

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

B283545810

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: 08/20/2018
STAFF: Kaitlyn DeVries	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Throughout the 2018 Fiscal year, Air Quality Division (AQD) staff Kaitlyn DeVries conducted partial inspections of the Consumers Energy, JH Campbell Coal Fired electric generating facility located at 17000 Croswell, Port Sheldon, Michigan. The purpose of these inspections was to determine compliance with the facility's renewable operating permit (ROP) MI-ROP-B2835-2013b, and PTI No. 18-15A, which was issued in June 2018 and will be rolled into the ROP during the renewal, which is currently in house with AQD. The observations made during each visit will comprise this Full Compliance Evaluation (FCE) for Fiscal Year 2018.		
RESOLVED COMPLAINTS:		

Throughout the 2018 Fiscal year, Air Quality Division (AQD) staff Kaitlyn DeVries conducted partial inspections of the Consumers Energy, JH Campbell Coal Fired electric generating facility located at 17000 Croswell, Port Sheldon, Michigan. The purpose of these inspections was to determine compliance with the facility's renewable operating permit (ROP) MI-ROP-B2835-2013b, and PTI No. 18-15A, which was issued in June 2018 and will be rolled into the ROP during the renewal, which is currently in house with AQD. The observations made during each visit will comprise this Full Compliance Evaluation (FCE) for Fiscal Year 2018.

The following observations were made on February 21, June 27, 2018, August 20, 2018. Each time, staff met with Mr. Joseph Firlit, Environmental Lead, who is the primary contact for on-site activities at the facility. KD also met with Ms. Kathryn Cunningham, Single Point of Contact for Coal Generation. In addition to the observations made during each of those visits, various testing was being conducted on each of those days. On the August 20th visit, KD also visited the ash storage area, including the Landfill area.

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 the control equipment associated with each respective unit.

Table 1: JHC Boiler Design and Specifications as of August 2018

	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

Regulatory Analysis

JHC is currently operating under Title V permit MI-ROP-B2835-2013b and has begun the renewal process for the current ROP. JHC is also subject to 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, IIII for Stationary Reciprocating Internal Compression Ignition Engines. 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).

JHC has also entered into a Consent Decree with USEPA; the provisions of the Consent Decree have been incorporated into the ROP via PTI's. There are fleetwide emission limitations established under the Consent Decree, but these will not be evaluated as part of this report.

Compliance Evaluation

The ROP is divided into two (2) sections. Section 1 consists of most of the facility operations and Section 2 consists only of one (1) 233 MMBtu/hr combustion turbine,

Section 1:*EUASHNEW*

This emission unit 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 (Headwaters), and two (2) re-sale load out silos (which share one (1) 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 resale silos with six (6) filter separators for the vacuum pump exhausters. The vacuum pump exhauster filter separators are exhausted to the main boiler stacks.

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, 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 any of her visits.

The amount of dry fly ash processed is limited to 41,610 tons per month and 499,320 tpy, based upon a 12-month rolling time period. As of June 2018, JHC had a 12-month rolling total of 200,232 tons of fly ash processed, with 21,434.5 tons in the month of June.

JHC notified AQD in a letter dated June 14, 2018 that all installation of various air quality control systems for Boiler Units 1, 2, and 3 was complete, and all new ash/byproduct disposal is now covered under EUBYPRODUCT. This emission unit is no longer applicable, as of June 14, 2018, and will be removed during the ROP renewal process.

EUBOILER1

This emission unit was evaluated primarily during KD's February 21, 2018 visit. Unit 1 is a 2490 MMBTU tangential fired boiler with fuel oil startup capabilities. The emissions from this unit are controlled by low-NOx burners, ACI, DSI, and a PJFF baghouse. All control equipment was installed and properly operating. This unit is subject to the provisions of 40 CFR Part 63 Subpart UUUUU for Coal and Oil-fired Electric Utility Steam Generating Units, also known as the Mercury and Air Toxics Standards (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 recent stack testing resulted in a three (3) run average PM emission rate of 0.0004 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 0.00005 lb./MMBtu. Both emission show compliance with the low emitting electric generating unit (LEE) limits outlined in the MATS rule. Three (3) years of consecutive quarterly testing is required in order for this unit to obtain LEE status.

Table 2, below, outlines additional emission limitations for the unit; Table 3 and 4 outline operational parameters, and the observations made on the February 21, 2018 visit.

Table 2: 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 SO₂ emissions. 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	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 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	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, which 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.

EUBOILER2

Unit 2 was of interest during KD's June 27, 2018 visit.

Unit 2 is a 3560 MMBTU wall-fired boiler with fuel start-up capability. Emissions are controlled by low-NOx burners, a SCR, ACI, DSI, and a PFJJ baghouse. This unit is also subject to MATS.

PM emissions are limited to 0.15 lbs per 1,000 pounds of exhaust gas, corrected to 50% excess air and to 0.015 pounds per MMBtu heat input. The MATs PM limit is 0.030 lbs/ MMBtu heat input. Compliance with these limits are demonstrated via stack testing. The current ROP requires stack testing to verify these emission rates at least every three (3) years, however, JHC has chosen quarterly stack testing to verify compliance with the MATS limit, thus the every three (3) years requirement has also been met. The most recent stack test indicated an emission rate of 0.0011 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 0.00005 lb./ MMBtu. Both of these results also show compliance with the low emitting electric generating unit (LEE) limits outlined in the MATS rule. Three (3) consecutive years of quarterly testing is required in order for LEE status to be obtained.

Additional emission limitations are outlined in Table 5, and operational parameters are outlined in Table 6 and 7.

Table 5: Emissions data for Boiler 2

Unit Number	Pollutant	Limit	Observed Value	Averaging time
2	NO _x	0.100 lbs/ MMBtu	0.042lbs/ MMBtu	30 Day Rolling Average
2	NO _x	0.080 lbs/ MMBtu	0.043 lbs/ MMBtu	90 Day Rolling Average
2	SO ₂	0.320 lbs/ MMBtu	0.270 lbs/ MMBtu	365 Day Rolling Average
2	Mercury (Hg)	1.2 lbs/TBTU ^A	0.365 lbs/TBTU	30 Day Rolling Average

^A 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. 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	301	
Coal Type	100% Western Coal	
DSI	3141 pph	pph of lime injected
ACI	74 pph	pph of carbon injected
Opacity ^B	1.0%	6-Minute Average
Hg	0.494 lbs/TBTU	Instantaneous
SCR NO _x Reduction	54% - A-Side 40% - 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	6.2 Inches of Water Column (WC)
Temperature Drop	5°F
Fields in Service	10 of 10 fields
Cleaning Air Pressure	2.7 Pounds per Square Inch (PSI)
System Drag	2.60

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

This unit was the unit of interest on KD's August 20, 2018 visit. The calibration records were requested, reviewed and are attached to this report. The opacity matrix from the previous day was also requested and is 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 also subject to MATS.

Boiler 3 is an 8240 MMBtu/hr dry bottom, wall-fired boiler with fuel oil startup capability. Emissions are controlled by low-NOx burners, a SCR, ACI, SDA, and a PJFF baghouse. All equipment was properly operating on the day of the visit.

PM emissions are limited to 0.030 lbs/ MMBtu heat input, 0.10 lbs/MMBtu heat input, and 0.015 lbs/MMBtu heat input. JHC uses a PM CEMS to demonstrate compliance with PM limitations. As of June 30,2018, the 30-day rolling average for PM emissions was 0.00049

lbs/MMBtu. The Part 75 Certified CEMS for SO₂ is used to demonstrate compliance with the HCl limit, as allowed under MATS. The rolling 30 day SO₂ limit is 0.20 lb./MMBtu. On the date of the inspection, the 30-day rolling average for SO₂ was 0.060 lbs/ MMBtu.

Table 8 shows the remaining emission limitations for Boiler 3, while Tables 9 and 10 show operational parameters for the boiler.

Table 8: Emissions data for Boiler 3

Unit Number	Pollutant	Limit	Observed Value	Averaging time
3	NO _x	0.070 lb/MMBtu	0.051 lbs/MMBtu	3 Hour Rolling Average
3	NO _x	18,750 tpy	1,530 tpy	12 Month Rolling Average
3	NO _x	0.100 lbs/MMBtu	0.048 lbs/MMBtu	30 Day Rolling Average
3	NO _x	0.080 lbs/MMBtu	0.047 lbs/MMBtu	90 Day Rolling Average
3	SO ₂	1.2 lbs/MMBtu	0.069 lbs/MMBtu	3 Hour Rolling Average
3	SO ₂	31,650 tpy	1,647 tpy	12 Month Rolling Average
3	SO ₂	1.00 lbs/MMBTU	0.027 lbs/MMBtu	30 Day Rolling Average
3	SO ₂	0.085 lbs/MMBtu	0.060 lbs/MMBtu	30 Day Rolling Average
3	SO ₂	0.070 lbs/MMBtu	0.058 lbs/MMBtu	365 Day Rolling Average
3	Mercury (Hg)	1.2 lbs/TBTU ^A	0.645 lbs/TBTU	30 Day Rolling Average
3	Opacity	20%	2.0%	6 Minute Average
3	PM	1,080 tpy	28 tpy	12 Month Rolling Average

^A This limit is a MATS limit

JHC uses a Part 75 Certified continuous emissions monitoring system (CEMS) to continuously monitor NO_x, CO₂, and SO₂ emissions. At the time of observation, PM emissions were 0.149 µg/m³.

Table 9: Boiler 3 Operating Parameters

Process Parameter	Observed Information	Operating Time ^A
Gross MW	867	
Net MW	809	
Total Coal Flow	872,000 pph	
Coal Type	100% Western Coal	
DSI	236 with 35% Solids for Side A 240 with 41% Solids for Side B	gpm of Lime Injected
ACI ^B	30 pph for Side A 36 pph for Side B	pph of carbon injected
System Drag	1.35	
Opacity	1.0%	6-Minute Average
SO ₂	0.031 lbs/MMBtu	1 Hour Rolling Average
Hg	0.302 lbs/TBTU	Instantaneous

^A Operating time for appropriate parameters only

^B Each side has two (2) trains

Table 10: Pulse Jet Fabric Filter Baghouse Parameters

Process Parameter/Description	Observed Information
<i>Pulse Jet Fabric Filter</i>	
Fields in Service	12 Out of 12 fields
Differential Pressure	6.7 Inches of Water Column (WC) for both Side A and Side B
Temperature Drop	4°F for Side A 7°F for Side B
Opacity	1 % - 6-minute average

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 Da, the NSPS for Electric Utility Steam Generating Units.

JHC uses a COMS system as an indicator of the unit's compliance with the particulate matter limits. 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. Acid rain compliance demonstrations are reported directly to USEPA on a quarterly basis.

The facility does not combust waste, therefore no EDTA or citrosolve has been used by the facility. The stack dimensions were not explicitly measured, but there was no evidence of change, and the dimensions appeared to be correct.

*EU*COALHAND

This emission unit consists of all the coal handling operations 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 emissions from these processes JHC uses various enclosures, baghouses, and dust suppression measures. The dust collectors serving the breaker house, bunker houses, and the reclaim hopper (DC #4, #5, #6, #7, and #9) are subject to the provisions of the New Source Performance Standards 40 CFR Part 60 Subpart Y for Coal Preparation and Processing Plants. Initial Performance testing for these baghouses has already been completed.

JHC was not actively receiving product during any of KD's visits but does typically receive at least one (1) train full of coal per day. Additionally, during each of KD's visits, the coal pile looked well groomed with no fugitive emissions. JHC has been successfully submitting fugitive dust reports, and properly implementing fugitive dust control practices.

PM emissions are limited to 0.10 pounds per 1,000 pounds exhaust gas, on a dry basis from each discharge point. Each discharge point also has an opacity limit of 20%; all baghouses were properly operating during each visit and no opacity was observed at any time during the visits. Each of the baghouses are equipped with pressure drop indicators and were operating within the specified range of 1-7" WC.

Dust Collectors #1, #10, and #11 which serve the dumper houses, the coal yard hopper, and Units 1 and 2 are also subject to the provisions of 40 CFR Part 64 for Compliance Assurance Monitoring (CAM).

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 for each of the bin vent filters and each spray scrubber; no opacity was noted during any of KD's visits to the facility. PM is limited to 0.004 gr/dscf of exhaust gas from the bin filters and 0.01 gr/dscf of exhaust gas for the spray scrubber. Additional PM₁₀ limits for EUSDA_U3 are 0.021 pph and 0.024 pph for various spray scrubber emission points, and 0.02 pph or 0.03 pph for the bin vent filter emission points. The PM_{2.5} limit for the bin vent filters is 0.02 pph or 0.03 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 maintains a MAP for this unit to ensure proper operation. Indicators from the MAP include monitoring differential pressure for the lime storage silos, recycle ash silos, and the filter separators. JHC is also monitoring and recording visible emissions from the appropriate points for this emission unit. The aforementioned Campbell Complex fugitive dust plan also helps ensure minimal fugitive dust.

EUSDI_U12

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

The bin vent filters have an opacity limit of 5%; no opacity was noted at any time during any of KD's visits. The bin vent filters also have a PM limit of 0.004 gr/dscf of exhaust gases, a PM₁₀ limit of 0.08 pph, and a PM_{2.5} limit of 0.08 pph. JHC has implemented and maintains a MAP to ensure proper operation. Indicators from the MAP include monitoring the differential pressure and the lime injection rate. JHC is also monitoring visible emissions from the appropriate bin vent filters.

JHC employs the Campbell Complex Fugitive dust plan for this emission unit to minimize fugitive emissions. Per the most recent quarterly fugitive dust report, appropriate measures have been taken to minimize fugitives. Additionally, no fugitive emissions were observed during any of KD's visits.

EUACI_U123

All three (3) units activated carbon (or other sorbent) material handling, including the silos are covered under this emission unit. Each bin vent filters have a PM emission limit of 0.004 gr/dscf of exhaust gas. Other various bin vent filters have additional PM emission limits, including PM₁₀ limits of 0.45 pph and 0.41 pph, and PM_{2.5} limits of 0.045 pph and 0.041 pph, depending on the emission point.

The Campbell Complex fugitive dust plan and the MAP, both of which been implemented and maintained, help to minimize fugitive emissions and ensure proper operation of the bin vent filters. Indicators in the MAP include monitoring the differential pressure and the injection rates, and the fill level. JHC is also monitoring and recording the visible emissions from the appropriate bin vent filters. No fugitive dust was noted during any of KD's visits.

EUBYPRODUCT

This emission is currently operating under PTI No. 18-15A. In a letter dated June 14, 2018 JHC notified AQD that all installation, construction, reconstruction, relocation, and modification of EUBPYRODUCT was complete. This PTI will be rolled into the ROP during the renewal process. The emission unit covers the ash and byproduct handling system that transports ash and byproduct from the plant to the disposal silos. Equipment included in this emission unit is transfer tanks, (2 for the Unit 3 system and 2 for the Unit 1 and 2 system) with associated vacuum exhausters, and common disposal silos and truck loading.

There is an opacity limit of 5% from various bin vent filter emission points, as well as a PM limit of 0.004 gr/dscf of exhaust gas. The transfer tanks also have the PM emission limit of 0.004 gr/dscf of exhaust gases. KD did not observe any visible emissions emanating from any of the bin vent filters during her visits. Additional emission limits for the transfer tank vacuum exhausters include PM₁₀ limits of 0.03 pph and PM_{2.5} limits of 0.03 pph. The various bin vent filters have PM₁₀ limits of 0.03 pph, 0.55 pph or 0.05 pph and PM_{2.5} limits of 0.03 pph or 0.55 pph or 0.05 pph, depending on the vent.

Each byproduct transfer tanks vacuum exhaust is discharged to a PJFF baghouse for one of the three (3) boilers except when EUBOILER1 is not operating. In that instance, the exhaust from the filter/separator associated with EUBOILER2 may be exhausted to atmosphere. JHC is tracking where the exhaust is going, and when it is being exhausted to atmosphere. JHC is

also noting if there are any visible emissions during the time the transfer tanks are being exhausted to atmosphere. Records indicate no visible emissions were observed the last time Unit 1 was down.

All associated equipment appeared to be properly operating during each of KD's visits. JCH has implemented and maintains a MAP for this emission unit as well as utilizing fugitive dust control measures as outlined in the Campbell Complex fugitive dust plan.

EUAUXBLR12

This emission unit is one (1) common auxiliary boiler for Units 1 and 2, which is a 17 MMBtu/Hr limited use oil-fired tube boiler, and has been identified as a limited use boiler. This boiler is subject to the provisions of 40 CFR Part 63 Subpart DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters. Since this is a limited use boiler, the oil used in this boiler has a 10% annual capacity factor on the oil. This annual capacity factor means the ratio between the actual heat input to a boiler from the fuels burned during a calendar year to the potential heat input to the boiler had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity. The fuel burned in this boiler is limited to a sulfur content of 0.5% sulfur by weight based on a higher heating value of 18,000 btu/lb. Fuel records, reviewed on site, indicate the sulfur content is compliant with this limit.

Tune-ups are required ever five years, and records indicate the most recent tune-up was done in August of 2015 with all the required item checked and appropriate adjustments made.

EUCAT3DIESEL

This emission unit is a 9.4 MMBTU emergency diesel-fired installed in 2012. This unit is subject to the provisions of the new source performance standards (NSPS) Subpart 40 CFR Part 60 Subpart IIII for Reciprocating Compression Ignition Internal Combustion Engines as well as 40 CFR Part 63 Subpart ZZZZ for Reciprocating Internal Combustion Engines. Compliance with Subpart ZZZZ is demonstrated via compliance with Subpart IIII. This is a Certified engine, therefore meeting the emission limitations specified in Subpart IIII, unless modified. This engine burns diesel fuel only, and the sulfur content of the fuel is below the 1.0% allowed by weight at 18,000 btu/lb. The engine is equipped with an hour meter and was not in use during the time of the inspection. Records indicate a total of 15.6 hours of operation during 2017.

EUCATDIESEL12

This emission unit is a 2,000-kilowatt (kW) diesel-fueled emergency generator installed in 2012. This unit is subject to the provisions NSPS Subpart 40 CFR Part 60 Subpart IIII for Reciprocating Compression Ignition Internal Combustion Engines as well as 40 CFR Part 63 Subpart ZZZZ for Reciprocating Internal Combustion Engines. Compliance with Subpart ZZZZ is demonstrated via compliance with Subpart IIII. This engine was not operating at the time of the inspection. This is a Certified engine, thus meeting the emission limits of 6.4 g/kW-hr for NMHC+NOx, 3.5 g/kW-hr for CO, and 0.2 g/kW-hr for PM. The engine is equipped with an hour meter, and records indicate a total of 18.1 hours of operation during 2017. Additionally, the fuel used for this engine has a sulfur content of less than 0.0015 % by weight.

EUWPDIESEL

This emission unit is a 130 Horsepower (HP) diesel fired internal combustion emergency flush water pump. This unit is subject to the provisions NSPS Subpart 40 CFR Part 60 Subpart IIII for Reciprocating Compression Ignition Internal Combustion Engines as well as 40 CFR Part 63 Subpart ZZZZ for Reciprocating Internal Combustion Engines. Compliance with Subpart ZZZZ is demonstrated via compliance with Subpart IIII. Fuel records indicate compliance with the maximum sulfur content of less than 15 ppm by weight and a minimum cetane index of 40 or a maximum aromatic content of 35 % by volume. Since this is a certified engine, it is compliant with the NMHC+ NO_x limit of 4.0 g/kW-hr, CO limit of 3.5 g/kW-hr, and the PM limit of 0.20 g/kW-hr. The engine is equipped with an hour meter, and records indicate it that it did not operate in 2017. The most recent PM done on the unit was done in December 2017.

FGBOILER12

This flexible group covers the common applicable requirements for EUBOILER1 and EUBOILER2; these boilers exhaust through a common stack.

Each boiler has a 1.67 lbs/MMBTU SO₂ limit, however the SO₂ limits that were incorporated from the Consent Decree are more stringent and are evaluated in the respective individual boiler sections of this report. Each boiler has a 20% opacity limit, per 6-minute averaging period. No opacity was noted during any of KD's visits.

Sulfur content is limited to 1.0% by weight at a heat content of 12,000 btu/lb. Records, reviewed on site, indicate compliance with this limit. These boilers are no longer burning waste, therefore no EDTA or citrosolve is being used.

JHC uses a continuous opacity monitoring system (COMS) and has properly implemented their compliance assurance monitoring (CAM) plan.

Both units are also subject to the provisions of 40 CFR Part 63 Subpart UUUUU for Coal and Oil-fired Electric Utility Steam Generating Units, otherwise known as the Mercury and Air Toxics Standards (MATS). Emission limitations from MATS are discussed in EUBOILER1 and EUBOILER2, respectively.

FGEXISTINGRICE

This flexible group is comprised of four (4) diesel fired emergency reciprocating internal combustion engines that are subject to the provisions of 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. Each of the units is equipped with an hour meter, and hours of operation are properly being tracked. JHC is properly complying with all provisions of ZZZZ, including conducting all inspections and changing the oil and filters. The most recent PM for all the units was done in November 2017.

EUCATFIREPUMP, a 2.28 MMBTU fire pump installed in 2017, is also subject to the provision pf 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.

FGPARTSCLEANERS

This flexible group covers all existing or future cold cleaners exempt from Rule 201 permitting under Rules 281(2)(h) and 285(2)(r)(iv). All parts cleaners were properly labeled and closed during the visits.

FGAUXBLRS3

There are two (2) 9.8 MMBtu distillate oil fired boilers that provide heat to building 3 in this flexible group. The boilers are used primarily for comfort heat and were not operating during any of the three (3) visits. These boilers are exempt from rule 201 permitting under Rule 282 (2)(b)(ii) but are subject to the provisions of 40 CFR Part 63 Subpart DDDDD, but do not have any emission limitations. The boilers burn fuel oil with a sulfur content of less than 0.4% by weight, at 18,000 btu/lb. All required notifications have been submitted, and tune-ups completed.

Section 2:**EUCOMBTURB**

Section 2 consists only of this emission unit, a 233 MMBTU/Hr distillate oil-fired combustion turbine that is used for peaking. The sulfur content of the fuel oil used in this emission unit is limited to 1.5% by weight at 18,000 btu/lb. Records indicated that the sulfur content of the fuel is less than 0.5% by weight. JHC maintains records of all fuel usage and hours of operation. Per the records reviewed on site during the June 2018 visit, the turbine last ran in January 2018 for a total of 11.7 hours.

This emission unit is subject to the provisions of 40 CFR Part 63 Subpart YYYY for Stationary Combustion Turbines, however, 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, therefore there are no requirements for this unit, unless the unit undergoes major reconstruction. As of the date of this report, there has not been major reconstruction on this emission unit.

Additionally, during KD's August 20, 2018 visit, Ms. Kathryn Cunningham stated that this unit will be permanently retired in the near future.

Compliance Determination

Based on the observations made during the various site visits, and a review of the required records and reports, the facility appears to be in compliance with MI-ROP-B2835b and PTI No. 18-15a.

NAME Koulem Duhio

DATE 8/28/2018 SUPERVISOR [Signature]