MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY AIR QUALITY DIVISION

OCTOBER 8, 2020

PERMIT TO INSTALL 43-20

ISSUED TOLANSING BOARD OF WATER AND LIGHT

LOCATED AT 3725 SOUTH CANAL ROAD LANSING, MICHIGAN 48917

> IN THE COUNTY OF EATON

STATE REGISTRATION NUMBER B4001

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

April 14, 2020		
DATE PERMIT TO INSTALL APPROVED:	SIGNATURE:	
October 8, 2020		
DATE PERMIT VOIDED:	SIGNATURE:	
DATE PERMIT REVOKED:	SIGNATURE:	

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD Air Quality Division

BACT Best Available Control Technology

CAA Clean Air Act

CAM Compliance Assurance Monitoring
CEMS Continuous Emission Monitoring System

CFR Code of Federal Regulations

COMS Continuous Opacity Monitoring System

Department/department/EGLE Michigan Department of Environment, Great Lakes, and Energy

EU Emission Unit FG Flexible Group

GACS Gallons of Applied Coating Solids

GC General Condition
GHGs Greenhouse Gases

HVLP High Volume Low Pressure*

ID Identification

IRSLInitial Risk Screening LevelITSLInitial Threshold Screening LevelLAERLowest Achievable Emission RateMACTMaximum Achievable Control TechnologyMAERSMichigan Air Emissions Reporting System

MAP Malfunction Abatement Plan MSDS Material Safety Data Sheet

NA Not Applicable

NAAQS National Ambient Air Quality Standards

NESHAP National Emission Standard for Hazardous Air Pollutants

NSPS New Source Performance Standards

NSR New Source Review
PS Performance Specification

PSD Prevention of Significant Deterioration

PTE Permanent Total Enclosure

PTI Permit to Install

RACT Reasonable Available Control Technology

ROP Renewable Operating Permit

SC Special Condition

SCR Selective Catalytic Reduction
SNCR Selective Non-Catalytic Reduction

SRN State Registration Number

TBD To Be Determined

TEQ Toxicity Equivalence Quotient

USEPA/EPA United States Environmental Protection Agency

VE Visible Emissions

^{*}For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm Actual cubic feet per minute

BTU **British Thermal Unit** °C **Degrees Celsius** CO Carbon Monoxide

Carbon Dioxide Equivalent CO₂e Dry standard cubic foot dscf Dry standard cubic meter dscm °F Degrees Fahrenheit

Grains gr

HAP Hazardous Air Pollutant

Hg Mercury Hour hr ΗP Horsepower H_2S Hydrogen Sulfide

kW Kilowatt Pound lb Meter m Milligram mg Millimeter mm Million MM MW Megawatts

NMOC Non-Methane Organic Compounds

Oxides of Nitrogen NO_{x}

Nanogram ng PM

Particulate Matter

PM10 Particulate Matter equal to or less than 10 microns in diameter Particulate Matter equal to or less than 2.5 microns in diameter PM2.5

Pounds per hour pph Parts per million ppm

ppmv Parts per million by volume ppmw Parts per million by weight psia Pounds per square inch absolute Pounds per square inch gauge psig

scf Standard cubic feet

Seconds sec Sulfur Dioxide SO₂

Toxic Air Contaminant TAC

Temp **Temperature**

THC Total Hydrocarbons tpy Tons per year Microgram μg

μm Micrometer or Micron

VOC Volatile Organic Compounds

yr Year

GENERAL CONDITIONS

- 1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. (R 336.1201(1))
- 2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. (R 336.1201(4))
- 3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. (R 336.1201(6)(b))
- 4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. (R 336.1201(8), Section 5510 of Act 451, PA 1994)
- 5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. (R 336.1219)
- 6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. (R 336.1901)
- 7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). (R 336.1912)
- 8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
- 9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
- 10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

- 11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). (R 336.1301)
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
- 12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). (R 336.1370)
- 13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. (R 336.2001)

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU001*	Babcock & Wilcox pulverized coal-fired boiler. No. 2 fuel oil can be used for startup and flame stabilization. The boiler is rated at 1668 MMBTU/hr. The boiler is equipped with low NO _x burners (LNB), over-fire air (OFA) and selective non-catalytic reduction (SNCR). Particulate matter from the boiler is controlled by an electrostatic precipitator (ESP). The single ESP was replaced 11/20/1998 with two ESPs of more efficient design.	7-1-1970	NA
EUCOAL The process is a coal handling system that serves Erickson Station. It includes coal conveyors, coal bunkers, a coal pile, and equipment to apply dust suppressant to the coal.			
*Other applicable permit requirements for the emission units in this table can be found in the Title V permit, ROP-MI-B4001-2015			

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

EU001 EMISSION UNIT CONDITIONS

DESCRIPTION

Babcock & Wilcox pulverized coal-fired boiler. No. 2 fuel oil can be used for startup and flame stabilization. The boiler is rated at 1668 MMBTU/hr and is equipped with low NO_x burners (LNB), over-fire air (OFA), and selective non-catalytic reduction (SNCR). Particulate matter from the boiler is controlled by an electrostatic precipitator (ESP). The single ESP was replaced in 1998 with two ESPs of more efficient design.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Low NO_x burners (LNB), over-fire air (OFA), selective non-catalytic reduction (SNCR) and two (2) electrostatic precipitators (ESP).

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
Visible Emissions	20% opacity except for one 6-minute period per hour of not more than 27%	6-minute average	EU001	SC IV.1, SC VI.2	R 336.1301(1)(a)
2. PM*	0.030 lb/MMBTU ¹	Hourly	EU001	SC V.1	R 336.1331(1)(c), Consent Agreement and Final Order (CAFO) Docket No. CAA-05-2019-0040, Paragraph 74, Act 451 324.5503(b)
3. NO _x	0.170 lb/MMBTU ¹	Based on a 30-day Rolling Average	EU001	SC IV.3, SC VI.3	Consent Agreement and Final Order (CAFO) Docket No. CAA-05-2019-0040, Paragraph 75, Act 451 324.5503(b)
4. SO ₂ *	0.749 lb/MMBTU ¹	Based on a 30-day Rolling Average	EU001	SC IV.4, SC VI.4	R 336.1401, Consent Agreement and Final Order (CAFO) Docket No. CAA-05-2019-0040, Paragraph 76, Act 451 324.5503(b)

*Compliance with the limits in the CAFO demonstrates compliance with R 336.1331 & R 336.1401.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn coal and low sulfur No. 2 fuel oil in EU001. (R 336.1205(1)(a))

- 2. The permittee shall not operate EU001 unless a malfunction abatement plan (MAP) as described in Rule 911(2), is implemented, and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for guick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1205(1)(a), R 336.1911)

IV. DESIGN/EQUIPMENT PARAMETER(S)

- 1. The permittee shall not operate EU001 unless the low NO_x combustion system, selective non-catalytic reduction (SNCR), and electrostatic precipitator (ESP) are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP as required in SC III.2. (R 336.1205(1)(a), R 336.1225, R 336.1910)
- The permittee shall install, calibrate, certify, maintain, and operate, in a satisfactory manner, a COMS for measuring and recording the opacity from EU001 in accordance with 40 CFR Part 75. (R 336.1301(1)(a), 40 CFR Part 75)
- 3. The permittee shall install, calibrate, maintain, and operate, in a satisfactory manner, devices to monitor and record the NO_x emissions and oxygen (O₂), or carbon dioxide (CO₂), content of the exhaust gas from EU001 on a continuous basis. The permittee shall install and operate the CEMS to meet the timelines, requirements, and reporting in accordance with 40 CFR Part 75 and detailed in Appendix 1.¹ (R 336.1205(1)(a), R 336.2101, 40 CFR Part 75, CAFO Docket No. CAA-05-2019-0040, Paragraph 79-81)
- 4. The permittee shall install, calibrate, maintain, and operate, in a satisfactory manner, devices to monitor and record the SO₂ emissions and oxygen (O₂), or carbon dioxide (CO₂), content of the exhaust gas from EU001 on a continuous basis. The permittee shall install and operate the CEMS to meet the timelines, requirements and reporting detailed in Appendix 1.¹ (R 336.1205(1)(a), R 336.2101, 40 CFR Part 75, CAFO Docket No. CAA-05-2019-0040, Paragraph 79-81)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall verify PM emission rates from EU001 on an annual basis until EU001 is retired, at the permittee's expense, in accordance with the Department requirements. Testing shall be performed using EPA Method 5 (filterable portion only) and any alternate method approved by EPA under the terms of the CAFO. Each stack test shall consist of three separate runs performed under representative operating conditions not including periods of startup, shutdown, or malfunction. The sampling time for each run shall be at least 60 minutes and the volume of each run shall be at least 0.85 dry standard cubic meters (30 dry standard cubic feet). The permittee shall calculate the PM emission rate from the stack test results in accordance with 40 CFR 60.8(f). Stack testing for PM performed pursuant to 40 CFR Part 63, Subpart UUUUU can be used to satisfy this requirement. No less than 30 days prior to resting, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed

after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office, and EPA with 60 days following the last date of the test.¹ (R 336.1331(1)(c), R 336.2001, R 336.2003, R 336.2004, CAFO Docket No. CAA-05-2019-0040, Paragraph 82, Act 451 324.5503(b))

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- 1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205(1)(a))
- 2. The permittee shall continuously monitor and record, in a satisfactory manner, the percent opacity of emissions on a 6-mintue average using a COMS for EU001 in accordance with 40 CFR Part 75. (R 336.1301(1)(a), R 336.2101(1)(a), 40 CFR Part 75)
- 3. The permittee shall monitor and record the 30-day Rolling Average Emission Rates for NO_x using NO_x emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75, except that the NO_x emissions data need not be bias adjusted and the missing data substitution procedures of 40 CFR Part 75 shall not apply. Diluent capping (i.e., 5% CO₂) will be applied to the NO_x emission rate for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.1 (CAFO Docket No. CAA-05-2019-0040, Paragraphs 80, Act 451 324.5503(b))
- 4. The permittee shall monitor and record the 30-day Rolling Average Emission Rates for SO₂ using SO₂ emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75, except that the SO₂ emissions data need not be bias adjusted and the missing data substitution procedures of 40 CFR Part 75 shall not apply. Diluent capping (i.e., 5% CO₂) will be applied to the SO₂ emission rate for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.1 (R 336.1401, CAFO Docket No. CAA-05-2019-0040, Paragraphs 81, Act 451 324.5503(b))
- 5. The permittee shall maintain complete records of the coal analysis for each delivery of coal. At a minimum, the records shall include percent ash by weight, percent sulfur by weight, percent moisture (H₂O) by weight, and BTU's per pound. These records may include ASTM analyses provided by the vendor at the time of delivery, analytical results from laboratory testing, or any other records adequate to demonstrate compliance. (R 336.1205(1)(a))

See Appendix 1

VII. REPORTING

1. Beginning with the calendar half period ending December 31, 2019, and ending upon the retirement of EU001, the permittee shall submit to EPA semi-annual reports by September 15 for the period January through June and March 15 for the period July through December. The reports shall include all information necessary to assess compliance with the requirements of the CAFO. The permittee shall send all reports required by the CAFO by first class mail to the Compliance Tracker of the Air Enforcement and Compliance Assurance Branch at the following address:1 (CAFO Docket No. CAA-05-2019-0040, Paragraphs 89, 98 & 99, Act 451 324.5503(b))

Attn: Compliance Tracker (ECA-18J)
Air Enforcement and Compliance Assurance Branch
Enforcement and Compliance assurance Division
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Boulevard
Chicago, Illinois 60604

2. The permittee shall submit the results of the PM stack test required in SC V.1 to the EPA within 60 days of completion of each test. The permittee shall submit the results to EPA via EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through EPA's Central Data exchange (CDX). Test data shall be submitted in a file format generated through the use of EPA's Electronic Reporting Tool (ERT) or in an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. As an alternative, test reports may be submitted in portable document format (PDF) through EPA's Emissions Collection and Monitoring Plan System (ECMPS) or alternative method as required by 40 CFR Part 63 Subpart UUUUU.¹ (R 336.2001(5)), CAFO Docket No. CAA-05-2019-0040, Paragraph 83, Act 451 324.5503(b))

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV001BLR	204	475	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

- 1. The permittee shall comply with all applicable provisions of the National mission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and UUUUU as they apply to EU001. **(40 CFR Part 63, Subparts A & UUUUU)**
- 2. The permittee shall comply with the System-Wide Annual NO_x Tonnage Limitations and the System-Wide Annual SO₂ Tonnage Limitations specified in Appendix 2-B. Emissions from EU001 shall be counted toward the system-wide total emissions.¹ (CAFO Docket No. CAA-05-2019-0040, Paragraphs 77 & 78, Act 451 324.5503(b))
- 3. The permittee shall comply with the SO₂ and NO_x allowance surrender and super-compliance allowance provisions listed in Appendix 2-C: Allowance Provisions.¹ (CAFO Docket No. CAA-05-2019-0040, Paragraphs 84-91, Act 451 324.5503(b))

See Appendices 2-B & 2-C

Footnotes:

¹ This condition is federally enforceable and was established pursuant to the "U.S. V Lansing Board of Water and Light, Consent Agreement and Final Order (CAFO) Docket No. CAA-05-2019-0040."

² Definitions specific to this condition may be found in Appendix 2-A: Definitions associated with the CAFO.

EUCOAL EMISSION UNIT CONDITIONS

DESCRIPTION

The process is a coal handling system that serves Erickson Station. It includes coal conveyors, coal bunkers, a coal pile, and equipment to apply dust suppressant to the coal.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Enclosed coal conveyors

I. EMISSION LIMIT(S)

						Underlying
			Time Period/Operating		Monitoring/	Applicable
	Pollutant	Limit	Scenario	Equipment	Testing Method	Requirements
1.	Visible	20% opacity	6-minute average	EUCOAL	SC V.1,	R 336.1301(1)(b),
	Emissions		_		SC VI.2	40 CFR 60.254(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUCOAL unless a program for continuous fugitive dust control for delivery, storage, handling, and use of coal is implemented and maintained. If at any time the fugitive dust control program fails to address or inadequately addresses an event, the permittee shall amend the fugitive dust control program within 45 days after such an event occurs. The permittee shall also amend the fugitive dust control program within 45 days if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the fugitive dust control program and any amendments to the fugitive dust control program to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the fugitive dust control program or amended fugitive dust control program shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1371)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3)

1. Within 180 days of permit issuance, the permittee shall verify visible emission rates from EUCOAL by testing at the owner's expense, in accordance with the Department requirements. Testing shall be performed using Method 9 of 40 CFR Part 60, Appendix A and the procedures in 40 CFR 60.257 and 40 CFR 60.11, with the exceptions specified in 40 CFR 60.257(a)(1)(i) and (ii). An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.2001, R 336.2003, R 336.2004, 40CFR 60.255(a), 40 CFR 60.257)

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- 1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205)
- 2. The permittee shall perform and document non-certified visible emissions observations on a daily basis when operating. If during the observation there are any visible emissions detected, a USEPA Method 9 certified visible emissions observation shall be conducted for a minimum of 15 minutes to determine the actual opacity. Records of the non-certified visible emissions observations, USEPA Method 9 observations that are performed, the reason for any visible emissions observed, and any corrective actions taken shall be kept on file and made available to the Department upon request. (R 336.1205)

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Y. (40 CFR Part 60, Subparts A & Y)

Footnotes:

- ¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
- ² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

APPENDIX 1 SO₂ & NO_x Monitoring

Continuous Emission Monitoring System (CEMS) and Continuous Emission Rate Monitoring System (CERMS) Requirements

For an existing CEMS/CERMS: If the permittee has satisfied the installation and testing requirements, Items 1 – 4 do not apply.

- 1. Within 30 calendar days of issuance of this permit, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS/CERMS.
- 2. Within 150 calendar days of issuance of this permit, the permittee shall submit two copies of a complete test plan for the CEMS/CERMS to the AQD for approval.
- 3. Within 180 calendar days of issuance of this permit, the permittee shall complete the installation and testing of the CEMS/CERMS.
- 4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS/CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS	
SO ₂ & NO _x	2	
O ₂ & CO ₂	3	
CERMS	6	
*Or other PS as approved by the AQD		

- 5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
- 6. The CEMS/CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2, 3, and 6 of Appendix B to 40 CFR Part 60 or 40 CFR Part 75, Appendices A and B, as applicable.
- 7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS/CERMS set forth in Appendix F of 40 CFR Part 60 or 40 CFR Part 75, Appendix B. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F of 40 CFR Part 60).
- 8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
 - a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause, and corrective actions of all occurrences during the reporting period.b)
 A report of all periods of CEMS/CERMS downtime and corrective action.
 - c) A report of the total operating time of the EU001 during the reporting period.
 - d) A report of any periods that the CEMS/CERMS exceeds the instrument range.
 - e) If no exceedances or CEMS/CERMS downtime occurred during the reporting period, the permittee shall report that fact.
- 9. The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

APPENDIX 2-A Definitions associated with the CAFO

The following phrases and terms are specifically defined in relation to those special conditions associated with "U.S. v Lansing Board of Water and Light, Consent Agreement and Final Order Docket No. CAA-05-2019-0040, 2019" (CAFO).

- "30-Day Rolling Average Emission Rate" means the emission rate for a Unit expressed in lb/mmBTU and calculated in accordance with the following procedure: first, sum the total pounds of pollutant emitted from the applicable Unit during the current Unit Operating Day and the previous 29 Unit Operating Days; second, sum the total heat input to the unit in mmBTU during the current Operating Day and the previous 29 Operating Days; and third, divide the total number of pounds of pollutant emitted during the 30 Operating Days by the total heat input during the 30 Operating Days. A new 30-Day Rolling Average Emission Rate shall be calculated for each new Unit Operating Day. Each 30-Day Rolling Average Emission Rate shall include all emissions of the applicable pollutant that occur during all periods within any Unit Operating Day, including emissions from startup, shutdown, and malfunction. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 46)
- "CEMS" or "Continuous Emission Monitoring System" means the devices defined in 40 CFR §72.2 and installed and maintained as required by 40 CFR Parts 60 and 75. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 47)
- "Clean Air Act," "CAA," or "Act" means the federal Clean Air Act, 42 USC §§7401-7671q, and its implementing regulations; (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 48)
- "Continuously Operate" means that when a pollution control technology or combustion control is required to be continuously used at a Unit pursuant to this CAFO (including, but not limited to, SNCR, ESP, or Low NOx Combustion System), it shall be operated at all times such Unit is in operation, consistent with the technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 CFR §60.11(d)) for such equipment and the Unit. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 49)
- "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period
 of time under this CAFO, where the last day would fall on a Saturday, Sunday, or federal holiday, the
 period shall run until the close of business of the next business day. (U.S. v Lansing Board of Water and
 Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 50)
- "Respondent" means Lansing Board of Water and Light or LBWL (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 51)
- "Eckert Station" means the Eckert Generating Station consisting of five boilers designated as Units 1, 3, 4, 5, and 6 (50.0, 51.3, 80.0, 80.0, and 80.0 MW gross respectively), located in Ingham County, Michigan. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 52)
- "Electrostatic Precipitator" or "ESP" means a device for removing particulate matter from combustion gases by imparting an electric charge to the particles and then attracting them to a metal plate or screen of opposite charge before the combustion gases are exhausted to the atmosphere. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 53)
- "Emission Rate" means the number of pounds of a given pollutant emitted per million British thermal units of heat input (lb/mmBTU), measured in accordance with this CAFO (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 54)
- "Erickson Station" means the Erickson Generating Station consisting of one coal-fired boiler designated as Unit 1 (168 MW gross), located in Eaton County, Michigan (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 55)
- "lb/mmBTU" means pound per million British thermal units (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 56)

- "LBWL" means Lansing Board of Water and Light (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 57)
- "Low NO_x Combustion System" means burners and associated combustion air control equipment, including Overfire Air (if installed at the Unit), which control mixing characteristics of fuel and oxygen, thus restraining the formation of NO_x during combustion of fuel in the boiler. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 58)
- "Malfunction" means a failure to operate in a normal or usual manner by any air pollution control
 equipment, process equipment, or a process, which is sudden, infrequent, and not reasonably
 preventable. Failures that are caused in part by poor maintenance or careless operation are not
 malfunctions. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019,
 Paragraph 59)
- "Michigan SIP" means the Michigan State Implementation Plan, and any amendments thereto, as approved by EPA pursuant to Section 110 of the Act, 42 USC §7410. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 60)
- "NO_x" means oxides of nitrogen (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 61)
- "NOx Allowance" means an authorization to emit a specified amount of NO_x that is allocated or issued under an emissions trading or marketable permit program of any kind established under the Clean Air Act or applicable State Implementation Plan. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 62)
- "PM" means total filterable particulate matter, measured in accordance with the provisions of this CAFO (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 63)
- "PM Emission Rate" means the number of pounds of PM emitted per million BTU of heat input (lb/mmBTU) (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 64)
- "SNCR" or "Selective Non-Catalytic Reduction" means an air pollution control device for the reduction of NO_x emissions through the injection of ammonia or urea into the boiler. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 65)
- "SO₂" means sulfur dioxide, as measured in accordance with the provisions of this CAFO (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 66)
- "SO₂ Allowance" means an authorization to emit a specified amount of SO₂ that is allocated or issued under an emissions trading or marketable permit program of any kind established under the Clean Air Act or applicable Michigan State Implementation Plan. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 67)
- "Surrender" or "Surrender of Allowances" means, for purposes of NO_x or SO₂ Allowances, permanently surrendering allowances from the accounts administered by EPA and the State of Michigan, if applicable, so that such allowances can never be used thereafter to meet any compliance requirements under the CAA, a state implementation plan, or this CAFO (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 68)
- "System" means, collectively, the Eckert Station and Erickson Station (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 69)
- "System-Wide Annual Tonnage Limitation" for a pollutant means the sum of the tons of the pollutant emitted from each of the Eckert and Erickson Units including, without limitations, all tons of that pollutant emitted during periods of startup, shutdown, and malfunction, in the designated year. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 70)
- "Title V Permit" means the permit required of major sources pursuant to Subchapter V of the Act, 42 USC §§7661-7661e (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 71)

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- "Unit" means, collectively, the coal pulverizer, stationary equipment that feeds coal to the boiler, the
 boiler that produces steam for the steam turbine, the steam turbine, the generator, the equipment
 necessary to operate the generator, steam turbine, and boiler, and all ancillary equipment, including
 pollution control equipment and systems necessary for production of electricity. An electric steam
 generating station may be comprised of one or more Units. (U.S. v Lansing Board of Water and Light,
 CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 72)
- "Unit Operating Day" means any Day on which a Unit fires fuel in the boiler. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 73)

APPENDIX 2-B System Wide Tonnage Limitations

System-Wide Annual NO_x Tonnage Limitations

For each calendar year as specified below, LBWL's System, collectively, shall not exceed the following System-Wide Annual NO_x Tonnage Limitations:

For the Calendar Year Specified Below:	System-Wide Annual Tonnage Limitation for NO _x :
2019 through 2020	1,800
2021 through 2025	1,100*
2026 and beyond	350*

^{*}Beginning January 1, 2021, and thereafter, "System-Wide" limitations in this paragraph apply only to the existing electric generating system at Erickson Station, identified in Paragraph 55.

(U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 77)

• For purposes of determining compliance with any System-Wide Annual NO_x Tonnage Limitations, LBWL shall use NO_x emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 79)

System-Wide Annual SO₂ Tonnage Limitations

For each calendar year as specified below, LBWL's System, collectively, shall not exceed the following System-Wide Annual SO₂ Tonnage Limitations:

For the Calendar Year Specified Below:	System-Wide Annual SO ₂ Tonnage Limitation:
2019 through 2020	4,700
2021 through 2025	3,000*
2026 and beyond	250*

^{*}Beginning January 1, 2021, and thereafter, "System-Wide" limitations in this paragraph apply only to the existing electric generating system at Erickson Station, identified in Paragraph 55.

(U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 78)

• For purposes of determining compliance with any System-Wide Annual SO₂ Tonnage Limitations, LBWL shall use SO₂ emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 79)

APPENDIX 2-C Allowance Provisions

Allowance Surrender

- LBWL shall not use NO_x or SO₂ Allowances to comply with any requirement of this CAFO, including by claiming compliance with any emission limitation required by this CAFO by using, tendering, or otherwise applying NO_x or SO₂ Allowances to offset any excess emissions. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 84)
- Beginning in calendar year 2019 and continuing each calendar year thereafter, LBWL shall not sell, bank, trade, or transfer its interest in any NO_x or SO₂ Allowances allocated to each Eckert Unit and Erickson Unit 1, except as otherwise provided in this CAFO. Nothing in this CAFO shall restrict LBWL's ability to transfer NO_x or SO₂ Allowances between LBWL-owned generating units. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 85)
- Beginning in calendar year 2019, and continuing each calendar year thereafter, LBWL shall Surrender all NO_x or SO₂ Allowances allocated to each Eckert Unit and Erickson Unit 1 for any calendar year that LBWL does not need to meet federal and/or state CAA regulatory requirements for those Units. Nothing in this CAFO shall restrict LBWL's ability to transfer NO_x or SO₂ allowances among LBWL-owned generating units. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 86)
- Nothing in this CAFO shall prevent LBWL from purchasing or otherwise obtaining NO_x or SO₂ Allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 87)

Super-Compliant NO_x or SO₂ Allowances

- Notwithstanding Paragraph 86, and provided that LBWL is also in compliance for that calendar year with all emission limitations for NO_x or SO₂ set forth in this CAFO, in each calendar year beginning in 2019 and continuing thereafter, LBWL may sell, bank, use, trade, or transfer NO_x Allowances allocated to each Eckert and Erickson Unit that are made available in the calendar year solely as a result of: (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 88)
 - a) the installation and operation of any NO_x or SO₂ air pollution control equipment that is not otherwise required under this CAFO and is not otherwise required by law; or
 - b) achievement and maintenance of an Emission Rate below an applicable 30-Day Rolling Average Emission Rate and System-Wide Tonnage Limitation.
- LBWL shall Surrender all NO_x or SO₂ Allowances required to be Surrendered by June 30 of the immediately following calendar year. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 90)
- For all Allowances required to be Surrendered, LBWL shall, with respect to the Allowances that LBWL is to Surrender, ensure that an Allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such Allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. Such Allowance transfer requests may be made in an electronic manner using the EPA's Clean Air Markets Division Business System, or similar system provided by EPA. As part of submitting these transfer requests, LBWL shall ensure that the transfer of its Allowances are irrevocably authorized and that the source and location of the Allowances being Surrendered are identified by name of account and any applicable serial or other identification numbers or station names. (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraph 91)
- LBWL shall timely report the generation of such Super-Compliant Allowances in accordance with the following timeline: (U.S. v Lansing Board of Water and Light, CAFO Docket No. CAA-05-2019-0040, 2019, Paragraphs 89 & 98)

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• Beginning with the calendar half period ending December 31, 2019 and ending upon retirement of Erickson Unit 1, LBWL shall submit to EPA semi-annual reports by September 15 for the period January through June and March 15 for the period July through December). The reports shall include all information necessary to assess compliance with this CAFO.