

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Stack Test Observation

B361051678

FACILITY: Pharmacia & Upjohn Co LLC, a subsidiary of Pfizer		SRN / ID: B3610
LOCATION: 7000 Portage Road, KALAMAZOO		DISTRICT: Kalamazoo
CITY: KALAMAZOO		COUNTY: KALAMAZOO
CONTACT: Jeff Robey , Senior Specialist EH & S		ACTIVITY DATE: 12/10/2019
STAFF: Monica Brothers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MEGASITE
SUBJECT: Observation of PM and CO tests for coal-fired Boiler 5.		
RESOLVED COMPLAINTS:		

This series of stack tests were conducted to determine compliance with 40 CFR, Part 63, Subpart DDDDD (Boiler MACT). Three coal-fired boilers (Boilers 1,5, and 6) were tested over a four-day period. Boiler 5 has its own gas stream, and Boilers 1 and 6 share one gas stream. Each gas stream was tested for particulate matter (PM), carbon monoxide (CO), hydrochloric acid (HCl), and mercury (Hg). Staff, Monica Brothers, attended only the first day of testing, at which, Boiler 5 was tested for PM and CO.

I arrived on-site at about 9:15am and met with Jeff Robey. Testing had not yet begun. We first went to the boiler control room to look at how the boilers were running. At that time, Boiler 5 was running at 74,661.3 lbs steam/hour. The design capacity for Boiler 5 is 90,000 lbs steam/hour, and the normal steam output is around 75,000 lbs steam/hour. Each boiler is equipped with a lime injection system, which helps control HCl. The MACT limit for PM is 0.04 lb/MMBtu and the limit for CO is 160 ppm at 3% oxygen (O₂).

We then went out to the testing trailer. I met Tony Sakellariou, Senior Project Manager for TRC, who was conducting the tests. Dave Patterson and Lindsay Wells from TPU arrived a bit later that morning. The cal-gases being used were 0, 90.08, and 203.2 ppm for CO, 0, 8.71, and 17.73 for CO₂, and 0, 10.22, and 21.82 for O₂. Three 60-minute runs were conducted for testing CO, and three 120-minute runs were conducted for testing PM. The tables below show the data I collected during the tests.

The CO was significantly higher than the last time they tested at the 75,000 lbs steam/hour load, so before they began the first run for CO, they lowered the load to about 70,000 lbs steam/hour, which seemed to lower the CO concentration. You will see that reflected in the tables below. Jeff Robey understood that this lower load would then become their limit in the future. He said that they never run the boilers at this high of a load anyway, so he wasn't concerned about lowering the maximum load to around 70,000 lbs steam/hour instead of 75,000 lbs steam/hour. They are also planning on getting rid of all of their coal-fired boilers by the end of next year. I left the facility at about 2:45 pm.

PM:

Run	Time	Load (lbs steam/hour)
1	9:50 am-10:50 am and 11:52 am-12:52 pm (paused from 10:50-11:52 to switch out a probe)	75919.6
2	1:20-3:20pm	69647.6
3	Did not attend	Did not attend

CO:

Run	Time	Load (lbs steam/hour)	CO (ppm at 3% O ₂) Limit = 160 ppm
1	11:52am – 12:52 pm	*see below	113.8
2	1:20 pm-2:20 pm	69647.6	148.0
3 Did not attend	Did not attend	Did not attend	Did not attend

* I did not collect load data for this run because it was decided later to retroactively use this CO data. TRC had been collecting CO data since the PM runs began, but they had to wait for the facility to tinker with the boiler and lower the load before officially beginning Run 1. The CO numbers looked good for this time period, so they later decided to go ahead and use that data. However, it is known that the load at this time was at the lower load of around 70,000 lbs steam per hour, not at the 75,000 lbs steam per hour like it was at the beginning of the first PM run.

NAME 

DATE 12/13/19

SUPERVISOR RIL 12/17/19