

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

B283541190

FACILITY: J. H. Campbell Plant		SRN / ID: B2835
LOCATION: 17000 Crosswell, WEST OLIVE		DISTRICT: Grand Rapids
CITY: WEST OLIVE		COUNTY: OTTAWA
CONTACT: JOE FIRLIT , AQD CONTACT		ACTIVITY DATE: 08/09/2017
STAFF: Kaitlyn DeVries	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: The purpose of this inspection was to determine compliance with the facility's renewable operating permit (ROP) MI-ROP-B2835-2013a, Permit to Install (PTI) Numbers 39-15, 18-15 and 141-12, and USEPA fleetwide Federal Consent Decree. This report will serve as the final partial compliance evaluation (PCE) to complete the full compliance evaluation (FCE) for the facility for fiscal year 2017.		
RESOLVED COMPLAINTS:		

On Wednesday August 9, 2017 Air Quality Division (AQD) staff Kaitlyn DeVries (KD), Steve Lachance, (SL) and Rebekah Banas (RB) conducted a scheduled inspection of the Consumers Energy, JH Campbell Coal-fired electric generation facility located at 17000 Crosswell, Port Sheldon, Michigan. The facility's primary contact, Mr. Joseph Firlit, was contacted the afternoon prior to the inspection in order to properly be checked into the facility and to have the appropriate corporate personnel in place. The purpose of this inspection was to determine compliance with the facility's renewable operating permit (ROP) MI-ROP-B2835-2013a, Permit to Install (PTI) Numbers 39-15, 18-15 and 141-12, and USEPA fleetwide Federal Consent Decree. This report will serve as the final partial compliance evaluation (PCE) to complete the full compliance evaluation (FCE) for the facility for fiscal year 2017.

AQD staff arrived on site at approximately 10:00 am and met with Mr. Joseph Firlit (Environmental Lead), who is the primary contact for the facility. Conditions were sunny and clear with a westerly wind ranging from 5 -10 mph; temperatures were in the mid 70's. Staff did not note any opacity from either of the two (2) stacks upon arrival at the gate. Mr. Firlit escorted staff to a conference room where they were greeted by Ms. Katie Cunningham, (Environmental Services, Field Support and Compliance SPOC for Coal Generation), Mr. Brad Plummer (Environmental Manager), Mr. Mike Rabideau (CEMS Tech for Units 1 and 2), and Mr. Jon Duvall (Production Lead for Units 1 and 2). Various records were requested at that time; discussions were also had pertaining to the mercury CEMS RATA that was being conducted on Unit 3 on that day and the facility's overall operations.

Facility Description

Consumers Energy JH Campbell (JHC) plant is a coal fired electric generating station. There are three (3) units, which use primarily pulverized Western coal, with Unit 2 having the capability to use Eastern coal. The facility is located adjacent to Lake Michigan, across from Pigeon Lake.

The three (3) units were installed in 1958, 1963, and 1974. Table 1 outlines each of the three (3) boiler designs and control equipment associated with each unit.

Table 1: JHC Boiler Design and Specifications as of August 2017

	Unit 1 ^A	Unit 2 ^A	Unit 3
Capacity and Description	2490 MMBtu per hour dry bottom tangential fired boiler with fuel oil startup capabilities.	3560 MMBtu per hour wall-fired boiler with fuel oil startup capability	8420 MMBtu per hour dry bottom, wall-fired boiler with fuel startup capability.
Coal Type Capability	100% Western Coal	0 – 100% Western Coal 0-100% Eastern Coal	100% Western Coal
Pollution Control Equipment	ACI ^B DSI ^C PJFF ^E Low NOx Burners	ACI ^B DSI ^C PJFF ^E SCR ^F Low NOx Burners	ACI ^B SDA ^D PJFF ^E SCR ^F Low NOx Burners

^A Units 1 and 2 exhaust through a common stack

^B ACI – Activated Carbon Injection

^C DSI – Dry Sorbent Injection

^D SDA – Spray Dry Absorption

^E PJFF – Pulse Jet Fabric Filter

^F SCR – Selective Catalytic Reduction

Units 1 and 3 were in operation at the time of the inspection. Unit 2 was down, due to an unforeseen outage the week prior. Additionally, testing was underway for the Unit 3 Mercury Continuous Emissions Monitoring System (CEMS) Relative Accuracy Test Audit (RATA) which was being conducted that day.

Regulatory Analysis

JHC is subject to the Title V program and Title IV (Acid Rain). In addition to the applicable Michigan air quality rules, JHC is subject to the provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subparts UUUUU, for Coal – and Oil – Fired Electric Utility Steam Generating Units, ZZZZ, for Stationary Reciprocating Internal Combustion Engines, DDDDD, for Industrial, Commercial, and Institutional Boilers and Process Heaters at Major Sources, and Subpart YYYYY, for Stationary Combustion Turbines. JHC is also subject to the provisions of the New Source Performance Standards (NSPS) 40 CFR Part 60 Subparts Y for Coal Preparation and Processing Plants. Additional applicable Federal regulations include: 40 CFR Part 64, Compliance Assurance Monitoring (CAM) and 40 CFR Part 96 for NOX trading. Each of the three (3) units are also subject to the provisions of the cross-state air pollution rules (CSAPR). Complete analysis of the aforementioned regulations will be detailed in the compliance Evaluation portion of this report.

The ROP is divided into two (2) sections. Section 1 consists of most of the facility operations and Section 2 consists of only a peaking unit, which is a 233 MMBtu/hr distillate oil-fired combustion turbine.

Compliance Evaluation

The Full Compliance Evaluation (FCE) for JHC has been conducted over several visits (PCE's) and compliance determinations have been conducted during those visits. The two (2) primary visits evaluated Units 2 and 3, and the reports associated with those visits will be referenced within this report, as appropriate. Several of the provisions of the existing ROP (MI-ROP-B2835-2013a) have been updated per the previously mentioned PTI's.

In addition to the permits, JHC has entered a consent decree with USEPA. This Consent Decree has resulted in additional emission limits for the three (3) units and will be further outlined below. JHC has successfully met all the installation requirements of the consent decree and will be at the 365-day mark for many of the emission limits soon. The fleet-wide emission limits that are established via the Consent Decree will not be evaluated as part of this report.

Section 1:*EUASHNEW*

This emission unit, as currently permitted, covers the dry fly ash handling facility serving all three (3) boilers and consists of four (4) transfer silos, six (6) vacuum pump exhausters, two (2) disposal silos, three (3) re-sale storage silos, and two (2) re-sale load out silos that share one (1) common dust collector. In addition to the dust collector for the load out silos, there are nine (9) bin vent filters for the transfer, disposal, and re-sale silos and six (6) filter separators for the vacuum pump exhausters. The vacuum pump exhauster filter separators are exhausted to the main boiler stacks. It should be noted that not all of the construction for this emission unit has been completed.

Particulate matter (PM) emissions from each discharge point in the ash handling process are limited to 0.10 pounds per 1,000 pounds of exhaust gas, on a dry gas basis, and to 0.032 pounds per ton of dry fly ash processed. All control equipment appeared to be properly operating at the time of the inspection, and no visible emissions were noted from any of the discharge points. All dust collector systems are equipped with alarms, and continually monitored to ensure proper operation. JHC is following the Fugitive Dust Control Plan and conducting daily visual inspections for opacity from all control equipment and monitoring the pressure drop. KD did not note any fugitive dust during the inspection.

JCH has a monthly limit of 41,610 tons of dry fly ash processed per month. Per the attached records, the July 2017 monthly dry fly ash processed was 20,251.5 tons. From January 2016 through the end of May 2016, JHC was receiving ash from BC Cobb, the Consumers Energy Facility that was located in Muskegon Michigan, but has since been completely shut down. Additionally, the 12-month rolling limit of dry fly ash processed is 499,320 tons. Records also indicate that as of July 2017 the 12-month rolling average of dry fly ash processed was 219,171.7 tpy. The fly ash is sent to an onsite landfill.

EUBOILER1

Unit 1 was the boiler of interest during the August 9, 2017 visit. The continuous opacity monitor (COMS), continuous emissions monitor (CEMS), and calibration records were requested, reviewed, and are attached to this report. No issues were noted for this unit at the time of the inspection, or in any of the records. This unit is subject to the provisions of 40 CFR Part 63 Subpart UUUUU, or the Mercury and Air Toxics Rule (MATS).

The emissions from Unit 1, a 2490 MMBTU tangential fired boiler with fuel oil startup capability, are controlled by low-NO_x burners, ACI, DSI, and a PJFF baghouse. All control equipment is installed and was properly operating. This unit used to have two (2) electrostatic precipitators (ESP's), but these have been removed from service since the installation of the baghouse and other control equipment.

PM emissions are limited to 0.16 pounds per 1,000 pounds of exhaust gas, corrected to 50% excess air and to 0.015 pounds per MMBTU heat input, from the Consent Decree. The MATS PM limit is 0.030 lb/MMBTU heat input. Compliance for both are demonstrated through stack testing. Currently, the ROP requires stack testing to verify these emission rates every three (3) years, however, MATS requires quarterly stack testing, thus the testing every three (3) years has been met. The most recent test results were received on July 3, 2017 and showed compliance with the heat input limit at a three (3) run average of 0.0031 lb/MMBTU. In addition to PM, MATS requires compliance with an HCl limit of 0.0020 lb/MMBTU; stack testing indicated a three (3) run average of 0.0001 lb/MMBTU. Both of these results also show compliance with the low emitting electric generating unit (LEE) limits as outlined in the MATS rule. Three (3) consecutive years of quarterly testing is required in order for this unit to obtain LEE status for MATS.

Additional emission limitations are outlined in Table 2, and other operational parameters are outlined in Tables 3 and 4; the tables are below, and are as observed on August 9, 2017.

Table 2: Emissions data for EUBOILER1

Unit Number	Pollutant	Limit	Observed Value	Averaging time
1	NO _x	0.220 lbs/MMBTU	0.178 lbs/MMBTU	365 Day Rolling Average
1	SO ₂	0.350 lbs/MMBTU	0.238 lbs/MMBTU	30 Day Rolling Average
1	SO ₂	0.290 lbs/MMBTU	0.243 lbs/MMBTU	90 Day Rolling Average
1	Mercury (Hg)	1.2 lbs/TBTU ^A	0.446	30 Day Rolling Average

^A This limit is a MATS limit

JHC uses a Part 75 Certified CEMS to continuously monitor SO₂ emissions, as required by the Consent Decree. The CEMS daily calibration report is attached to this report, along with the Opacity Matrix. In addition to the SO₂ CEMS, JHC also has a NO_x, and a mercury CEMS along with a COMS unit.

Table 3: Boiler 1 Operating Parameters

Process Parameter	Observed Information	Operating Time ^A
Gross MW	278	
Net MW	256	
Total Coal Flow	285,000 pph ^B	
Coal Type	100% Western Coal	
DSI	4258 pph	pph of Lime Injected
ACI	178 pph	pph of carbon injected
Opacity ^C	1.1%	6-Minute Average
SO ₂	0.224 lbs/MMBTU	1 Hour Rolling Average
Hg	0.66 lbs/TBTU	Instantaneous

^A Operating time for appropriate parameters only

^B pph – pounds per hour

^C There is no opacity emission limit noted for EUBOILER1, as opacity is evaluated under FGBOILER12 since EUBOILER1 and EUBOILER2 share a common stack.

Table 4: 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	2°F
Opacity	1.1% - 6-minute average
Cleaning Air Pressure	7.9 Pounds per Square Inch (PSI)
System Drag	1.59

JHC is required to have a malfunction abatement plan (MAP) for this unit, for which the facility has 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.

EUBOILER2

Unit 2 was not in operation during the August 9, 2017 visit due to a recent outage. Unit 2, however, was fully evaluated during SL's April 11, 2017 site visit. Specifics for that PCE can be found under activity report CA_B283539336, but emissions data and operational parameters from that visit are outlined in tables 5, 6, and 7, below.

Emissions from Unit 2, a 3560 MMBtu wall-fired boiler with fuel oil startup capability, are controlled by low-NO_x burners, a SCR, ACI, DSI, and a PJFF baghouse. This unit used to have an ESP that utilized sulfur trioxide flue gas enhance the collection efficiency of the ESP, but has since been removed from service due to the installation of the baghouse and other control equipment.

PM emissions are limited to 0.15 pounds per 1,000 pounds of exhaust gas, corrected to 50% excess air and to 0.015 pounds per MMBTU heat input from the Consent Decree. The MATS PM limit is 0.030 lb/MMBTU heat input. Compliance with these limits are demonstrated via stack testing. Currently, the ROP requires stack testing to verify these emission rates every three (3) years, however, MATS requires quarterly stack testing, thus the testing every three (3) years has been met. The most recent test results were received on July 3, 2017 and showed compliance with the heat input limit at a three (3) run average of 0.0025 lb/MMBTU. In addition to PM, MATS requires compliance with an HCl limit of 0.0020 lb/MMBTU; stack testing indicated a three (3) run average of 0.0001 lb./MMBTU. Both of these results also show compliance with the low emitting electric generating unit (LEE) limits as outlined in the MATS rule. Three (3) consecutive years of quarterly testing is required in order for this unit to obtain LEE status for MATS.

Additional emission limitations are outlined in Table 5, and other operational parameters are outlined in Tables 6 and 7; the tables are below, and are as observed on April 11, 2017.

Table 5: Emissions data for Boiler 2

Unit Number	Pollutant	Limit	Observed Value	Averaging time
2	NO _x	0.100 lbs/MMBTU	0.055 lbs/MMBTU	30 Day Rolling Average
2	NO _x	0.080 lbs/MMBTU	0.039 lbs/MMBTU	90 Day Rolling Average
2	SO ₂	0.320 lbs/MMBTU	0.283 lbs/MMBTU ^A	365 Day Rolling Average
2	Mercury (Hg)	1.2 lbs/TBTU ^B	0.265 lbs/TBTU	30 Day Rolling Average

^A This number has not yet reached the 365-day mark.

^B This limit is a MATS limit

JHC uses a Part 75 Certified continuous emissions monitoring system (CEMS) to continuously monitor SO₂ emissions, as required by the Consent Decree. The CEMS daily calibration report is attached to this report, along with the Opacity Matrix. In addition to the SO₂ CEMS, JHC also has a NO_x and a mercury CEMS along with a COMS unit.

Table 6: Boiler 2 Operating Parameters

Process Parameter	Observed Information	Operating Time ^A
Gross MW	299	
Net MW	278	
Coal Type	100% Western Coal	
DSI	3330 pph	pph of lime Injected
ACI	74 pph	pph of carbon injected
Opacity ^B	1.1%	6-Minute Average
Hg	0.57 lbs/TBTU	Instantaneous
SCR NO _x Reduction	69% - A-Side 49% - B-Side	

^A Operating time for appropriate parameters only

^B There is no opacity emission limit noted for EUBOILER2, as opacity is evaluated under FGBOILER12 since EUBOILER1 and EUBOILER2 share a common stack.

Table 7: Pulse Jet Fabric Filter Baghouse Operating Parameters

Process Parameter/Description	Observed Information
Differential Pressure	6.7 Inches of Water Column (WC)
Temperature Drop	4°F

JHC is required to have a malfunction abatement plan (MAP) for this unit, for which the facility has 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 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; EUBOILER2 shares a stack with EUBOILER1.

EUBOILER3

Unit 3 was operating during the August 9, 2017 visit and JHC staff was conducting the required Mercury CEMS RATA. The COMS, CEMS, and Calibration records were requested, reviewed, and are attached to this report. No issues were noted for this unit at the time of the inspection, or in any of the records. This unit is subject to the provisions of 40 CFR Part 63 Subpart UUUUU, or the Mercury and Air Toxics Rule (MATS).

The emissions from Unit 3, a 8240 MMBtu dry bottom, wall-fired boiler with fuel oil startup capability, are controlled by low-NO_x burners, a SCR, ACl, SDA, and a PJFF baghouse. All control equipment is installed and was properly operating. This unit used to have two (2) electrostatic precipitators (ESP's), but these have been removed from service since the installation of the baghouse and other control equipment.

PM emissions are limited to 0.030 pounds per 1,000 pounds of exhaust gas, corrected to 50% excess air and to 0.10 pounds per MMBTU heat input. Both are based off of stack testing. Additional PM limits are 370 pph, based on stack testing, and 1,080 tons per year, based on a 12-month rolling time period. The Consent Decree, however, lowers the required heat input PM limit to 0.015 pounds per MMBTU. MATS also has a PM limit of 0.030 lbs/ MMBTU. Currently, the ROP requires stack testing to verify these emission rates every three (3) years, however, MATS requires quarterly stack testing, thus the testing every three (3) years has been met. The most recent stack test results show compliance for the three (3) run average. However, in March 2017 JHC submitted a notice of compliance status (NOCS) change indicating the use a Part 75 Certified SO₂ CEMS as a surrogate for compliance instead of quarterly testing. Subsequently, JHC has submitted the CEMS results and all reporting has shown compliance.

Additional emission limitations are outlined in Table 8, and other operational parameters are outlined in Tables 9 and 10; the tables are below, and are as SL's PCE on March 24, 2017 visit.

Table 8: Emissions data for Boiler 3

Unit Number	Pollutant	Limit	Observed Value	Averaging time
3	NO _x	0.070 lbs/MMBTU	0.049 lbs/MMBTU	3 Hour Rolling Average
3	NO _x	6,130 pph	414.266 pph ^A	Daily Average
3	NO _x	18,750 tpy	1,347 tpy	12 Month Rolling Average
3	NO _x	0.100 lbs/MMBTU	0.042 lbs/MMBTU	30 Day Rolling Average
3	NO _x	0.080 lbs/MMBTU	0.049 lbs/MMBTU	90 Day Rolling Average
3	SO ₂	1.2 lbs/MMBTU	0.056 lbs/MMBTU	3 Hour Rolling Average
3	SO ₂	10,500 pph	975.8 pph	Daily Average
3	SO ₂	31,650 tpy	5,042 tpy	12 Month Rolling Average
3	SO ₂	1.00 lbs/MMBTU	0.042 lbs/MMBTU	30 Day Rolling Average
3	SO ₂	0.085 lbs/MMBTU	0.063 lbs/MMBTU	30 Day Rolling Average
3	SO ₂	0.070 lbs/MMBTU	NA ^C	365 Day Rolling Average
3	Mercury (Hg)	1.2 lbs/TBTU ^D	0.318 lbs/TBTU	30 Day Rolling Average
3	Opacity	20%	0 - 1%	6 Minute Average
3	PM	1,080 tpy	49 tpy	12 Month Rolling Average

^A The maximum daily observed was 545.661 pph of NO_x

^B The maximum daily observed was 1,557.3 pph of SO₂

^C This compliance date has not yet been met, thus no value was observed

^D This limit is a MATS limit

JHC uses a Part 75 Certified continuous emissions monitoring system (CEMS) to continuously monitor SO₂ emissions, as required by the Consent Decree. The CEMS daily calibration report is attached to this report, along with the Opacity Matrix. In addition to the SO₂ CEMS, JHC also has a NO_x and a mercury CEMS along with a COMS unit.

Table 9: Boiler 3 Operating Parameters

Process Parameter	Observed Information	Operating Time ^A
Gross MW	849	
Net MW	806	
Total Coal Flow	900,000 pph	
Coal Type	100% Western Coal	
ACI ^B	0/37 pph for Side A 0/38 pph for Side B	pph of carbon injected
Ammonia Slip	0.8 – 4.5 ppm	A Direct Measurement
Opacity	0 - 1%	6-Minute Average
SO ₂	0.224 lbs/MMBTU	1 Hour Rolling Average
Hg	0.152 lbs/TBTU	Instantaneous

^A Operating time for appropriate parameters only

^B Each side has two (2) trains

Table 10: Pulse Jet Fabric Filter Baghouse and SCR Operating Parameters

Process Parameter/Description	Observed Information
<i>Pulse Jet Fabric Filter</i>	
Fields in Service	12 Out of 12 fields
Differential Pressure	7.0 Inches of Water Column (WC) for both Side A and Side B
Temperature Drop	4°F for Side A 6°F for Side B
Opacity	0 - 1 % - 6-minute average (each side)
Cleaning Air Pressure	2.7 PSI for Side A 69 PSI for Side B
<i>Selective Catalytic Reduction</i>	
NO _x Inlet (4 Channels)	151, 210, 181, 193 ppm
NO _x Outlet (4 Channels)	31, 38, 25, 28 ppm
NO _x Reduction	79, 82, 86, 85 %

JHC is required to have a MAP for this unit, for which the facility has implemented. This unit is also subject to 40 CFR Part 64 – Compliance Assurance Monitoring (CAM), and to 40 CFR Part 60 Subpart D, the NSPS for Fossil-Fuel-Fired Steam Generators.

JHC uses a PM CEMS system as an indicator of the unit's compliance with the particulate matter limits. This method of monitoring is presumptively acceptable under CAM. The most recent CEMS/COMS excess emissions reported the COM's monitor downtime appropriately, and no excess emissions were indicated because of the downtime.

This unit is subject to Acid Rain and the 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.

EUCOALHAND

This emission unit consists of all of the coal handling throughout the facility and is comprised of: two (2) dumper buildings, transfer conveyors, a transfer building, a breaker house, bunker rooms, and the coal pile storage area itself. To control the fugitive emissions from these processes, dust collectors serve several of the areas, including the breaker house, the bunker houses and the reclaim hopper. Dust collectors #3, #5, #6, #7, and #9 are subject to the New Source Performance Standards (NSPS) 40 CFR Part 60 Subpart Y for Coal Preparation and Processing Plants. Initial performance testing for the respective baghouses has already successfully been completed. JHC has been successfully submitting fugitive dust reports, and properly implementing fugitive dust control practices.

JHC was not receiving any product at the time of the visit, but typically does receive at least one (1) train full of coal per day. PM is limited to 0.1 pounds per 1,000 pounds of exhaust gas, on a dry gas basis at all times from each discharge point. Each discharge point also has a 20% opacity limit; all baghouses were properly operating at the time of the inspection, and no opacity was observed from any of the discharge points. Each of the baghouses are equipped with pressure drop indicators and were operating within the specified range of 1 – 7" WC.

Baghouses #1, #10, and #11, which serve the dumper building and the coal yard dust hopper, are also subject to the provisions of 40 CFR Part 64 for Compliance Assurance Monitoring. Per the successfully completed reports, no CAM monitor downtime was reported for this process. Similarly, no excursions or exceedances were reported either.

EUSDA_U3

This emission unit covers the lime preparation operations that support the SDA for Boiler 3, and include the storage silos, vertical ball mills, and lime slurry transfer and product tanks. The storage silos are controlled by

bin vent filters, the ball mill emissions are controlled by spray scrubbers, and the recycle mix tank emissions are controlled by a spray scrubber.

There is a 5% opacity limit on the bin vent filter and each spray scrubber; no opacity was noted at the time of the inspection. PM is limited to 0.004 gr/dscf of exhaust gas from the bin vent filter and to 0.01 gr/dscf of exhaust gas for each spray scrubber, both based on test protocol. Additional PM₁₀ limits for EUSDA_U3 are 0.021 pph and 0.024 for the various spray scrubber emission points, and 0.02 pph for the bin vent filter emission points. The PM_{2.5} limit for the bin vent filters is 0.02 pph; while the PM_{2.5} limits for the various spray scrubber emission points are 0.024 pph, and 0.021 pph.

JHC has properly implemented and maintained a MAP for this unit to ensure proper operation. Indicators from the MAP include monitoring the differential pressure for the lime storage silos, recycle ash silos and the filter separators. JHC is also monitoring and recording visible emission from the appropriate points for this emission unit.

JHC is also employing their fugitive dust plan in this area to minimize fugitives. Per the most recent fugitive dust report, JHC has been adequately addressing any fugitives; no fugitive dust was noted during the inspection.

EUDSI_U12

This emission unit is for the dry sorbent injection (DSI) material handling operations for Boilers 1 and 2. This includes the sorbent silos (hydrated lime or other sorbent) and pneumatic transfer.

No opacity was noted during the inspection, thus meeting the 5% opacity limit for each bin vent filter. PM emissions from the bin vent filters are limited to 0.004 gr/dscf of exhaust gases, based on test protocol. Additional PM emission limits are 0.08 pph, for PM₁₀, and 0.08 pph, for PM_{2.5}.

JHC has properly implemented and maintained a MAP for this unit to ensure proper operation. Indicators from the MAP include monitoring the differential pressure and the lime injection rate. JHC is also monitoring and recording visible emissions from the appropriate bin vent filters.

JHC is also employing their fugitive dust plan in this area to minimize fugitives. Per the most recent fugitive dust report, JHC has been adequately addressing any fugitives; no fugitive dust was noted during the inspection.

EUACI_123

All three (3) units activated carbon (or other sorbent) material handling, including the silos, are covered under this emission unit. PM is limited to 0.004 gr/dscf for each bin vent filter. PM₁₀ emissions are limited to 0.045 pph and to 0.041 pph, for the various bin vent filters. PM_{2.5} emissions are also limited to 0.045 pph and 0.041 pph for the various bin vent filters.

JHC has properly implemented and maintained a MAP for this unit to ensure proper operation. Indicators from the MAP include monitoring the differential pressure and the injection rates, and the fill level. JHC is also monitoring and recording visible emissions from the appropriate bin vent filters.

JHC is also employing their fugitive dust plan in this area to minimize fugitives. Per the most recent fugitive dust report, JHC has been adequately addressing any fugitives; no fugitive dust was noted during the inspection.

EULIMEPREP, EUSDAMAT1&2, and EUSDAMAT3

These three (3) emission units, while currently in the active ROP, have been replaced by other, previously detailed emission units. These emission units will not be evaluated as outlined in MI-ROP-B2835-2013a.

EUBYPRODUCT

There are three (3) separate byproduct systems, one for each boiler. The system transfers the byproduct from the fabric filters (ash, spent lime, and sorbent) to the disposal silos. The material handling operations for all three boilers consists of byproduct transfer silos, byproduct vacuum conveying blowers to transfer silos, and byproduct storage silos. Emissions from the transfer and storage silos are controlled by bin vent filters and the byproduct vacuum conveying blowers vent through filter separators that exhaust to the PJFF baghouses on

boiler 3.

PM emissions are limited to 0.004 gr/dscf of exhaust gases from each bin vent filters for the transfer silos and for each filter separator exhausting to the PJFF baghouses; all are based test protocol. Additionally, PM₁₀ and PM_{2.5} emissions are limited to 0.03 pph, 0.04 pph, 0.05 pph, or 0.55 pph for various bin vents. All emission limitations are based on test protocol.

All control equipment appeared to be properly operating; no opacity was noted from any of the points in the process during the roof-top observations, thus showing compliance with the 5% opacity limit for each bin vent filter for the transfer and the storage silos.

JHC has implemented a fugitive dust plan and submits quarterly reports to AQD. The most recent report, received on 7/13/2017 indicates that several dust control measures were used, including a water truck, and brine application, in addition to the daily surveillance to ensure no fugitive emissions. JHC also maintains a malfunction abatement plant (MAP), that has been properly implemented and maintained.

While stack dimensions were not explicitly measured, they appeared to be correct.

EUAUXBLR12

There is one (1) 17 MMBtu oil-fired firetube auxiliary boiler for Units 1 and 2. This boiler was not in use at the time of the inspection.

Ultra-Low Sulfur Diesel No. 2 fuel oil with a maximum sulfur content of 0.0015 % by weight is used in this boiler. This boiler is exempt from Rule 201 permitting under Rule 282(2)(b)(ii), but is subject to the provisions of 40 CFR Part 63 Subpart DDDDD and does not have any emission limits associated with it. JHC has successfully submitted the required notifications and tune-up reports, as required.

EUCAT3DIESEL

This emission unit is for a 9.4 MMBTU emergency diesel-fired internal combustion engine. This engine is subject to the provisions of 40 CFR Part 63 Subpart ZZZZ for reciprocating internal combustion engines (RICE MACT). This engine burns diesel fuel only, and the sulfur content is below the allowed 1.0% by weight at 18,000 BTU/lb. This engine was not in use at the time of the inspection.

EUCATDIESEL12

This emission unit is a 2,000 kilowatt (kW) diesel-fueled emergency generator installed in 2012. This unit is subject to the provisions of the new source performance standards (NSPS) for stationary compression ignition internal combustion engines and the provisions of the RICE MACT. This engine was not operating at the time of the inspection.

The fuel used for this engine has a sulfur content of less than 0.0015 % by weight, and JHC is tracking the hours of operation for the engine, as required. This is a Certified engine, thus meets all the emission limitations unless the engine is modified.

EUWPDIESEL

This emission unit is for the 130 Horsepower (HP) diesel internal combustion emergency flush water pump. This engine is subject to the provisions of 40 CFR Part 60 Subpart IIII, the NSPS for Stationary Compression Ignition Internal Combustion Engines and the RICE MACT. This engine is a NSPS IIII Tier 3 Certified engine and meets the emission limits of 0.20 g/kW-hr for PM, 3.5 g/kW-hr for CO, and 4.0 g/kW-hr for NMHC + NO_x; all based on test protocol. Based on the certification, this engine meets the requirement for the emissions limitations, unless the engine is modified.

This engine only burns diesel fuel with a sulfur content of less than 15 ppm and is equipped with a non-resettable hour meter. This engine was not in operation at the time of the inspection.

FGBOILER12

This flexible group covers the common applicable requirements for Boilers 1 and 2. Boilers 1 and 2 exhaust through a common stack. As previously mentioned, Boiler 2 was down during the August 9, 2017 visit. However, no opacity was noted from the stack during that visit. The SO₂ monthly average emission rate is limited to 1.67 lbs/MMBTU, applying to each individual boiler. However, the Consent Decree with USEPA has since implemented more stringent SO₂ limits that each individual boiler must comply with. Each boiler is compliant with the more stringent limits. Please reference EUBOILER1 and EUBOILER2.

FGEXISTINGRICE

There are four (4) diesel-fired reciprocating internal combustion engines in this flexible group that are subject to the provisions of the NEHSAP 40 CFR Part 63 Subpart ZZZZ for reciprocating internal combustion engines. All engines burn ultra-low sulfur diesel fuel, that has a maximum sulfur content of 0.0015% by weight. JHC is properly complying with all provisions of ZZZZ, including conducting all inspections and changing the oil and filter, as needed.

EUCATFIREPUMP3, a 2.28 MMBTU fire pump installed in 2017, is also subject to the provisions of 40 CFR Part 60 Subpart IIII, the NSPS for stationary compression ignition internal combustion engines. No initial notification is required for Subpart IIII, and all emission standards are met based off of the manufacturers Certification of the engine.

None of the engines were operating at the time of the inspection.

FGPARTSCLEANERS

This flexible group covers all existing or future cold cleaners exempt from Rule 201 permitting under Rules (2)(h) and (2)(r)(iv). All parts cleaners were closed properly labeled. All appeared to be compliant.

FGAUXBLRS3

This flexible group covers two (2) 9.8 mmBTU distillate oil fired boilers that provide heat to building 3. Neither boiler was operating at the time of the inspection; the boilers are operated primarily for the purposes of providing comfort heat. These boilers are exempt from Rule 282(2)(b)(ii). Both of these boilers, however, are subject to the provisions of 40 CFR Part 63 Subpart DDDDD, but do not have any emission limits. JHC has successfully submitted the required notifications and tune-up reports.

Section 2:

EUCOMBTURB

As previously stated, Section 2 consists only of a 233 MMBtu/Hr Distillate oil-fired combustion turbine. This unit has previously been in moth-ball status, but was put back into service in July 2017. Per the records provided by Mr. Firlit, during the onsite visit on August 9, 2017, over the past year July 2017 was the only month this unit ran, and no reconstruction had occurred. JHC is properly tracking the fuel usage and the hours of operation.

Additionally, the sulfur content of the fuel used for the turbine is less than the allowed 1.5% by weight. This unit is subject to the provisions of 40 CFR Part 63 Subpart YYYY for Stationary Combustion Turbines, however, per 40 CFR 63.9090(b)(4) states that an existing stationary combustion turbine in all subcategories does not have to meet the requirements of this subpart, thus there is no requirements for this unit, unless the unit undergoes major reconstruction.

Compliance Determination

Based on the observations made during this inspection, the previous site visits, and a review of the required records and reports, the facility appears to be in compliance with MI-ROP-B2835-2013a, PTI NOs. 39-15, 18-15, and 141-12 as well as the Federal Consent Decree.

NAME Kaitlyn Davis

DATE 10/4/2017 SUPERVISOR [Signature]