

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Other

B283571824

FACILITY: J. H. Campbell Plant		SRN / ID: B2835
LOCATION: 17000 Croswell, WEST OLIVE		DISTRICT: Grand Rapids
CITY: WEST OLIVE		COUNTY: OTTAWA
CONTACT: Joseph Firli , Manager of Engineering Support		ACTIVITY DATE: 04/30/2024
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Stack test observation and Partial Compliance Evaluation.		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff, April Lazzaro arrived at the Consumers Energy (CE) J.H. Campbell facility at approximately 8:20 AM to observe particulate matter (PM) stack testing of EUBOILER1 (Unit 1) and met with Joe Mason Continuous Emissions Monitoring System Technician (CEMS). Upon arrival to the facility, no visible emissions or odors were observed. This site visit and process evaluation is a Partial Compliance Evaluation (PCE) of the facility, as well as a stack test observation. EUBOILER2 (Unit 2) and EUBOILER3 (Unit 3) were not operating at the time of the PCE.

FACILITY DESCRIPTION

Consumers Energy, J.H. Campbell Generating Complex consists of a coal fired electric generating station. The facility has obtained and operates under the terms and conditions specified in Renewable Operating Permit (ROP) No. MI-ROP-B2835-2020b. Currently, there are three (3) coal fired electric generating units at the facility while only Units 1 & 2 are operating. The units use primarily pulverized coal, producing approximately 1,450 megawatts (net) per hour when all three units are operational. Emissions from the boilers are controlled via use of low NOx burners, pulse jet fabric filter baghouses, activated carbon injection, dry sorbent injection (Units 1 and 2), spray dry absorption (Unit 3), and selective catalytic reduction systems (Units 2 and 3).

Control of fugitive dust from the source has historically been of concern for the surrounding community. As such, the facility has implemented and maintains a site-wide fugitive dust control plan.

COMPLIANCE EVALUATION

Mr. Mason and I drove back to Unit 1 to observe the CEMS data collection trailer, and the stack testing platform and operations. The CEMS trailer and equipment therein were observed to be functioning normally. We also observed the EUBOILER3 (Unit 3) mercury CEMS equipment in the Unit 3 CEMS trailer, and I learned how that equipment operates and is calibrated. CE staff indicated that they have little downtime on the CEMS units that they operate.

We observed the stack testing platform and learned that Run 1 had taken place the day prior, with no issues. Run 2 had begun today at 8:30 AM. In accordance with AQD's Part 10 rules, a company has 36 hours to complete testing, and as such the scenario described is acceptable. No obvious issues were identified on the stack test platform with the equipment. A port change was observed, and it appeared to go smoothly. We also met with the testing supervisor in the test trailer. They indicated

that all data collection (flows etc.) were in line with expectations. The data collection spreadsheet was observed as well, no errors were identified at that time.

During the time I observed Run 2, Unit 1 load was at 250 megawatts (MW). While PM is monitored by CEMS, baghouse pressure drop is also continuously monitored. The baghouse pressure drop readings for the units (8) were at or about 3.0" H₂O.

Mr. Mason took me to meet with Joe Firlit in his office. We discussed a scenario where during service of Unit 2 "alpha fan", they took the time during the outage to service the Selective Catalytic Reduction (SCR) for NO_x control that consists of a Urea Based Ammonia System (UBAS). The UBAS downtime lasted 1 hour, 25 minutes longer than what AQD had deemed reasonable in prior discussions. A UBAS is a type of ammonia feed system for SCRs where solid urea pellets are stored in a silo. Upon use, the solid urea is heated to liquid, thermally decomposed to ammonia, and injected into the SCR as the reagent for the NO_x reduction reaction. The facility Maintenance and Malfunction Abatement Plan (MMAAP) uses the term "reasonable time period" related to repairs of conditions of the UBAS that can be diligently and expeditiously addressed. This term is conditioned with the words, "AND the NO_x rolling average emission limit is NOT projected to be exceeded (including any necessary unit or pollution control device shutdown and subsequent start-up)." Mr. Firlit showed me previous correspondence with former AQD staff that a reasonable time is expected to be 24-48 hours. In this instance the downtime lasted 49.25 hours. The extra 1 hour and 25 minutes of downtime occurred because once they inspected the UBAS, they found a plug in the line. This required a steam purge process to clear the plug, and that was not initially planned for. Since Unit 3 has been down, the purge requires 200 MW of steam from Unit 2. Since Unit 2 had a fan outage, they could not immediately produce the steam needed to clear the plug. Once Unit 2 had the available 200 MW of steam, the plug was cleared. I discussed, with Mr. Firlit that a 1 hour and 25 minutes time frame beyond 48 hours is not automatically a deviation since a specific time is not outlined. However, the AQD would not expect that J.H. Campbell continue to extend that time if scenarios are identified where maintenance and equipment shutdowns occur for longer and longer durations. Mr. Firlit also stated that that no emission limit exceedance occurred because of the UBAS downtime. A request for a current version of the UBAS MAP was made and the plan reviewed. This review found that the plan, dated May 13, 2021, aligns with the conversation and information provided by Mr. Firlit, and no further action is needed.

CONCLUSION

The parameters observed during the inspection for Unit 1, as well as the UBAS downtime scenario evaluated during Unit 2 maintenance indicated compliance at the time of the inspection.

NAME April Lazzaro

DATE 05/08/2024

SUPERVISOR 