

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

December 15, 2023

PERMIT TO INSTALL
145-23

ISSUED TO
Potlatch Deltic Land & Lumber, LLC / Gwinn Lumber

LOCATED AT
650 Avenue A
Gwinn, Michigan 49841

IN THE COUNTY OF
Marquette

STATE REGISTRATION NUMBER
N5940

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).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: October 30, 2023	
DATE PERMIT TO INSTALL APPROVED: December 15, 2023	SIGNATURE:
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
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan 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
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
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
EU- WOODBOILER1	28.7 MMBTU/hr wood-fired boiler with a primary and secondary multiclone.	1996 / NA	FG- WOODBOILERS
EU- WOODBOILER2	28.7 MMBTU/hr wood-fired boiler with a primary and secondary multiclone.	1996 / NA	FG- WOODBOILERS

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.

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-WOODBOILERS	Two 28.7 MMBTU/hr wood-fired boilers and associated pollution control equipment.	EU-WOODBOILER1 EU-WOODBOILER2

**FG-WOODBOILERS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Two 28.7 MMBtu/hr wood fired boilers.

Emission Units: EU-WOODBOILER1, EU-WOODBOILER2

POLLUTION CONTROL EQUIPMENT

Primary and secondary multiclones

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Benzo(a)pyrene	9.7 micrograms per cubic meter ¹	Hourly	EUWOODBOILER1 EUWOODBOILER2	SC V.1	R 336.1225
2. Benzo(a)pyrene	0.0006 pounds per hour ¹	Hourly	EUWOODBOILER1 EUWOODBOILER2	SC V.1	R 336.1225
3. Benzo(a)pyrene	0.0027 tpy ¹	12 month rolling time period as determined at the end of each calendar month	EUWOODBOILER1 EUWOODBOILER2	SC VI.3	R 336.1225
4. CO	0.50 pounds per MMBTU heat input ²	Hourly	EUWOODBOILER1 EUWOODBOILER2	SC V.1	R 336.1205(1)
5. CO	14.35 pph ²	Hourly	EUWOODBOILER1 EUWOODBOILER2	SC V.1	R 336.1205(1)
6. CO	62.85 tpy ²	12 month rolling time period, as determined at the end of each calendar month	EUWOODBOILER1 EUWOODBOILER2	SC VI.3	R 336.1205(1)
7. PM	0.20 pounds per MMBTU heat input ²	Hourly	EUWOODBOILER1 EUWOODBOILER2	SC V.1	R 336.1331(1)(c)
8. PM	5.7 pph ²	Hourly	EUWOODBOILER1 EUWOODBOILER2	SC V.1	R 336.1331(1)(c)
9. PM	25.1 tpy ²	12 month rolling time period, as determined at the end of each calendar month	EUWOODBOILER1 EUWOODBOILER2	SC VI.3	R 336.1331(1)(c)

II. MATERIAL LIMIT(S)

1. The permittee shall not burn any wood, wood residue, or wood waste which is painted or treated with wood preservatives.¹ (R 336.1224, R 336.1225)

2. The permittee shall not burn in FG-WOODBOILERS any other waste, except for on-site spill cleanups such as floor sweeps or ground spills of: spilled oil, hydraulic fluid, antifreeze, and spent boiler chemicals. The permittee shall not burn any other material in FG-WOODBOILERS without prior notice to and approval by the AQD. Upon notification by the AQD, a performance test may be required, prior to approval of the use of any other waste fuel.¹ (R 336.1224, R 336.1225, R 336.1901)
3. The permittee shall not burn in FG-WOODBOILERS more than two gallons per hour of the acceptable waste fuels listed in Special Condition II.2.² (R 336.1224, R 336.1225, R 336.1702)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall install, maintain, and calibrate a device to measure the differential pressure across the multiclones.² (R 336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the boilers unless the primary and secondary multiclones are installed and operated properly.² (R 336.1301, R 336.1331(1)(c), R 336.1910)

V. TESTING/SAMPLING

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

1. The permittee shall verify benzo(a)pyrene, CO, and PM emission rates from FG-WOODBOILERS by testing at the owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
CO	40 CFR Part 60, Appendix A
Benzo(a)pyrene	SW 846 Method 0010

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 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall verify benzo(a)pyrene, CO, and PM emission rates from FG-WOODBOILERS, at a minimum, every five years from the date of the last test. (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. (R 336.1213(3))

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep hourly records of the type and amount (in gallons) of the following fuels: spilled oils, hydraulic fluids, antifreeze, and spent boiler chemicals. AQD reserves the right to obtain samples of the sweepings from the floor and ground cleanups at any time for the purpose of determining compliance with this permit.¹ (R 336.1224, R 336.1225)

2. The permittee shall maintain records of the amount of wood fuel combusted during each calendar month. **(40 CFR 60.48c(g)(2))**
3. The permittee shall calculate and record CO, PM, and benzo(a)pyrene emissions in tons per year, based on a 12-month rolling time period using the equations in Appendix 7 and emission factors from the most recent performance test. **(R 336.1213(3)(b))**
4. The permittee shall monitor and record the differential pressure across the multiclones once per shift in a manner and with instrumentation acceptable to the AQD. **(R 336.1213(3)(b))**

See Appendices 4 and 7

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit a complete test protocol to the AQD for approval at least 30 days prior to each anticipated test date. **(R 336.2001(3), R 336.1213(3))**
5. The permittee shall notify the AQD no less than 7 days prior to each anticipated test date. **(R 336.2001(4), R 336.1213(3))**
6. The permittee shall submit two complete test reports to the AQD, one to the Technical Programs Unit and one to the district office, within 60 days following the last date of each test. **(R 336.2001(5), R 336.1213(3))**

See Appendix 8

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. SVBOILER1	30.25 ²	55 ²	R 336.2803, R 336.2804 40 CFR 52.21(c) and (d)
2. SVBOILER2	30.25 ²	55 ²	R 336.2803, R 336.2804 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. **(40 CFR Part 63, Subpart JJJJJJ)**

2. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Dc - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. **(40 CFR Part 60, Subpart Dc)**

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(a)(a).

APPENDIX 4

FG-WOODBOILERS

The permittee shall use the following table to monitor and record the type and amount (in gallons) of spilled oils, hydraulic fluids, antifreeze, and spent boiler chemicals fired in FG-WOODBOILERS.

Date	Time	Amount of Oil (gal)	Depth in Fuel Room (ft)	Type of Spill	Burn Rate (gal/hr)

APPENDIX 5

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

APPENDIX 7

FG-WOODBOILERS

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-WOODBOILERS.

A. CO emissions

$$CO = \sum_{i=1}^{12} \left(EF \times BTU \times FUEL_i \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} \right)$$

Where:

CO = CO emissions, tons per year based on a 12 month rolling time period;
EF = Emission factor derived from the most recent stack test, pounds/MMBTU;
BTU = Heat value of fuel, MMBTU/ton of fuel;
FUEL_i = Amount of fuel burned during month "i", tons.

B. PM emissions

$$PM = \sum_{i=1}^{12} \left(EF \times BTU \times FUEL_i \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} \right)$$

Where:

PM = PM emissions, tons per year based on a 12 month rolling time period;
EF = Emission factor derived from the most recent stack test, pounds/MMBTU;
BTU = Heat value of fuel, MMBTU/ton of fuel;
FUEL_i = Amount of fuel burned during month "i", tons.

C. Benzo(a)pyrene emissions

$$B(a)p = \sum_{i=January}^{December} \left(EF \times T_i \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} \right)$$

Where:

B(a)p = Benzo(a)pyrene emissions, in tons per year;
EF = Emission factor derived from most recent stack test, pph;
T_i = Hours of operation during month "i".

APPENDIX 8

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.