

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

September 6, 2024

PERMIT TO INSTALL
107-24

ISSUED TO
Weyerhaeuser NR Company

LOCATED AT
4111 West Four Mile Road
Grayling, Michigan 49738

IN THE COUNTY OF
Crawford

STATE REGISTRATION NUMBER
B7302

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: July 30, 2024	
DATE PERMIT TO INSTALL APPROVED: September 6, 2024	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 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 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
EUDRYFUEL	Waste material is transferred from FGWOODHANDLING and flake screening areas and delivered as dry fuel to the wood burners in EUCOEN and EUDRYER1 through EUDRYER4. This system is controlled by a cyclone and baghouse.	08/01/1980	FGWOODHANDLING
EUFINISHING	Pressed board is finished to the final product, packaged, and shipped. Controlled by a Cyclone and Baghouse.	08/01/1980 11/14/1995	FGWOODHANDLING
EUFLAQ	Forming Line Air Quality Pneumatic pickups on the surface forming equipment contain vagrant particulates within the system. Controlled by a Baghouse	08/01/1980 06/17/2009	FGWOODHANDLING
EUMATTRIM	Formed mat trim line Controlled by a Baghouse.	08/01/1980	FGWOODHANDLING
EUCLEANUP	Cleanup system for screens and dry bins area. This is a pneumatic system with dust pickups, servicing screens, conveyors, dry bins, and associated equipment for housekeeping purposes. Controlled by a Baghouse and Enclosure.	01/01/1992	FGWOODHANDLING
EUBLENDVENT	Blending core transfer, and core forming area controlled by a baghouse. The baghouse fan is rated at 42,000 acfm.	07/14/2012	FGWOODHANDLING

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
FGWOODHANDLING	Waste material is transferred from flake screening areas, cleanup system for screens and dry bins area, wood handling systems consisting of press board trim line and the area where pressed board is finished to the final product, packaged, and shipped, and delivered as dry fuel to the wood burners in EUCOEN and EUDRYER1 through EUDRYER4. This is a pneumatic system with dust pickups servicing screens, conveyors, dry bins, and associated equipment for housekeeping purposes.	EUMATTRIM EUFLAQ EUFINISHING EUDRYFUEL EUCLEANUP EUBLENDVENT

**FGWOODHANDLING
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Waste material is transferred from flake screening areas, cleanup system for screens and dry bins area, the sanding line, wood handling systems consisting of press board trim line and the area where pressed board is finished to the final product, packaged, and shipped and delivered as dry fuel to the wood burners in EUCOEN and EUDRYER1 through EUDRYER4. This is a pneumatic system with dust pickups servicing screens, conveyors, dry bins, and associated equipment for housekeeping purposes.

Emission Unit: EUFLAQ, EUFINISHING, EUMATTRIM, EUCLEANUP, EUDRYFUEL, EUBLENDVENT

POLLUTION CONTROL EQUIPMENT

Cyclones and Baghouse

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.002 lbs Per 1,000 lbs of dry exhaust gases	NA	FGWOODHANDLING	SC VI.2 SC VI.3 SC VI.4	40 CFR 52.21(j)
2. PM	1.86 pph	NA	FGWOODHANDLING	SC VI.2 SC VI.3 SC VI.4	40 CFR 52.21(j)
3. PM	8.1 tpy	NA	FGWOODHANDLING	SC VI.2 SC VI.3 SC VI.4	40 CFR 52.21(j)
4. Visible emissions	5% opacity	6-minute average	FGWOODHANDLING	SC VI.4	40 CFR 52.21(j) R 336.1331 R 336.2803 R 336.2804
5. PM10	0.41 pph	NA	EUBLENDVENT	SC VI.3 SC VI.4	40 CFR 52.21 (c) and (d) R 336.2803 R 336.2804
6. PM2.5	0.41 pph	NA	EUBLENDVENT	SC VI.3 SC VI.4	40 CFR 52.21 (c) and (d) R 336.2803 R 336.2804

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGWOODHANDLING unless a malfunction abatement plan (MAP) as described in Rule 911(2), for all dust collectors in FGWOODHANDLING, 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 quick 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 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 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate FGWOODHANDLING unless the associated cyclones and baghouses are maintained and operated in a satisfactory manner. Satisfactory operation includes, but is not limited to, maintaining a pressure drop across the baghouses in accordance with the manufacturer's specifications. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), R 336.2803, R 336.2804)**
2. The permittee shall not operate FGWOODHANDLING unless a gauge, which measures the pressure drop across each baghouse, is maintained and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), R 336.2803, R 336.2804)**

V. TESTING/SAMPLING

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

NA

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 and records by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), R 336.2803, R 336.2804)**
2. The permittee shall calculate the PM emissions per the formula found in Appendix 7. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d), R 336.2803, R 336.2804)**
3. The permittee shall monitor continuously and record once daily the pressure drop across each baghouse in FGWOODHANDLING. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
4. The permittee shall monitor the baghouse to verify it is operating properly, by taking 6 minute visible emission readings for FGWOODHANDLING a minimum of once per calendar week when the equipment is operating. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. If any visible emissions (other than uncombined water vapor) are observed, the permittee shall immediately inspect the baghouse and perform any required maintenance. **(R 336.1301, R 336.1910)**

- 5. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for FGWOODHANDLING. At a minimum, records shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1301, R 336.1910)**
- 6. The permittee shall keep, in a satisfactory manner, all records related to, or as required by the MAP. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911)**

See Appendix 7

VII. REPORTING

NA

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 Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
SVBLENDVENT	35	60	R 336.1225 40 CFR 52.21(c) and (d) R 336.2803 R 336.2804

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

APPENDIX 7. Emission Calculations

FGWOODHANDLING

- The following emission calculation shall be used to determine emission rates for PM.

$$129,100 * 0.075 \text{ lbs gas /ft}^3 * 60 \text{ min/hr} * 0.002 \text{ lb PM/ 1000 lbs gas} = \text{lbs/hr}$$

Annual emissions are calculated by applying this emission factor to the total hours of operation each month.