

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

B205040195

FACILITY: MPI RESEARCH		SRN / ID: B2050
LOCATION: 54943 N MAIN, MATTAWAN		DISTRICT: Kalamazoo
CITY: MATTAWAN		COUNTY: VAN BUREN
CONTACT: Richard Granberg , Associate Director SH&E Compliance		ACTIVITY DATE: 06/01/2017
STAFF: Amanda Chapel	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

On June 1, AQD’s Amanda Chapel (staff) conducted an unannounced inspection of MPI Research (facility) located in Mattawan, Van Buren County. The purpose of the inspection was to determine compliance with Permit to Install (PTI) No. 48-08A and all applicable state and federal air regulations. The following will summarize facility operations and compliance status.

I arrived at the facility at 9:50 am. There were no visible emissions or odors detectable from the road around the facility. I announced myself to the guard at the gate and she directed me to the main entrance. When I walked in, the secretary had me present my ID and she contacted Mr. Richard Granberg to be my main facility contact for the day. Mr. Granberg is the Associate Director of Safety, Health, and Environmental Compliance for the facility. I introduced myself, gave him a business card, presented my ID, and told him that I was there to do an unannounced air quality inspection of the facility. He took me back into the facility and we met in a conference room with Mr. Denny Hempel, Mr. Terron McLean, and Mr. Chris Dillon, among others. I explained that I would need the air quality records for the facility, the emissions calculations, fuel certification from the supplier, and would like a tour of the facility to see all of the boilers, generators, and incinerator at the facility.

The last inspection was on April 5, 2011 and the facility was in compliance. The facility has about 1450 staff that works in three shifts. The first shift is the main shift with second and third shift running a skeleton crew. The facility operates Monday to Friday with skeleton shifts on Saturday and Sunday. They do have emergency generators and boilers on site. There is one cold cleaner at the facility. A sticker was given for the lid of the cold cleaner and the MSDS for the chemical used in the cold cleaner was requested. The cold cleaner is exempt under Rule 281(2)(h).

Mr. Granberg, Mr. Hempel, and Mr. McLean accompanied me on the facility tour. The incinerator (PTI No. 24-851) was operating during the inspection. Only animals are processed, no bedding or trash. The primary burner was at 1518°F and the afterburner was at 1662°F. The incinerator is used daily about 6-10 hours per day. The incinerator is in compliance with the conditions found in PTI No. 24-851.

On the tour, a total of 30 boilers, 8 generators, and 1 incinerator were observed.

Boilers/Incinerator:

Emission Unit ID	EU Location	EU Rating	EU Classification	Install Date
EU0063	Room 5	2.9 MMBtu /hr Natural Gas Fired	Incinerator	1/1/1985
EUBoiler#2A	Room 2	4 MMBtu/hr Natural Gas Fired Boiler	Hot Water	7/25/1980
EUBoiler#2	Room 5	20 MMBtu/hr Natural Gas Fired Boiler	Steam	7/25/1980
EUBoiler#3	Room 5	32.7 MMBtu/hr Natural Gas Fired Boiler	Steam	11/2005
EUBoiler#4	Room 4	7 MMBtu/hr Natural Gas Fired Boiler	Hot Water	7/25/1980
EUBoiler#5	Room 5	20 MMBtu/hr Natural Gas Fired Boiler	Hot Water	7/25/1980
EUBoiler#6A	Room 5	25.5 MMBtu/hr Natural Gas Boiler	Hot Water	8/11/2016
EUBoiler#K2-1	Room K2	6 MMBtu/hr Natural Gas Fired	Steam	6/1/2007

		Boiler		
EUBoiler#K2-2	Room K2 – Penthouse	2 MMBtu/hr Natural Gas Fired Boiler	Hot Water	6/9/2007
EUBoiler#K2-3	Room K2 – Penthouse	2 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/9/2007
EUBoiler#K2-4*	Room K2 – Penthouse	2 MMBtu/hr Natural Gas Fired Boiler	Hot Water	2014
EUBoiler#M-2	Room M	5.2 MMBtu/hr Natural Gas Fired Boiler	Steam	1/12/2006
EUBoiler#M-3	Room M – Penthouse	15 MMBtu/hr Natural Gas Fired Boiler	Steam	1/1/2006
EUBoiler#M-4	Room M – Penthouse	15 MMBtu/hr Natural Gas Fired Boiler	Steam	1/1/2006
EUBoiler#M-1	Room M – Penthouse	5.2 MMBtu/hr Natural Gas Fired Boiler	Steam	1/12/2006
EUBoiler#M2-1	Room M2 – Penthouse	1.8 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/9/2007
EUBoiler#M2-2	Room M2 – Penthouse	1.8 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/9/2007
EUBoiler#M2-3	Room M2 – Penthouse	1.8 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/9/2007
EUBoiler#M2-4	Room M2 – Penthouse	1.8 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/9/2007
EUBoiler#M2-5	Room M2 – Penthouse	1.8 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/9/2007
EUBoiler#M2-6	Room M2	5.2 MMBtu/hr Natural Gas Fired Boiler	Steam	1/9/2007
EUBoiler#O	Room O	4 MMBtu/hr Natural Gas Fired Boiler	Steam	1/1/2006
EUBoiler#Q1	Room Q	1.7 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/10/2007
EUBoiler#Q2	Room Q	1.7 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/10/2007
EUBoiler#Q3	Room Q	1.7 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/10/2007
EUBoiler#Q4	Room Q	5 MMBtu/hr Natural Gas Fired Boiler	Steam	1/10/2007
EUDHWM-1	Room M	0.42 MMBtu/hr Natural Gas Fired Boiler	Domestic Hot Water	1/1/2006
EUDHWM-2	Room M	0.42 MMBtu/hr Natural Gas Fired Boiler	Domestic Hot Water	1/1/2006
EUPHWM-1	Room M	1.5 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/1/2006
EUPHWM-2	Room M	1.5 MMBtu/hr Natural Gas Fired Boiler	Hot Water	1/1/2006

*During the inspection, this boiler was located and was not on the 2016 MAERS report

Emergency Generators:

Emission Unit ID	EU Location	EU Rating	Monthly Starting Hours	Monthly Ending Hours	Install Date
EUEmGen#1A	Main Building	8.45 MMBtu	520.9	523.5	7/1/2005
EUEmGen#2A*	G&H Sections	4.29 MMBtu			7/1/2005
EUEmGen#3	K Building	8.45 MMBtu	609.7	612.8	7/1/2005
EUEmGen#4	K2 Building	8.45 MMBtu	645.0	648.0	7/1/2006
EUEmGen#5	O Building	8.45 MMBtu	650.9	653.9	7/1/2006

EUEmGen#6	M Building	8.45 MMBtu	840.1	843.1	7/1/2006
EUEmGen#7	Q Building	8.45 MMBtu	513.1	516.0	7/1/2006
EUEmGen#8	M2 Building	8.45 MMBtu	512.5	515.5	7/1/2006

*Generator is not in use, currently. In the future, it will be used as a portable generator.

Records obtained during the inspection include generator maintenance work orders, MSDS for 0291 MAR019 Marathon No. 2 Ultra Low Sulfur Diesel, natural gas usage and associated energy bills, and natural gas fuel receipts. I thanked Mr. Granberg, Mr. Hempel, and Mr. McLean for taking the time to show me around the facility. I left the facility at 12:20 pm.

Records of operating hours and NOx emissions were submitted via email. They were received on June 5, 2017. The following identify the permit conditions in PTI No. 48-08A and the facility's compliance with them.

FG-GENERATORS

I. Emission Limits

- NOx is limited to 82.50 pph for EU-EMGEN-1A, EU-EMGEN-3, EU-EMGEN-4, EU-EMGEN-5, EU-EMGEN-6, EU-EMGEN-7, EU-EMGEN-8. (R 336.1205(1)&(3), 40 CFR 52.21 (c)&(d))
AQD Comment: Compliance.
- NOx is limited to 42.88 pph for EU-EMGEN-2A. (R 336.1205(1)&(3), 40 CFR 52.21 (c)&(d))
AQD Comment: Compliance

II. Material Limits

- The permittee shall combust only diesel fuel in FG-GENERATORS. (R 336.1205(3))
AQD Comment: Compliance.
- The sulfur content of the diesel fuel burned in FG-GENERATORS shall not exceed 0.05 percent by weight. (R 336.1205(3), R 336.1402)
AQD Comment: Compliance. MSDS indicates Sulfur Max is 15 ppm which is lower than 0.05 percent by weight.

III. Process/Operational Restrictions

- The maximum operating time for each of the eight generators included in FG-GENERATORS shall not exceed 150 hours per 12-month rolling time period as determined at the end of the calendar month. (R 336.1205(3))
AQD Comment: Compliance. Based on the records received from the facility, each generator is below the 150 hour 12-month rolling limit. The generator with the most run time in the most recent 12-month rolling time period is EMGEN3 with 39.7 hours.
- The permittee shall operate each generator of FG-GENERATORS in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction. (R 336.1912)
AQD Comment: Compliance. Facility supplied generator maintenance records which demonstrate compliance with this condition.

VI. Monitoring/Recordkeeping

- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the total hours of operation for each generator of FG-GENERATORS on a monthly basis. (R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))
AQD Comment: Compliance. During the inspection, generator maintenance work orders were obtained for May 2017.
- The permittee shall obtain a fuel supplier certification for each delivery of diesel fuel. The certification shall include the following information:
 - Flash point in °F or °C
 - Gravity at 60/60F (specific gravity or degrees API)
 - Sulfur content (% by weight)

d. Higher heating value (Btu/lb or Btu/gallon)

The permittee shall keep, in a satisfactory manner, copies of the fuel supplier certifications on file at the facility and make them available to the Department upon request (R 336.1205(3))
AQD Comment: Compliance.

3. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction, any maintenance performed and any testing results for each generator of FG-GENERATORS. All records shall be kept on file for a period of at least five years and made available to the Department upon request. (R 336.1912)
AQD Comment: Compliance.
4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period operating time records for each generator of FG-GENERATORS. The records must indicate the total operating time in hours for each generator of FG-GENERATORS. All records shall be kept on file for a period of at least five years and made available to the Department upon request. (R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))
AQD Comment: Compliance. Records obtained during the inspection show 12-month rolling time period calculations of operating time for each generator.

FGFACILITY

I. Emission Limits

1. Less than 90.0 tons per year of NOx on a 12-month rolling time period as determines at the end of each calendar month. (R 336.1205(3))
AQD Comment: Compliance. Records show the highest NOx emission was in January 2016 and it was 25.51 tons per year.

II. Material Limits

1. The permittee shall burn only natural gas and diesel in FGFACILITY. The permittee shall burn diesel fuel exclusively in FG-GENERATORS. (R 336.1205, R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))
AQD Comment: Compliance.
2. The permittee shall not burn more than 886,818 MMBtu of natural gas in FGFACILITY per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))
AQD Comment: Compliance. Records indicate the maximum MMBtu burned at the facility was in January 2016 and was 284,581 MMBtu.

Boiler #2, #5, and #6 are also covered under PTI 131-80. Boiler #6 was removed from the facility and boiler #6A was installed. Boiler #6A is covered under PTI 48-08A. PTI 131-80 can only be voided if the facility permanently removes the diesel lines to boiler #2 and #5. A third 2 MMBtu/hr boiler was installed in the K2-Penthouse in 2014. This boiler installation is exempt under Rule 282(2)(b)(i) and the boiler is subject to FGFACILITY permit conditions. The fuel usage for this boiler was being accounted for in the emissions calculations. The boiler will be included in the facility's 2017 MAERS calculations. The facility appears to be in compliance with all permit requirements.

NAME

Annun Chiese

DATE

6/16/17

SUPERVISOR

MD 6/16/17