

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

K213128551

FACILITY: Western Michigan University		SRN / ID: K2131
LOCATION: 1903 West Michigan Ave, KALAMAZOO		DISTRICT: Kalamazoo
CITY: KALAMAZOO		COUNTY: KALAMAZOO
CONTACT: Mark Weiss, Director, Environmental Health and Safety		ACTIVITY DATE: 01/22/2015
STAFF: Dorothy Bohn	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

This was an announced inspection. I emailed Mark Weiss and George Jarvis in the morning to set up a 1 pm inspection. I arrived at the power plant about 1 pm and met with Mark Weiss, Director of Environmental Health & Safety; George Jarvis, Director of the power plant, and Michael Walden, Chief Operating Engineer of the power plant. I gave Mark an inspection brochure.

The facility's draft ROP will be starting public comment on 1/26/15 and we discussed the process for finalizing that. This is Mark's first experience with the ROP process. The test of EU-02-PeakGen last week with the new catalyst went well and they passed with flying colors. They still have not operated the unit since realizing it was subject to MACT ZZZZ. Last Wednesday (1/14) they had an electrical fire on EUPBHRSGEN-8. So that unit is down while they get the parts to fix it.

During the inspection I viewed some of the equipment in the powerhouse. EUBoiler#10 and EUPBHRSGEN-7 were operating (computer printout of operating data attached). EU-EngineRent-01 has not been installed. They requested and received an 18 month extension from permits. That ends on 11/26/15. I observed of EU-02-PeakGen with its new catalyst bed but it was not operating. I did not review the compliance status of EU-02-PeakGen since all the requirements are due to the area source MACT ZZZZ. I also did not review compliance with any of the Boiler MACT 6J.

**POWERHOUSE:** Powerhouse records were complete through 11/14 for all the equipment. (A copy is attached.) All of the emissions are well below their limits. No visible emissions were observed either before or after the inspection. Peak operation is May to August because electricity is very expensive then due to air conditioning.

EUPABOILER-6: This boiler is available for use and maintained but they do not use it unless they have to. It was tested in 4/2010. Records show that it last operated in 12/2013 using 292.4 MCF of gas. The use records I saw went back as far as 12/2011 and this was the only month showing use.

EUBOILER9 & EUBOILER10: These are separate units in the current ROP but in 4/2014 they received a PTI giving them identical requirements so in the draft they are combined into a flex group. Both are capable of burning oil but they do not store oil on site. If it is needed they will bring in a tanker and draw straight from that. The only time they have ever burned oil is for their initial stack tests which were in 11/04 for boiler 9 and in 4/2010 for boiler 10. They are required by the ROP to test one of these boilers every 5 years, alternating between them. So they are to test #9 in the next year. I suggested that since the units have been tested once for oil and they have not burned any oil and do not plan to unless an emergency (partially due to the Boiler MACT – area source) they propose to test only firing natural gas.

The max NOx & SO2 emissions for boiler#9 at the end of November was 4.67 tpy & 0.03 tpy (12 month rolling total – MRT), respectively. The max NOx emissions for boiler#10 at the end of November was 2.56 tons 12 MRT. These 12 MRT are the max emissions recorded since 12/2011. Boiler#9 operated 312 hours in November and Boiler#10 ran for 211 hours.

FGPBTUHR-78: This group has 2 identical systems each involving a turbine, boiler, steam generator and duct burners. The turbines are in the center with a generator on one side and a duct burner followed by a boiler on the other. The turbine can just supply the generator or boiler or both simultaneously. When it supplies the boiler it can be with or without the duct burners operating. The duct burners can supply the boiler without the turbine operating (fresh air mode) but they don't do this. All the units were tested (at full load) in 4/2010. They would only operate in fresh air mode if there was some sort of emergency or malfunction – like if the fire in turbine 8

had happened in the summer. They had all the required records.

**FGPartswash:** I observed the coldcleaner at the powerhouse and its lid was closed and it was posted on the outside. It uses mineral spirits. Michael didn't know if the cold cleaners in other locations use the same but at the last inspection I was told that they all use mineral spirits.

**Emergency Generators:**

Fuel oil: Attached is a copy of the most recent fuel oil analysis report. The sulfur was 13.16 ppm (limit is 15). The same fuel oil is delivered to all diesel equipment on campus. They need to also have the oil analyzed for either the minimum cetane index or the aromatic content by volume per 40 CFR 80.510(b). This is not spelled out in the current ROP but is in the renewal draft.

They have monthly records for each generator of the hours of operation for the month, 12 MRT, and hours for the calendar year. The largest 12 MRT was 95.5 hours, most were around 35 hours. The records I observed (attached) do not say why the units were operated but they said they have this information. This is required for the units subject to the NSPSs. Maintenance is scheduled and tracked on the computer. I observed a spreadsheet with a list of all the preventative maintenance for the generators. It included the work order #s, the specific equipment, the date of the request and the date the work was performed, etc. To see what work was actually done you would have to go to the specific work order.

Mark has submitted via email (see the file) the documentation for all NSPS subject generators as to their emissions certification by the manufacturer. All units appear to be certified by the manufacturer except for EU-138-EG-01 at Sangren Hall (which was known). It had an initial performance test on 12/12/12 – so it will need to be re-tested by the end of this year.

**FGRULE290:** Lu DeBoef, Environmental Specialist, brought these records over. EU-90-PRESSR-2 and EU-90-PRESSF-2 are both at Wellborn Hall and have their records combined as one unit. The records were complete through 12/14. The max monthly emission was 401# VOC in 10/2014 and most of this was toluene. They have a list of all the chemicals and all are allowed 1000 pounds per month. EU-27-PAPERMACH is at McCracken Hall has one product run by a client that contains VOC and it is used once a year. The only time it was operated in 2014 was in October and the emissions were 323 # of VOC (all ethyl alcohol).

I left about 3:50. The source appeared to be in compliance with its requirements at the time of the inspection.

NAME Dorothy Behn DATE 2/13/15 SUPERVISOR MA 2/13/2015