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

B283543599

FACILITY: J. H. Campbell Plant		**SRN / ID:** B2835
LOCATION: 17000 Croswell, WEST OLIVE		**DISTRICT:** Grand Rapids
CITY: WEST OLIVE		**COUNTY:** OTTAWA
CONTACT: JOE FIRLIT , AQD CONTACT		**ACTIVITY DATE:** 02/21/2018
STAFF: Kaitlyn DeVries	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: The partial inspection was in conjunction with testing on Unit 1 that was occurring that day. The purpose of the inspection was to determine compliance with the facility's renewable operating permit (ROP) MI-ROP-B2835-2013b. During this partial compliance evaluation (PCE), only Unit 1 was evaluated.		
RESOLVED COMPLAINTS:		

On Wednesday February 21, 2018 Air Quality Division (AQD) Staff Kaitlyn DeVries (KD) conducted partial, scheduled inspection of Consumers Energy, JH Campbell Coal-fired electric generation facility, located at 17000 Croswell, Port Sheldon, Michigan. The partial inspection was in conjunction with testing on Unit 1 that was occurring that day. The purpose of the inspection was to determine compliance with the facility's renewable operating permit (ROP) MI-ROP-B2835-2013b. During this partial compliance evaluation (PCE), only Unit 1 was evaluated.

Upon arrival at the complex, KD was escorted by Mr. Joseph Firlit, Environmental Lead, where testing was underway. Please reference Activity Report CA_B283543374 for complete information regarding the testing that day.

Facility Description and Unit 1 Description

Consumers Energy J.H. Campbell Generating Complex (JHC) is a coal fired electric generating station. There are three (3) units which use primarily Western coal. The facility is located adjacent to Lake Michigan, across from Pigeon Lake.

Unit 1, which was of primary interest this day, is a 2490 MMBtu Per Day dry bottom tangential fired boiler with fuel oil startup capabilities that was installed in 1958. Unit 1 burns 100% Western Coal and shares a stack with Unit 2, which was not in operation at the time of the visit. Unit 1 is equipped with Low-NOx burners, Sorbent Injection for mercury control, dry sorbent injection, and a pulse-jet fabric filter baghouse.

Compliance Evaluation

This section of the report will detail the emission units that were of interest during this partial compliance evaluation.

Consumers Energy has entered into a Consent Decree with USEPA, and the conditions of the Consent Decree were incorporated into the ROP. The Consent Decree requires System-Wide Annual NOx and System Wide Annual SO_2 tonnage limitations. Since this requirement is system wide, and includes another Consumers Energy facility, it has not been evaluated in this report. The Consent Decree also requires that Consumers Energy comply with SO_2 and NOx allowance surrender and super-compliance allowance provisions.

EUBOILER1

Unit 1 testing for Hydrogen Chloride (HCl) and Particulate Matter (PM) was already underway when KD arrived on site. All daily calibrations had passed, and everything looked good, per Mr. Thomas Schmelter, who was lead for testing that day. All control equipment associated with the unit appeared to be properly operating at the time of the inspection. This unit, like the other two, is subject to the provisions of 40 CFR Part 63 Subpart UUUUU, or the Mercury and Air Toxics Rule (MATS).

PM emissions are limited to 0.16 pounds per 1,000 pounds exhaust gas, corrected to 50% excess air and to 0.015 pounds per mmBTU heat input. The MATS PM limit is 0.030 lb./mmBTU heat input. Compliance for the PM limits is demonstrated through stack testing. The most recently completed stack testing, done in the Q4 of 2017, resulted in a three (3) run average PM emission rate of 0.0009 lb/mmBTU. In addition to PM, the MATS rule requires compliance with an HCl limit of 0.0020 lb./MMBTU. Stack testing for HCl, indicated a three (3) run average emission rate of 0.001 lb./mmBTU. Both emission show compliance with the low emitting electric

generating unit (LEE) limits outlined in the MATS rule. Three (3) years of consectuve quarterly testing is required in order for this unit to obtain LEE status.

Table 1: Emissions data for EUBOILER1

Unit Number	Pollutant	Limit	Observed Value	Averaging time
1	NO_x	0.220 lbs/mmBTU	0.169lbs/mmBTU	365 Day Rolling Average
1	SO_2	0.350 lbs/mmBTU	0.258 lbs/mmBTU	30 Day Rolling Average
1	SO_2	0.290 lbs/mmBTU	0.259 lbs/mmBTU	90 Day Rolling Average
1	Mercury (Hg)	1.2 lbs/TBTU[A]	0.578	30 Day Rolling Average

[A] This limit is a MATS limit

JHC uses a Part 75 Certified CEMS to continuously monitor SO_2 emissions. In addition to the SO_2 CEMS, JHC also has a NO_x, and a mercury CEMS along with a COMS unit.

Table 2: Boiler 1 Operating Parameters

Process Parameter	Observed Information	Operating Time[A]
Gross MW	255	
Net MW	235	
Total Coal Flow	273,000 pph[B]	
Coal Type	100% Western Coal	
DSI	4288 pph	pph of Lime Injected
ACI	102 pph	pph of carbon injected
Opacity[C]	3.0%	6-Minute Average
SO_2	0.262 lbs/MMBTU	1 Hour Rolling Average
Hg	0.975 lbs/TBTU	Instantaneous

[A] Operating time for appropriate parameters only
[B] pph – pounds per hour
[C] This is compliant with the 20% opacity limit found in FGBOILER12, since EUBOILER1 and EUBOILER2 share a common stack.

Table 3: Pulse Jet Fabric Filter Baghouse Operating Parameters

Process Parameter/Description	Observed Information
Fields in Service	8 Out of 8 fields
Differential Pressure	6.5 Inches of Water Column (WC)
Temperature Drop	1°F
Opacity	2.7% - 6-minute average
Cleaning Air Pressure	2.2 Pounds per Square Inch (PSI)
System Drag	2.21

JHC is required to have a malfunction abatement plan (MAP) for this unit. A revised plan was submitted to the AQD in December 2017, and the plan has been successfully implemented. This unit is also subject to 40 CFR Part 64 – Compliance Assurance Monitoring (CAM), for which the provisions are addressed in FGBOILER12 for both boilers 1 and 2. Please reference FGBOILER12 for further evaluation of CAM.

This unit is subject to Acid Rain and the Cross State Air Pollution Rules (CSAPR) programs. Compliance demonstrations for both are reported directly to USEPA.

The stack dimensions were not explicitly measured, but there was no evidence of change, and the dimensions appeared to be correct; EUBOILER1 shares a stack with EUBOILER2.

Compliance Determination

Based on the observations made during the inspection, Unit 1 appears to be in compliance with MI-ROP-B2835-2013b.

NAME Kaitlyn Dirhe DATE 3/12/2018 SUPERVISOR