

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

October 25, 2012

PERMIT TO INSTALL
168-07D

ISSUED TO
L'Anse Warden Electric Company, LLC

LOCATED AT
157 South Main Street
L'Anse, Michigan

IN THE COUNTY OF
Baraga

STATE REGISTRATION NUMBER
B4260

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. 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).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

October 5, 2012

DATE PERMIT TO INSTALL APPROVED:

October 25, 2012

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfuction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM less than 10 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM less than 2.5 microns diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

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 Environmental Quality, 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 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 R 336.1219 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 R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(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 conditions 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 R 336.1301, 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 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 R 336.1370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

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 (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-BOILER#1	Boiler#1 with capability of burning tire derived fuel (TDF), railroad ties, wood chips, wood fines and bark, and natural gas. Boiler#1 has a maximum heat input rating of 324 million BTU per hour and will produce steam and electricity. The existing electrical generator is rated at 22.0 megawatts. Boiler#1 is controlled by a multicyclone followed by a three (series) section electrostatic precipitator.	1959 / 1974 / 4-15-2008 / 10-26-11	NA
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 336.1290.			

The following conditions apply to: EU-BOILER#1

DESCRIPTION: Boiler#1 with capability of burning tire derived fuel (TDF), railroad ties, wood chips, wood fines and bark, and natural gas. Boiler#1 has a maximum heat input rating of 324 million BTU per hour and will produce steam and electricity. The existing electrical generator is rated at 22.0 megawatts. Boiler#1 is controlled by a multicyclone followed by a three (series) section electrostatic precipitator.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Boiler#1 is controlled by a multicyclone followed by a three (series) section electrostatic precipitator.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.06 lb/MMBtu heat input ²	Test Protocol*	EU-BOILER#1	SC V.1	R 336.1205 R 336.1331
2. PM	19.2 pph ²	Test Protocol*	EU-BOILER#1	SC V.1	R 336.1205
3. PM10	15.4 pph ²	Test Protocol*	EU-BOILER#1	SC V.1	R 336.1205 40 CFR52.21 (c) & (d)
4. SO ₂	290 pph ²	Test Protocol*	EU-BOILER#1	SC V.1, SC V.2, SC VI.3	R 336.1205
5. NOx	145 pph ²	Test Protocol*	EU-BOILER#1	SC V.1	R 336.1205
6. CO	0.3 lb/MMBtu except for startup and shutdown ²	24-hr rolling average as determined each hour that EU-BOILER#1 operates	EU-BOILER#1	SC VI.7	R 336.2810 40 CFR 52.21(j)
7. CO	97.2 pph ²	Test Protocol*	EU-BOILER#1	SC VI.7	R 336.2810 40 CFR 52.21(j)
8. VOC	50 ppmvd at 7% O ₂ (as methane) except for startup and shutdown ²	Test Protocol*	EU-BOILER#1	SC V.1	R 336.1205 R 336.1702
9. VOC	9.1 pph ²	Test Protocol*	EU-BOILER#1	SC V.1	R 336.1205 R 336.1702
10. Lead (Pb)	0.02 pph ²	Test Protocol*	EU-BOILER#1	SC V.1, SC VI.3	R 336.1205
11. Hydrogen Chloride (HCl)	2.17 pph ²	Test Protocol*	EU-BOILER#1	SC V.1, SC V.2, SC VI.3	R 336.1224 R 336.1225
12. Hydrogen Chloride (HCl)	9.5 tpy ²	Test Protocol*	EU-BOILER#1	SC V.1, SC V.2, SC VI.3	R 336.1205(3)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
13. Aggregate HAPs	Less than 20.0 tpy ²	Based on a 12-month rolling time period as determined at the end of each calendar month	EU-BOILER#1	SC VI.4	R 336.1205(3)

* Test protocol will specify averaging time period.

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Natural Gas	Less than 50% of annual heat input ²	12-month rolling time period as determined at the end of each calendar month	EU-BOILER#1	SC VI.2	R 336.1205
2. TDF	4.0 tons/hr ² "as received"	Calendar Day Average	EU-BOILER#1	SC VI.2	R 336.1205
3. TDF	32,800 tpy ² "as received"	12-month rolling time period as determined at the end of each calendar month	EU-BOILER#1	SC VI.2	R 336.1205
4. Railroad Ties	20.1 tons/hr ² "as received"	Calendar Day Average	EU-BOILER#1	SC VI.2	R 336.1205
5. Railroad Ties	72,078 tpy ² "as received"	12-month rolling time period as determined at the end of each calendar month	EU-BOILER#1	SC VI.2	R 336.1205
6. Fines & Bark	5.4 tons/hr ² "as received"	Calendar Day Average	EU-BOILER#1	SC VI.2	R 336.1205
7. Fines & Bark	44,280 tpy ² "as received"	12-month rolling time period as determined at the end of each calendar month	EU-BOILER#1	SC VI.2	R 336.1205
8. Pentachlorophenol (PCP) treated wood	0.25 tons/hr ² "as received"	Calendar Day Average	EU-BOILER#1	SC VI.2	R 336.1205(1)(a)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The maximum heat input for EUBOILER#1 shall not exceed 2,656,800 MMBTU per year based on a 12-month rolling time period as determined at the end of each calendar month.² **(R 336.1205(3), R 336.1225, R 336.2810, 40 CFR 52.21(j))**
2. The permittee shall burn only natural gas and fuel defined in the *Fuel Procurement and Monitoring Plan* (FPMP) in EUBOILER#1.² **(R 336.1205, R 336.1225)**

3. During startup, the permittee shall start with natural gas followed by the other fuels to EUBOILER#1.² **(R 336.1205(3), R 336.1225)**
4. The permittee shall operate EUBOILER#1 according to the *Fuel Procurement and Monitoring Plan* (FPMP). The permittee shall utilize the FPMP at all times to ensure that only fuel, as defined in SC II. Material Limits, is being burned in EUBOILER#1 and to prevent unacceptable waste from being burned in EUBOILER#1. The plan shall, at a minimum, specify the following:
 - a. A description of fuel to be burned.
 - b. Inspection and sorting procedures and protocol used to eliminate prohibited fuels and minimize unacceptable fuel.
 - c. Procedures for rejecting and/or removing unacceptable fuel.
 - d. Supplier qualification, processing and inspection procedures for each supplier of source separated fuel.
 - e. Auditing procedures including records of fuel specification, load identification, quality control of load and fuel pile(s).
 - f. Odor minimization.

The permittee shall submit any amendments to the FPMP to the AQD District Supervisor for review and approval. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.² **(R 336.1205, R 336.1225)**

5. The permittee shall operate and maintain EUBOILER#1 according to the *Preventive Maintenance and Malfunction Abatement Plan* (PMMAP) as described in Rule 336.1911(2), for EUBOILER#1, including the hydrograte biomass fuel burning surface, boiler overfired air system, ID fan, air heater, economizer tubes, soot blowing equipment, multicyclone, electrostatic precipitator, and the CO monitoring equipment. The PMMAP shall include keeping a Daily Operating Log which details equipment problems found, repairs done and/or corrective action taken, and scheduled and completed maintenance on the equipment listed above. If at any time the PMMAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the PMMAP within 45 days after such an event occurs. The permittee shall also amend the PMMAP within 45 days if new equipment is installed or upon request from the District Supervisor. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.² **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUBOILER#1 unless the boiler overfired air system, multicyclone, and the electrostatic precipitator are installed and operating in a satisfactory manner.² **(R 336.1910)**

V. TESTING/SAMPLING

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

1. By December 31, 2015, the permittee shall verify PM, PM-10, SO₂, NO_x, lead, HCl, and VOC emission rates from EUBOILER#1 by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of testing.² **(R 336.1205, R 336.2001, R 336.2003, R 336.2004, R 336.2810, 40 CFR 52.21(j))**
2. The permittee shall conduct a compliance demonstration, through fuel analysis, for the following:
 - a. SO₂ and HCl emission rates to demonstrate compliance with the SO₂ and HCl emission limits. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input and the corresponding HCl emission rates.

The permittee shall maintain a copy of all calculations and supporting documentation on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.² (R 336.1205, R 336.1225)

3. The permittee shall perform periodic sampling and analysis of each solid fuel as described in the DEQ approved *Fuel Procurement and Monitoring Plan* (FPMP). Results will be reviewed to verify that no excessive changes in fuel quality, beyond typical variation, have occurred that may impact compliance with permit limits as demonstrated during the compliance demonstration. The permittee shall maintain a copy of all calculations and supporting documentation.² (R 336.1205, R 336.1331, R 336.2001, R 336.2003, R 336.2004)

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 and make them available by the end of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, , R 336.2810, 40 CFR 52.21(j))
2. The permittee shall monitor and keep records, in a satisfactory manner, of the following:
 - a. The amount of natural gas, by volume, burned in EUBOILER#1
 - b. The annual heat input of natural gas burned in EUBOILER#1
 - c. The type and amount of each solid fuel, by weight, burned in EUBOILER#1
 - d. The annual heat input of each solid fuel burned in EUBOILER#1

The permittee shall demonstrate compliance with the calendar day average for each solid fuel, and based on a monthly and a 12-month rolling time period as determined at the end of each calendar month by an acceptable method as approved by the AQD District Supervisor.² (R 336.1205, R 336.1224, R 336.1225)

3. The permittee shall obtain and keep records of the sulfur, lead, and chlorine content of each fuel burned in EUBOILER #1.² (R 336.1205, R 336.1224, R 336.1225)
4. The permittee shall keep records and calculations of monthly and annual HAP emissions utilizing the emission factors from the compliance demonstration or the most recent emissions testing. Additionally, the permittee shall keep records and calculations of monthly and annual emissions of all non-tested HAP utilizing AQD approved emission factors. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205(3))
5. The permittee shall keep, in a satisfactory manner, the *Fuel Procurement and Management Plan* (FPMP) records and information for EUBOILER#1, as required by SC III.2 and SC III.4. The permittee shall keep all records on file at the facility and make them available to the Department upon request. Alternative formats or procedures must be approved by the AQD District Supervisor.² (R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1331, R 336.1702, R 336.1901)
6. The permittee shall keep, in a satisfactory manner, the *Preventive Maintenance and Malfunction Abatement Plan* (PMMAP) records and information for EUBOILER#1, as required by SC III.5. The permittee shall keep all records on file at the facility and make them available to the Department upon request.² (R 336.1205, R 336.1225, R 336.1702, R 336.1901, R 336.1910)
7. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the CO emissions and (CO₂) diluent from EUBOILER#1 on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements, and reporting detailed in Appendix 3A, and shall use the CEMS data for determining compliance with SC I.6 and SC I.7.² (R 336.2810, 40 CFR 52.21(j))

8. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the visible emissions from EUBOILER#1 on a continuous basis. The permittee shall install and operate the Continuous Opacity Monitoring System (COMS) to meet the timelines, requirements, and reporting detailed in Appendix 3B, and shall use the COMS data for determining compliance with GC 11.² **(R 336.1301)**
9. The permittee shall calculate and keep records of PM, PM-10, SO₂, NO_x, VOC, and lead emissions from EUBOILER#1 in tons per calendar year. The calculations and records shall be kept in the format and timeframes described in Appendix 4, or an alternative format acceptable to the AQD Permit Section Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² **(R 336.1205, R 336.2802(4)(c), R 336.2810, 40 CFR 52.21(j))**

VII. REPORTING

1. The permittee shall calculate and keep records of the annual emissions of PM, PM-10, SO₂, NO_x, CO, VOC, and lead from EUBOILER#1 in tons per year on a calendar year basis. Records shall be kept in the format described in Appendix 4, or an alternate format acceptable to the AQD Permit Section Supervisor. Calculations and record keeping shall begin the month in which regular operations of EUBOILER#1 resume and shall continue for 10 years. The permittee shall submit this information to the AQD Permit Section Supervisor within 60 days following the end of each reporting year.

The report shall contain the following information:

- a. The calendar year actual emission of criteria pollutants, as described in Appendix 4, exceed the baseline actual emissions (BAE) by a significance level as defined in R 336.1119(e), and
 - b. The calendar year actual emissions differ from the pre-construction projection.
 - c. The name, address, and telephone number of the facility.
 - d. The annual emissions as calculated pursuant to this condition.
 - e. Any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).² **(R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))**
2. The permittee shall submit records of the annual emission of PM, PM-10, SO₂, NO_x, CO, VOC, and lead from EUBOILER#1 in tons per calendar year. Records shall be kept in the format described in Appendix 4, or an alternative form acceptable to both the AQD Permit Section Supervisor and the AQD District Supervisor. The records shall be transmitted within 60 days following the end of each recordkeeping year if either of the following occurs:
 - a. The yearly annual emission of PM, PM-10, SO₂, NO_x, CO, VOC, and lead exceed the baseline actual emissions (BAE) by a significant amount, and/or
 - b. The year's actual emissions differ from the pre-construction projection.

The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to EUBOILER#1, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).² **(R 336.1205, R 336.2802(4)(c), R 336.2810, R 336.2818, 40 CFR 52.21(j), 40 CFR 52.21(r)(6)(c)(iii))**

VIII. STACK/VENT RESTRICTIONS

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. SVBOILER#1	90 ²	147 ²	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENTS

1. *40 CFR Part 64 Compliance Assurance Monitoring (CAM)* requirements for particulate matter (PM) are specified in Appendix 3B.9 as a part of the Continuous Opacity Monitoring System requirements. **(40 CFR Part 64)**

Footnotes:

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

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

Appendices (ROP MI-ROP-B4260-2011)

APPENDIX3: Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in the EU-BOILER#1 table. 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.² **(R 336.1213(3))**

APPENDIX 3.A

CO Monitoring - Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, 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.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of Performance Specification (PS) 3 and 4a.
5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 3 and 4a of Appendix B to 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. 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).
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 0.3 lb/MMBtu based on a 24-hour rolling average as determined each hour that EUBOILER#1 operates (SC I.6). 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 downtime and corrective action.
 - c) A report of the total operating time of the EUBOILER#1 during the reporting period.
 - d) A report of any periods that the CEMS exceeds the instrument range.
 - e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

APPENDIX 3.B
Continuous Opacity Monitoring System (COMS) Requirements

1. Within 30 calendar days after commencement of trial operation, 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 COMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the COMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the COMS.
4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the COMS complies with the requirements of Performance Specification (PS) 1.
5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
6. The COMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 1 of Appendix B, 40 CFR Part 60.
7. The permittee shall perform an annual audit of the COMS using the procedures set forth in USEPA Publication 450/4-92-010, "Performance Audits Procedures for Opacity Monitors", or a procedure acceptable to AQD. Within 30 days after the completion of the audit, the results of the annual audit shall be submitted to the AQD.
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 Air Quality Division, 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 20 percent. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
 - b) A report of all periods of COMS downtime and corrective action.
 - c) A report of the total operating time of the EUBOILER#1 during the reporting period.
 - d) If no exceedances or COMS downtime occurred during the reporting period, the permittee shall report that fact.
9. Whenever EUBOILER#1 is operating, the permittee shall carry out a *40 CFR Part 64 Compliance Assurance Monitoring (CAM)* program for particulate matter (PM) as follows. Upon detection of a 6-minute average opacity in excess of 20 percent (except for one 6-minute average per hour of not more than 27 percent opacity), the permittee shall promptly determine whether corrective action is needed. If corrective action is needed, the permittee shall restore operation of EUBOILER#1 and associated dust collection equipment to their normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution practice for minimizing emissions. The permittee shall keep a summary record of all 6-minute averages of opacity greater than 20 percent (except for one 6-minute average per hour of not more than 27 percent opacity), including the cause if known, and corrective action taken. The permittee shall submit these records with the quarterly reports required by Appendix 3.B.8 above. **(40 CFR Part 64, 40 CFR 64.1, 40 CFR 64.6(c)(2), 40 CFR 64.7(d))**

APPENDIX 4: Recordkeeping

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in EUBOILER#1.² (R 336.1213(3))

Recordkeeping Provisions for PSD Source Using Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2818 and 40 CFR 52.21(r)(6)(i) for 10 years after the emission units identified in Table C resume normal operation, and shall be made available to the Department upon request.

- A. Project Description: The project is to totally replace coal with tire derived fuel (TDF), railroad ties, wood chips, wood fines/bark, and natural gas, and to increase the maximum heat input of EUBOILER#1 from 249 MMBTU/hr to 324 MMBTU/hr.
- B. Applicability Test Description: Modifications are not subject to PSD, except for CO. Actual to projected actual applicability test as described in the table below was used to demonstrate that PSD does not apply to these modifications.

Table C

Emission Unit / Flexible Group ID	Pollutant	EMISSIONS (tpy)			Reason for Exclusion
		Baseline Actual Emissions (tpy)	Projected Actual Emissions (tpy)	Excluded Emissions (tpy)	
EUBOILER #1	PM	0.44	80.1	120.7	EUBOILER#1 was capable of accommodating emissions up to 120.7 TPY, based on burning coal up to its existing capacity of 249 MMBtu/hr. The projected emission increase of -40.05 tpy < significant level of 25 tpy.
EUBOILER #1	PM-10	0.44	63.5	109.2	EUBOILER#1 was capable of accommodating emissions up to 109.2 TPY, based on burning coal up to its existing capacity of 249 MMBtu/hr. The projected emission increase of -46.14 tpy < significant level of 15 tpy.
EUBOILER #1	SO ₂	0.035	738	2065.9	EUBOILER#1 was capable of accommodating emissions up to 2065.9 TPY, based on burning coal up to its existing capacity of 249 MMBtu/hr. The projected emission increase of -1328 tpy < significant level of 40 tpy.
EUBOILER #1	NO _x	10.9	595	1009.8	EUBOILER#1 was capable of accommodating emissions up to 1009.8 TPY, based on burning coal up to its existing capacity of 249 MMBtu/hr. The projected emission increase of -425.75 tpy < significant level of 40 tpy.

		EMISSIONS (tpy)			
Emission Unit / Flexible Group ID	Pollutant	Baseline Actual Emissions (tpy)	Projected Actual Emissions (tpy)	Excluded Emissions (tpy)	Reason for Exclusion
EUBOILER #1	CO	4.8	399	22.9	EUBOILER#1 was capable of accommodating emissions up to 22.9 TPY, based on burning coal up to its existing capacity of 249 MMBtu/hr. The projected emission increase of 371.27 tpy > significant level of 100 tpy.
EUBOILER #1	VOC	0.32	37.3	2.74	EUBOILER#1 was capable of accommodating emissions up to 2.74 TPY, based on burning coal up to its existing capacity of 249 MMBtu/hr. The projected emission increase of 34.24 tpy < significant level of 40 tpy.
EUBOILER #1	Pb	0.17	0.043	0.02	EUBOILER#1 was capable of accommodating emissions up to 0.02 TPY, based on burning coal up to its existing capacity of 249 MMBtu/hr. The projected emission increase of 0.023 tpy < significant level of 0.6 tpy.