and deviations pursuant to Condition 23 of Part A, the report postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January to June 30 **[SC. VII.2]** Response was same as in Question# 75.

83. In compliance – HFH did not need to demonstrate permittee reported annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and report postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year **[SC. VII.3].** Response was same as in Question# 75.

84. In compliance – HFH did not need to demonstrate the exhaust gases from SVSTACK in FGPEAKSHAVERS were discharged unobstructed vertically upwards to the ambient air unless otherwise noted **[SC. VIII.1].** Response was same as in Question# 75.

FGENGINES

85. In compliance – HFH demonstrated the maximum emissions of NOx in FGENGINES were 41.1tpy based on hourly emissions **[SC. I.1].** Response from HFH stated emissions of NOx in FENGINES were 0.98 tpy based on hourly emissions monitored from January through December 2014 [Attachment# 4].

86. In compliance - HFH demonstrated the permittee did not operate EUENGINE9, EUENGINE10, and EUENGINE11 for more than 300 hours each per 12-month rolling time period as determined at the end of each calendar month **[SC. III.1].** Response from HFH stated the condition was met. EUENGINE9 operated for 21 hours. EUNGINE10 operated for 23.4 hours. EUNGINE11 operated for 12.2 hours in 2014 [Attachment# 4].

87. In compliance – HFH demonstrated permittee did not operate EUENGINE12a for more than 500 hours per 12 month rolling time period as determined at the end of each calendar month **[SC. III.2].** Response from HFH stated the condition was met. EUENGINE12a unit ran for 14.3 hours in 2014 [Attachment# 4].

88. In compliance – HFH did not need to demonstrate permittee did not operate EUENGINE 12b, EUENGINE14 for more than 500 hours each per 12-month rolling time period as determined at the end of each calendar month **[SC. III.3].** Response from HFH stated the emergency generators were not yet installed [Response # 88].

89. In compliance – HFH demonstrated permittee monitored in a satisfactory manner the hours of operation for FGENGINES on a monthly basis **[SCVI.1].** Response from HFH stated the condition was met. Recordkeeping reflected compliance [Attachment# 4].

90. In compliance – HFH demonstrated permittee completed all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition **[SC. VI.2].** Response was same as in Question# 89.

91. In compliance – HFH demonstrated permittee kept in a satisfactory manner, monthly and previous 12-month NOx emission calculation records for ENGINES as required by SC1.1, and permittee kept all records on file for a period of at least 5 years and available to the Department upon request. **[SC. VI.3].** Response was same as in Question# 89.

92. In compliance – HFH demonstrated permittee kept, in a satisfactory manner, a written log of the monthly hours of operation of FENGINES, and made it available to Department of upon request **[SC. VI.4].** Response was same as in Question# 89.

93. In compliance HFH demonstrated permittee promptly reported deviations pursuant to General Conditions 21 and 22 of Part A **[SC. VII.1].** Response is same as in Question# 82.

94. In compliance - HFH demonstrated permittee reported Semiannual monitoring and deviations pursuant to Condition 23 of Part A, the report postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January to June 30 **[SC. VII.2].** Response was same as in Question# 82.

95. In compliance - HFH demonstrated permittee reported annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and report postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year **[SC. VII.3].** Response was same as in Question# 82.

FGENGINES 9-10-11

96. In compliance – HFH demonstrated the maximum fuel oil used contained maximum sulfur content of 0.05 percent by weight based on instantaneous assessment **[SC. I.1].** Response from HFH was same as in Question# 6.

97. In compliance - HFH demonstrated permittee operated FGENGINES9-10-11 in accordance with the manufacturer's written instruction or by operating procedures developed by the permittee that were approved by the manufacturer **[SC. III.1].** Response from HFH stated the facility operated and maintained the unit following procedures that met or exceeded the manufacturer's specifications [Attachment# 3].

98. In compliance – HFH demonstrated permittee did not operate FGENGINES9-10-11 for more than 100 hours per 12-month rolling time period as determined at the end of each calendar month during maintenance and readiness testing, and not more than a total of 300 hours of operation per rolling 12-month rolling time period as determined at the end of each calendar month. **[SC. III.2].** Response from HFH stated the condition was met as in Question# 86.

99. In compliance - HFH demonstrated permittee operated each generator of FGENGINES9-10-11 in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of start-up, shutdown and malfunction **[SC III.3].** Response was same as in Question# 97.

100. In compliance – HFH demonstrated the nameplate capacity from EUENGINE9 did not exceed 1600 Kw with heat input of 15 MMBtu/hr.hr **[SC. III.4].** Response from HFH stated condition was met. Inspection indicated the name plate carried 1600 KW with heat input 15 MMBtu/hr.r. However, the Company stated manufacturer's specifications were not provided [Attachment# 16].

101. In compliance - HFH demonstrated the nameplate capacity from EUENGINE10 did not exceed 750 Kw with heat input of 7 MMBtu/hr.hr **[SC. III.5].** Response from HFH stated condition was met. Inspection indicated the name plate carried 750 KW with heat input 7 MMBtu/hr.hr. The manufacturer's specification was submitted [Attachment# 17].

102. In compliance – HFH demonstrated the nameplate capacity from EUENGINE11 did not exceed 1600 Kw with heat input of 900 MMBtu/hr.hr **[SC. III.6].** Response from HFH stated condition was met. Inspection indicated the name plate carried 1600 KW with heat input of 900 MMBtu/hr.r. The manufacturer's specification was submitted [Attachment# 17].

103. In compliance – HFH demonstrated permittee equipped each generator of FGENGINES9-10-11 with a non-resettable hour meter to track the number of operating hours **[SC. VI.1].** Response from HFH stated the condition was met. The units were installed with non-resettable meters [Response# 103].

104. In compliance- HFH demonstrated permittee promptly reported deviations pursuant to General Conditions 21 and 22 of Part A **[SC. VII.1].** Response from HFH was same as in Question# 93.

105. In compliance – HFH demonstrated permittee reported Semiannual monitoring and deviations pursuant to Condition 23 of Part A, the report postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January to June 30 **[SC. VII.2].** Response was same as in Question# 93.

106. In compliance – HFH demonstrated permittee reported annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and report postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year **[SC. VII.3].** Response was same as in Question# 93.

107. In compliance - HFH demonstrated permittee notified the AQD District Supervisor in writing of completion of the installation, construction, reconstruction, relocation, or modification authorized by this permit within 30 days after completion **[SC. VII.4].** Response from HFH stated the condition was met. These units were part of an earlier PTI. AQD acknowledges the assessment.

108. In compliance - HFH demonstrated the exhaust gases from SVSTACK in FGENGINES were discharged unobstructed vertically upwards to the ambient air unless otherwise noted **[SC. VIII.1].** Response from HFH stated the condition was met. Visual inspection confirmed the assessment.

FGENGINES12b & 14 [If installed]

109. In compliance – HFH did not need to demonstrate the maximum emissions of NMHC +NOx in FGENGINES12b & 14 did not exceed 6.4 g/Kw-hr.hr based on emissions test method **[SC. I.1].** Response from HFH stated the units were not yet installed [Response# 109].

110. In compliance – HFH did not need to demonstrate the maximum emissions of CO in FGENGINES12b & 14 did not exceed 3.5 g/Kw-hr.hr based on emissions test method **[SC. I.2].** Response from HFH was same as in Question# 109.

111. In compliance – HFH did not need to demonstrate the maximum emissions of PM in FGENGINES12b & 14 did not exceed 0.2 g/Kw-hr.hr based on emissions test method **[SC. I.3].** Response from HFH was same as in Question# 109.

112. In compliance - HFH did not need to demonstrate permittee met the specifications and requirements of 40 CFR 80.510 for the entire current diesel fuels use **[SC. II.1].** Response from HFH was same as in Question# 109.

113. In compliance – HFH did not need to demonstrate permittee burned only diesel fuel with a maximum sulfur content of 15 ppm in FENGINES12b & 14 **[SC. II.2].** Response from HFH was same as in Question# 109.

114. In compliance- HFH did not need to demonstrate permittee operated EUENGINES12b & 14 in accordance with its manufacturer's written instructions or by operating procedures developed by the permittee that were approved by the manufacturer **[SC. III.1].** Response from HFH was same as in Question# 109.

115. In compliance – HFH did not need to demonstrate permittee did not change or revise the operating instructions, procedures or settings for EUENGINES12b & 14 unless permitted by the manufacturer in writing **[SC. III.2].** Response from HFH was same as in Question# 109.

116. In compliance – HFH did not need to demonstrate permittee did not operate FGENGINES12b & 14 for more than 100 hours per engine per 12-month rolling time period as determined at the end of each calendar month during maintenance checks and readiness testing and not more than a total of 500 hours of operation per rolling time period as determined at the end of each calendar month **[SC. III.3].** Response from HFH was same as in Question# 109.

117. In compliance – HFH did not need to demonstrate permittee operated FGENGINES12b & 14 in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of start-up, shutdown and malfunction **[SC. III.4].** Response from HFH was same as in Question# 109.

118. In compliance – HFH did not need to demonstrate the nameplate capacity from EUENGINE12b did not exceed 2000 Kw with heat input of 20 MMBtu/hr.hr **[SC. III.5].** Response from HFH was same as in Question# 109.

119. In compliance – HFH did not need to demonstrate the nameplate capacity from EUENGINE14 did not exceed 2000 Kw with heat input of 20 MMBtu/hr.hr **[SC. III.6].** Response from HFH was same as in Question# 109.

120. In compliance – HFH did not need to demonstrate permittee equipped each generator of FGENGINES12b & 14 with a non-resettable hour meter to track the number of operating hours **[SC. VI.1].** Response from HFH was same as in Question# 109.

121. In compliance – HFH did not need to demonstrate if FGENGINES12b & 14 contained a diesel particulate filter to comply with SC. 1.3 the filter was installed with a backpressure monitor that notified the owner/operator when the high backpressure limit of the engine was approached **[SC. VI.2].** Response from HFH was same as in Question# 109.

122. In compliance – HFH did not need to demonstrate permittee monitored the hours of operation of EUENGINE12b and 14 on a monthly basis in a manner that was acceptable to the District Supervisor, Air Quality Division **[SC. VI.3].** Response from HFH was same as in Question# 109.

123. In compliance – HFH did not need to demonstrate permittee kept in a satisfactory manner, the following records on file and made available to the Department upon request:

(a) Engine certification according to 40 CFR Part 89 or Part 94, as applicable, for the same engine model year and maximum engine power; and the engine must have been installed and configured according to the manufacturer's specifications **[SC. VI.4a].** Response from HFH was same as in Question# 109.

(b) Records of performance test results for each pollutant for a test conducted on a similar engine; and the test must have been conducted correctly and using the same methods specified in 40 CFR Part 60, Subpart IIII **[SC. VI.4b].** Response from HFH was same as in Question# 109. .

(c) Records of engine manufacturer data indicating compliance with these standards **[SC. VI.4c].** Response from HFH was same as in Question# 109.

(d) Records of control device vendor data indicating compliance with these standards as applicable **[SC. VI.4d].** Response from HFH was same as in Question# 109.

(e) Conduct an initial test to demonstrate compliance with the emission standards according to the requirements of 60.4212, as applicable **[SC. VI.4e].** Response for HFH was same as in Question# 109.

124. In compliance- HFH did not need to demonstrate permittee kept records of the sulfur content in percent by weight of the fuel oil; and permittee kept a separate record of the sulfur content for each shipment of the fuel oil received; and all records were kept on file for a period of at least five years to be made available to the Department upon request **[SC. VI.5].** Response from HFH was same as in Question# 109.

125. In compliance – HFH did not need to demonstrate permittee promptly reported deviations pursuant to General Conditions 21 and 22 of Part A **[SC. VII.1].** Response for HFH was same as in Question# 109.

126. In compliance – HFH did not need to demonstrate permittee reported Semiannual monitoring and deviations pursuant to Condition 23 of Part A, the report postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January to June 30 **[SC. VII.2].** Response from HFH was same as in Question# 109.

127. In compliance – HFH did not need to demonstrate permittee reported annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and report postmarked or

received by appropriate AQD District Office by March 15 for the previous calendar year **[SC. VII.3].** Response from HFH was same as in Question# 109.

128. In compliance – HFH did not need to demonstrate permittee notified the AQD District Supervisor in writing of completion of the installation, construction, reconstruction, relocation, or modification authorized by this permit within 30 days after completion **[SC. VII.4].** Response from HFH was same as in Question# 109.

129. In compliance – HFH did not need to demonstrate the exhaust gases from SVSTACK in FGENGINES were discharged unobstructed vertically upwards to the ambient air unless otherwise noted **[SC. VIII.1].** Response from HFH was same as in Question# 109.

FGBOILERS

130. In compliance – HFH demonstrated the maximum NOx emissions in FGBOILERS did not exceed 35.4 tpy based on emissions 12-month rolling time period as determined at the end of each calendar month **[SC. I.1].** Response from HFH stated the condition was met. Monthly emissions of FGBOILERS were calculated and shown on the emissions page of the emission tracking form [Attachment# 4]. As long as all monthly emissions fell below 2.9 tons per month, annual rolling sum emissions were below the rolling sum of 35.4 tons per year as permitted. The report for each month indicated that rolling sum emissions fell under compliance status indicating that rolling sum emissions were in compliance. During the 12-month period January 1-December 31, the maximum emissions wee 8.21 tons for 2014.

131. In compliance – HFH demonstrated the fuel oil burned in FGBOILERS had maximum sulfur content of that did not exceed 0.03 percent by weight based on instantaneous assessment **[SC. II.1]**. Response from HFH stated the condition was met. Response was same as in Question# 6.

132. In compliance - HFH demonstrated the amount of fuel oil burned in FGBOILERS did not exceed 1,234,000 gallons/yr. based on 12-month rolling time period **{SC. II.2].** Response from HFH stated the condition was met. For the 12-month period ending Dec 2014, calculated FGBOILERS fuel oil burned 652 gallons.

133. In compliance – HFH demonstrated the amount of natural Gas burned in FGBOILERS did not exceed 1,515,480,000 cu. ft./yr. based on 12-month rolling time period **[SC. II.3].** Response from HFH stated the condition was met. For the 12 month period ending December 31, 2014, calculated FGBOILERS natural gas usage was 431,443,300 cubic feet.

134. In compliance - HFH demonstrated permittee monitored in a satisfactory manner the natural gas and fuel oil usage from FGBOILERS on a monthly basis **[SC. VI.1].** Response from HFH stated the condition was met. Monthly monitoring of fuel oil and natural gas use for FGBOILERS were recorded and shown on the emission tracking form [Attachment# 4].

135. In compliance - HFH demonstrated permittee kept, in a satisfactory manner the monthly and previous 12-month NOx emission calculation records for FGBOILERS, as required by SC. I.1; and permittee kept all records on file for at least a period of five years for making it available to the Department upon request **[SC. VI.2].** Response from HFH stated the condition was met. Monthly monitoring of NOx emissions for FGBOILERS were recorded and shown on the Emission Tracking form [Attachment# 4].

136. In compliance – HFH demonstrated permittee kept, in a satisfactory manner the monthly natural gas and fuel oil records for FGBOILERS for a period of at least five years for making it available to the Department upon request **[SC. VI.3].** Response from HFH stated the condition was met. Monthly monitoring of fuel oil and natural gas use for FGBOILERS were recorded and shown on the Emission Tracking Form [Attachment# 4].

137. In compliance – HFH demonstrated permittee kept, in a satisfactory manner, fuel oil Supply certification for each delivery of fuel. The certification included the name of the fuel oil supplier and a statement from the fuel oil supplier; and the fuel oil complied with the specifications under the definitions of distillate oil in 40 CFR 60.41c **[SC. 2.9].** Response from HFH was same as in Question# 6.

138. In compliance – HFH demonstrated permittee promptly reported deviations pursuant to General Conditions 21 and 22 of Part A **[SC. VII.1].** Response from HFH was same as in Question# 6.

139. In compliance -Please demonstrated permittee reported Semiannual monitoring and deviations pursuant to Condition 23 of Part A, the report postmarked or received by appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January to June 30 **[SC. VII.2]** Response from HFH was same as in Question# 109.

140. In compliance - HFH demonstrated permittee reported annual certification of compliance pursuant to general Conditions 19 and 20 of Part A, and report postmarked or received by appropriate AQD District Office by March 15 for the previous calendar year **[SC. VII.3].** Response from HFH was same as in Question# 109.

141. In compliance - HFH demonstrated permittee notified the AQD District Supervisor in writing of completion of the installation, construction, reconstruction, relocation, or modification authorized by this permit within 30 days after completion **[SC. VII.4].** Response from HFH was same as in Question# 109.

142. In compliance – HFH confirmed the Stack height for SVBOILERS was 75.8 feet above ground level [SC. VIII.1]. Visual inspection confirmed the assessment.

Permit# 179-14: 1474 BHP diesel fueled engine driving a 1000 KW emergency generator [If installed]

143. In compliance – HFH did not need to demonstrate the NMHC + NOx emission from EUENGINE15 did not exceed 6.4 g/kW-hr [SC. I.1]. Response from HFH stated the installation of unit was not complete [Response# 143].

144. In compliance – HFH did not need to demonstrate the CO emission from EUENGINE15 did not exceed 3.5 g/kW-hr [SC. I.2]. Response from HFH stated the installation of unit was not complete [Response# 144].

145. In compliance - HFH did not need to demonstrate the PM emission from EUENGINE15 did not exceed 6.4 g/kW-hr [SC. I.3]. Response from HFH stated the installation of unit was not complete [Response# 145].

146. In compliance – HFH did not need to demonstrate permittee burned only diesel fuel in EUENGINE15 with the maximum sulfur content of 15 ppm (0.0015) by weight and a minimum Cetane Index of 40 or a maximum aromatic content of 35 volume percent [SC. II.1]. Response from HFH stated the installation of unit was not complete [Response# 146].

147. In compliance – HFH did not need to demonstrate permittee did not operate EUENGINE for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 500 hours included the hours for the purpose of necessary maintenance checks and readiness testing as described in SC. III.2 [SC.III.1]. Response from HFH stated the installation of unit was not complete [Response# 147].

148. In compliance – HFH did not need to demonstrate permittee did not operate EUENGINE15 for more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing for the reason that the tests were recommended by Federal, State, or Local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine [SC. III.2]. Response from HFH stated the installation of unit was not complete [Response# 148].

149. In compliance – HFH did not need to demonstrate, if permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, subpart IIII, for the same model year and maximum engine power, and the permittee met the following requirements for EUENGINE15:.

(a) Operated and maintained the certified engine and control device according to the manufacturer's emission-related written instructions [SC. III.3 (a)] [SC. III.3 (a)]. Response from HFH stated the installation of unit was not complete [Response# 149].

(b) Changed only those emission-related settings that were permitted by the manufacturer, and [SC.III.3 (b)]. Response from HFH stated the installation of unit was not complete [Response# 149a].

(c) Met the requirements as specified in 40 CFR 89, 94, and/or 1068 as they applied to HFH. Failure to produce a certificate would render the engine a non-certified engine [SC.III.3c]. Response from HFH stated the installation of unit was not complete [Response# 149b].

150. In compliance - HFH did not need to demonstrate permittee purchased a non-certified engine or certified engine operating in a non-certified manner, and kept a maintenance plan for EUENGINE15, maintained and operated each engine in a manner consistent with good air pollution control practice for minimizing emissions [SC.III.4]. Response from HFH stated the installation of unit was not complete [Response# 150].

151. In compliance - HFH did not need to demonstrate permittee equipped and maintained each EUENGINE 15 with non-resettable hour's meters to track the operating hours [SC.IV.1]. Response from HFH stated the installation of unit was not complete [Response# 151].

152. In compliance- HFH did not need to demonstrate the nameplate capacity of EUENGINE15 did not exceed 1474 BHP as certified by the equipment manufacturer [SC. IV.2]. Response from HFH stated the installation of unit was not complete [Response# 152].

153. In compliance - HFH did not need to demonstrate permittee conducted initial performance test for EUENGINE15 within 1 year after start-up of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 unless the engines had been certified by the manufacturer and the permittee maintained the engine as required by 40 CFR Part 60, Subpart IIII, and submitted notifications and results according to protocol to the AQD [SC. V.1]. Response from HFH stated the installation of unit was not complete [Response# 153].

154. In compliance – HFH did not need to demonstrate permittee kept, in a satisfactory manner, records of testing, required in SC. V1 or manufacturer certification documentation indicating that EUENGINE15 met the applicable requirements contained in the federal standards of performance for new sources 40 CFR Part 60, Subpart IIII, and kept records on file even if the engine became uncertified [SC. VI.2]. Response from HFH stated the installation of unit was not complete [Response# 154].

155. In compliance – HFH did not need to demonstrate that permitttee kept records even if EUENGINE15 did not meet the standard set in 40 CFR 60, Subpart IIII applicable to non-emergency engines of operation hours recorded through non-resettable meters [SC. VI.3]. Response from HFH stated the installation of unit was not complete [Response# 155].

156. In compliance – HFH did not need to demonstrate permittee monitored and recorded the total hours of operation for EUENGINE 15, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality division [SC. VI.4]. Response from HFH stated the installation of unit was not complete [Response# 156].

157. In compliance – HFH demonstrated permittee kept, in a satisfactory manner, fuel sample test data, for each delivery of diesel fuel oil used in EUENGINE15, demonstrating the fuel met the requirement of 40 CFR 80.510(b). The certification or test data included the name of the oil supplier or laboratory, sulfur content, and Cetane index or aromatic content of the fuel oil [SC. VI.5]. Response from HFH stated the installation of unit was not complete [Response# 157].

158. In compliance – HFH did not need to demonstrate within 30 days after completion of the installation, construction, reconstruction, relocation, or modification of EUENGINE15 authorized by this Permit to install, permittee, pursuant to Rule 204, notified the AQD District Supervisor, in writing, of the completion of the activity [SC. VII.1]. Response from HFH stated the installation of unit was not complete [Response# 158].

159. In compliance- HFH did not need to demonstrate permittee submitted a notification specifying whether EUENGINE15 would be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation [SC. VII.2]. Response from HFH stated the installation of unit was not complete [Response# 159].

160. In compliance – HFH did not need to demonstrate the exhaust gases from Stack SVENGINE15 were discharged unobstructed vertically upwards to the ambient air [SC. VIII.1]. Response from HFH stated the installation of unit was not complete [Response# 160].

161. In compliance – HFH did not need to demonstrate permittee complied with the provisions of the federal standards of performance for new stationary sources as specified in 40 CFR Part 60, Subpart IIII as they apply to EUENGINE15 [SC. IX.1]. Response from HFH stated the installation of unit was not complete [Response# 161].

162. In compliance – HFH did not need to demonstrate permittee complied with the provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they applied to EUENGINE15 [SC. IX.2]. Response from HFH stated the installation of unit was not complete [Response# 162].

Inspection Areas of Focus:

1. Boilers: At the time of inspection, two out the three boilers were operating. One was on standby. The area around the boilers was up-kept. There were no open containers holding organic liquids in the area.
2. Stacks/Main stack opacity; at the time of inspection, the stacks that were active discharged gases vertically upward un-obstructively to the ambient. There was no visible opacity from stacks.
3. No. 2 Fuel oil storage tanks. The area around # 2 storage tanks was clean. The tank had a metering gauge for quantification and tracking of fuel usage.
4. Record keeping- the record keeping was adequate. HFH kept records manually in a central file vault. Data acquisition involving engines and boilers was monitored digitally using process logic controls.
5. Emission Units; Emission units that were already installed were maintained in satisfactory manner. The hygiene around the equipment was adequate.
6. EUENGINE15-the engine was under installation process
7. The EUCLVBOILLER was removed from the site. The space the Boiler occupied was vacant.

APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS

This facility did not have nor indicated the need for fugitive dust plan.

MAERS REPORT REVIEW:

The Henry Ford Hospital facility's 2014 MAERS is yet to be reviewed.

FINAL COMPLAINT DETERMINATION

A scheduled inspection was performed at HFH power generation system. The facility operated the permitted processes in satisfactorily manner. The company management showed commitment to maintaining compliance with permit conditions. Records submitted by the Company, and the on-site inspection indicated the facility is committed to maintaining emissions reduction programs at site. The HFH was in compliance with the permit ROP# MI-ROP-K1271-2012 conditions at the time of inspection.

NAME fh DATE 8/26/15 SUPERVISOR JK