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

N673135910

FACILITY: CMS Generation Kalamazoo River Generating Station		SRN / ID: N6731
LOCATION: 6900 EAST MICHIGAN AVENUE, COMSTOCK TWP		DISTRICT: Kalamazoo
CITY: COMSTOCK TWP		COUNTY: KALAMAZOO
CONTACT: Timothy Morrison , Plant operator		ACTIVITY DATE: 07/29/2016
STAFF: Monica Brothers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Announced Scheduled Inspection		
RESOLVED COMPLAINTS:		

This was an announced scheduled inspection to make sure that someone would be at the facility. I emailed Tim Morrison, the Plant Operator, the morning before I wanted to do the inspection, but Tim said he would be gone that day. He said that he would be there the rest of that afternoon though, so I decided to go ahead and do the inspection that day. I arrived at the facility at 1:30pm and met with Tim. I gave Tim a copy of the inspection brochure and my business card. We decided to look at records first, since we were already in the office area where the records were kept.

EUCOMBTURB01: The turbine is a GE Frame 7E Combustion Turbine with dry low NOx combustors that is only capable of firing natural gas. It is rated at 73.5 MW (786.5 MMBTU/hr). Records show that the unit has been fired for a total of 67 hours so far in 2016 and has generated 3573.6 Mw/hrs. Most of this was for testing purposes. The last time the turbine ran was on July 21, 2016.

The last time the turbine was stack tested was on March 14, 2014 and the results showed that they were in compliance with emission limits. They are required to test the turbine every 5 years.

I viewed records of their annual gas sampling analysis reports done by DTE Energy for July 22, 2014 and July 9, 2015. Tim did not yet have the results of the 2016 analysis. The 2015 report showed that the gas was 96.219 MOL% Methane and contained 0.072 gr S/100 cu.ft. and 0.0002% S. The gross heating value was 1003 and 1008 BTU/dscf. Consumers Energy calibrates the gas flow meter about once per year. I observed the records of these calibrations, which were performed on 3/10/15 and then again on 3/17/16. The inputs for the Data Acquisition System (DAS) get updated as soon as the company receives the annual results from the gas sampling analysis. The capacity factor gets computed weekly and is currently at 0.8%. Per 40 CFR, Part 75, Appendix E, it must be below 10% on a 3-year average, and below 20% for any given calendar year, or the company must install a NOx CEMS on the turbine.

In addition to the annual gas analysis requirement, they are required to determine the gross caloric value (GCV)/heating value every month. These values need to be between 950-1100 BTU/scf. The following values are the records I observed for this: June 2016= 1033 BTU/scf, May 2016= 1027 BTU/scf, April 2016= 1026 BTU/scf, March 2016= 1021 BTU/scf, February 2016= 1028 BTU/scf, January 2016= 1034 BTU/scf, December 2015= 1037 BTU/scf, November 2015= 1038 BTU/scf, and October 2015= 1018 BTU/scf, which were all within the required boundaries.

I also examined the Electronic Data Reporting (EDR) reports for all of 2015 and the first two quarters of 2016, as well as the Greenhouse Gas Reports for 2014 and 2015 (attached). These reports contain the SO2, CO2, and NOx emissions. For 2015, emissions were 0.0 tons SO2. 1,378.4 tons CO2, and 0.5 tons NOx.

This facility also has Acid Rain (AR)/CAIR permits that require them to keep track of their credit balances and allowances deducted for each year. These records are attached. In 2015, for AR and CAIR SO2, they used 0 allowances and have a balance of 39 credits. For CAIR NOX, they used 1 credit, which gives them an ending balance of 3 credits. They did not use any credits for the CAIR NOx Ozone season, so they still have a balance of 4 credits.

Tim then took me to see the facility and the turbine. The turbine itself was not running during the inspection. Tim mentioned that in early October, the turbine would be getting some major maintenance done, and a new "hot section" would be put into the unit. Tim said that this would make the unit more efficient and would ultimately reduce NOx emissions.

I thanked Tim and left the facility at about 3:50pm. CMS Generation-Kalamazoo River Generating Station seemed to be in compliance with its permit requirements at the time of this inspection.

NAME [signature] DATE 8/9/16 SUPERVISOR MD 8/9/2016