MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

June 21, 2017

PERMIT TO INSTALL
354-06I

ISSUED TO
Michigan Wood Fuels, LLC

LOCATED AT
1125 Industrial Avenue
Holland, Michigan

IN THE COUNTY OF
Allegan

STATE REGISTRATION NUMBER
N7729

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: **February 8, 2017**	
DATE PERMIT TO INSTALL APPROVED: **June 21, 2017**	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_2e	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_2S	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	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
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
EUPREPARATION	Dryer feedstock preparation (Process P10).	2007	FGFUGITIVE FGMWF
EUBURNER	A 38 MMBtu per hour Energy Unlimited wood-fired burner. Stack S21 (Stack S20 utilized during start-up) with the solid fuel suspension burner (Process B20) using dry wood chips and dry wood material, processed through a dryer, as fuel.	2007, 2010, 2015	FGMWF
EUDRYER	Triple pass rotary drum dryer. Stack S21 utilized during normal drying operation of (Process P20) green wood chips controlled by a multiclone.	2007, 2015	FGMWF
EUHAMMER	Dry hammer mill #13 (Process P30) controlled by baghouse #14 with explosion vent (Control Device C30).	2007, 2015	FGPROCESS, FGMWF
EUPELLET	Pelletizing (Process P40) consisting of a dry wood surge silo, pellet feed hoppers, mill conditioners, three pellet mills, screeners, closed auger systems, elevator, enclosed conveyor, ducts, and breaker. Controlled by baghouse #14 with explosion vents (Control Device C30).	2007, 2015	FGPROCESS, FGMWF
EUCOOLING	Pellet cooling (Process P50) controlled by a baghouse #14 with explosion vents (Control Device C30).	2007, 2015	FGPROCESS FGMWF
EUSTORAGE	Finished pellet storage (Process P60) consisting of five storage silos.	2007, 2015	FGPROCESS, FGMWF
EUBAGGING	Pellet bagging system (Process P70) consisting of conveyors, screening system, augers, bagging station, and sealing station. Controlled by baghouse #14 with explosion vents (Control Device C30).	2007, 2015	FGPROCESS, FGMWF
EUGENERAL	Point source ventilation system (Process P80) for emissions from bucket elevators, conveyors, screeners, and bagging system within the building controlled by baghouse #14 with explosion vents (Control Device C30).	2007, 2015	FGPROCESS, FGMWF
EUROADWAY	Fugitive emissions from paved and unpaved roads.	2007, 2015	FGMWF
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:
EUBURNER

DESCRIPTION: Stack S20 utilized during start-up with the solid fuel 38 MMBtu per hour suspension burner (Process B20) using dry wood chips and/or dry wood material (soft and/or hard woods), processed through a dryer, as fuel.

Flexible Group ID: FGMWF

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall only combust dry wood chips, and/or dry wood material, processed through the dryer, as fuel in EUBURNER. **(R 336.1225, R 336.1702, 40 CFR 52.21 (c) & (d))**

2. The permittee shall not combust more than 0.62 tons of dry wood fuel per hour in EUBURNER during startup and 2.43 tons of dry wood fuel per hour during normal operation. **(R 336.1205(3), R 336.1225, R 336.1301, R 336.1331, R 336.1901, 40 CFR 52.21 (c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUBURNER unless a preventative maintenance/malfunction abatement plan (PM/MAP) as described in Rule 911(2), for the process and emission control equipment, has been submitted within 90 days of permit issuance, and is implemented and maintained. The PM/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 PM/MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the PM/MAP within 45 days after such an event occurs. The permittee shall also amend the PM/MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the PM/MAP and any amendments to the PM/MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the PM/MAP or amended PM/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 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

2. The permittee shall not operate EUBURNER unless an acceptable plan that describes how emissions will be minimized during all startups and shutdowns has been submitted to the AQD District Supervisor within 60 days after the issuance of this permit, and is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer, if available, as well as incorporating standard industry practices. **(R 336.1911, R 336.1912)**

3. The emissions during startup of EUBURNER shall not be emitted through SVSTACK S20 for more than 360 hours per year, as determined on a 12-month rolling time period. **(R 336.1205(3), R 336.1225, R 336.1301, R 336.1331, R 336.1901)**

4. The permittee shall maintain the efficiency of the EUBURNER, to control CO emissions, by fine tuning the EUBURNER for proper burner operation and performance. This shall be done once every six months during start-up of EUBURNER as shown by the CO emission monitoring data. **(R 336.1225, R336.1901)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity of EUBURNER shall not exceed 38.88 MMBtu per hour on a fuel heat input basis. **(R 336.1205(3), R 336.1225, R 336.1702, R 336.1901, 40 CFR 52.21 (c) & (d))**

2. The maximum auger feed rate of EUBURNER for the dry wood fuel shall not exceed a daily average rate of 81 pounds per minute and 2.43 tons per hour. **(R 336.1205(3), R 336.1225, R 336.1702, R 336.1901, 40 CFR 52.21 (c) & (d))**

V. TESTING/SAMPLING

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/records in a format acceptable to the AQD District Supervisor and make them available 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 336.1901, R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record, the tons per hour of dry wood fuel, combusted in EUBURNER, in a manner as approved by the AQD Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1331, R 336.1702, R 336.1901, 40 CFR 52.21(c) & (d))**

3. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to continuously monitor the auger feed rate of EUBURNER. The permittee shall record the auger feed rate on an hourly basis. **(R 336.1205(3), R 336.1225, R 336.1301, R 336.1331, R 336.1901, 40 CFR 52.21 (c) & (d))**

4. The permittee shall monitor and record, in a satisfactory manner, the number of hours of startup operation of EUBURNER on a daily basis and 12-month rolling time period as determined at the end of each calendar month. For each day emissions are directed through SVSTACKS20 for startup, the permittee shall record the following information:
   a. The date and time a fire is started.
   b. The date and time that emissions are redirected to EUDRYER and SVSTACKS21.
   c. Any deviations in operation from the startup plan and the reason for the deviation.

   (R 336.1205(3), R 336.1225, R 336.1331, R 336.1702, R 336.1901, 40 CFR 52.21 (c) & (d))

5. The permittee shall monitor and record, in a satisfactory manner, with a handheld CO monitor, the CO emissions from EUBURNER and the fuel data associated with the time the emissions data were collected. The permittee shall record one data set every six months during start-up of the EUBURNER. A data set shall consist of at least eight separate CO readings and shall be taken over a total time period of 30 minutes or longer. The permittee shall submit any request for an alternate monitoring schedule, in writing, to the AQD District Supervisor for review and approval. The permittee shall use data collected by this method for determining proper burner operation, as required in III.4. **(R 336.1225, R 336.1901)**

VII. REPORTING

NA

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. SVSTACKS20*	60.0	36.0	R 336.1225, 40 CFR 52.21 (c) & (d)
*EUBURNER emits from SVSTACKS20 during startup. SVSTACKS20 is a fresh air inlet during normal operation.			

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUDRYER

DESCRIPTION: A triple pass rotary drum dryer used to dry the green wood chips (soft and/or hard woods).

Flexible Group ID: FGMWF

POLLUTION CONTROL EQUIPMENT: Multiclone

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 lb per 1000 lbs of exhaust gases calculated on a dry gas basis	Test Protocol*	EUDRYER	GC 13	R 336.1331(1)(c)
2. PM10	9.75 pph	Test Protocol*	EUDRYER	SC V.1	40 CFR 52.21 (c) & (d)
3. PM2.5	5.27pph	Test Protocol*	EUDRYER	SC V.1	40 CFR 52.21 (c) & (d)
4. NOx	15.3 pph	Test Protocol*	EUDRYER	SC V.1	40 CFR 52.21 (c) & (d)
5. CO	19.13 pph	Test Protocol*	EUDRYER	SC V.1	40 CFR 52.21(d)
6. VOC (as propane)	11.5 pph	Test Protocol*	EUDRYER	SC V.1	R 336.1702(a)
7. Formaldehyde	0.22 pph	Test Protocol*	EUDRYER	SC V.1	R 336.1225
8. Acrolein	0.16 pph	Test Protocol*	EUDRYER	SC V.1	R 336.1225
*Test Protocol will determine the averaging period.					

II. MATERIAL LIMITS

1. The permittee shall only process green wood chips in EUDRYER. **(R 336.1225, R 336.1702, 40 CFR 52.21 (c) & (d))**

2. The permittee shall not process more than 12.75 oven-dried tons (ODT) per hour of wood materials through EUDRYER. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21 (c) & (d))**

3. The moisture content of the wood chips fed into EUDRYER, shall not exceed 55 percent by weight. **(R 336.1225, R 336.1702)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUDRYER unless a preventative maintenance/malfunction abatement plan (PM/MAP) as described in Rule 911(2), for the process and emission control equipment, has been submitted within 90 days of permit issuance, and is implemented and maintained. The PM/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 PM/MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the PM/MAP within 45 days after such an event occurs. The permittee shall also amend the PM/MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the PM/MAP and any amendments to the PM/MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the PM/MAP or amended PM/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 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

2. The permittee shall not operate EUDRYER unless an acceptable plan that describes how emissions will be minimized during all startups and shutdowns has been submitted to the AQD District Supervisor within 60 days after the issuance of this permit, and is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer, if available, as well as incorporating standard industry practices. **(R 336.1911, R 336.1912)**

3. The temperature at the inlet of EUDRYER shall not exceed 825 degrees Fahrenheit. **(R 336.1225, R 336.1702)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUDRYER unless the multiclone is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EUDRYER as required in SC III.1. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21 (c) & (d))**

V. TESTING/SAMPLING

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

1. Within 180 days of installation of the third pellet mill, the permittee shall verify the emission rates of PM and CO from EUDRYER by testing at owner's expense, in accordance with Department requirements. The permittee shall use the PM stack test results to calculate the emissions of PM10 and PM2.5. The results of this calculation will be used demonstrate compliance with the emission limits of PM10 and PM2.5 as specified in SC I.2 and I.3. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The test plan shall specify testing at maximum moisture content of the wood and maximum inlet temperature of the dryer, according to the most representative historical data recorded. The test plan shall also specify a blend of woods or 100 percent softwood. 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 the test. **(R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d), R 336.2001, R 336.2003, R 336.2004)**

2. Upon request from the AQD District Supervisor, the permittee may be required to verify one or each of the emission rates of NOx, VOC, acrolein and formaldehyde from EUDRYER by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The test plan shall specify testing at maximum moisture content of the wood and maximum inlet temperature of the dryer, according to the most representative historical data recorded. The test plan shall also specify a blend of woods or 100 percent softwood. 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 the test. **(R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d), 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/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record the moisture content of the green wood fed into EUDRYER, on a daily basis, in a manner as approved by the AQD Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702,)**

3. The permittee shall monitor and record, the ODT per hour of wood chips processed in EUDRYER, in a manner as approved by the AQD Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1331, R 336.1702, 40 CFR 52.21(c) & (d))**

4. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor the temperature at the inlet of EUDRYER on a continuous basis. The permittee shall record the temperature hourly. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

5. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the pressure drop across the multiclone. The permittee shall record the pressure once per shift or every 12 hours. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

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.SVSTACK S21	48.0	62.0	R 336.1225, R 336.1901, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

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

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
FGPROCESS	Each emission unit for material handling which includes one hammer mill, one surge silo, pellet feed hoppers, mill conditioners, material conveyance, three pellet mills, and one bagging operation.	EUHAMMER, EUPELLET, EUSTORAGE, EUBAGGING, EUGENERAL, EUCOOLING
FGMWF	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	All

The following conditions apply to:
FGPROCESS

DESCRIPTION: Converting dried wood chips into wood pellets with the use of hammer milling, screening, conveying, pelletizing, and storage operations.

Flexible Group ID: EUHAMMER, EUPELLET, EUSTORAGE, EUBAGGING**, EU-COOLER**, and EUGENERAL

POLLUTION CONTROL EQUIPMENT: Fabric Filter Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Opacity	5 percent	6-minute average	FGPROCESS	SC VI.3	R 336.1301(1)(c)
2. PM	0.002 grains per dry standard cubic feet per minute of exhaust gases	hourly	FGPROCESS	GC 13	R 336.1331(1)(c)
3. PM10	0.38 pph*	hourly	FGPROCESS	SC V.1	40 CFR 52.21 (c) & (d)
4. PM2.5	0.38 pph*	hourly	FGPROCESS	SC V.1	40 CFR 52.21 (c) & (d)
5. Acrolein	0.02 pph	hourly	FGPROCESS	SC V.1	R 336.1225
6. Formaldehyde	0.16 pph	hourly	EUCOOLING	SC V.1	R 336.1225
* The pound per hour limits are based upon an outlet grain loading of 0.002 grains per dry standard cubic feet of exhaust gases, and a volumetric gas flow of 28,200 dry standard cubic feet per minute.					

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGPROCESS unless a preventative maintenance/malfunction abatement plan (PM/MAP) as described in Rule 911(2), for the process and emission control equipment, has been submitted within 90 days of permit issuance, and is implemented and maintained. The PM/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 PM/MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the PM/MAP within 45 days after such an event occurs. The permittee shall also amend the PM/MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the PM/MAP and any amendments to the PM/MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the PM/MAP or amended PM/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 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FGPROCESS unless the fabric filter baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved PM/MAP for FGPROCESS as required in SC III.1. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

1. Upon request from the AQD District Supervisor, the permittee may be required to verify one or each of the emission rates of PM10, formaldehyde, and acrolein from FGPROCESS by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit Supervisor and the Permit Section Supervisor. The test plan shall specify a blend of woods or 100 percent softwood to be used during testing. 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 the test. **(R 336.1225, 40 CFR 52.21(c) & (d), 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/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

2. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the pressure drop across the fabric filter baghouse for FGPROCESS. The permittee shall record the pressure once per shift or every 12 hours. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

3. The permittee shall conduct daily visible emissions observations, either by a certified or a non-certified reader. If visible emissions are observed, a USEPA Method 9 certified visible emissions observation, which is a 6-minute average reading consisting of 15 second data points, shall be conducted by a certified reader. Records shall include the visible emissions observations (date, time, name of reader, whether the reader is certified or not), causes of abnormal opacity, corrective actions, and the results of such actions. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910)**

VII. REPORTING

NA

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. SVSTACK S30	36.0	28.0	R 336.1225, R 336.1901, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

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

The following conditions apply Source-Wide to:
FGMWF

DESCRIPTION: All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

1. The permittee shall not process through FGMWF, more than 66,427 oven-dried tons (ODT) per year, based on a 12-month rolling time period, of dried wood product. **(R 336.1205(3), R 336.1225, R 336.1702, R 336.1901, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGMWF unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations has been submitted to the AQD District Supervisor and is implemented and maintained. The plan shall identify the specific measures to be taken to prevent fugitive dust and the frequency of these measures. In addition, the permittee shall record the number of raw material and product trucks which are at the facility on a daily basis. **(R 336.1372, Act 451 324.5524**)

IV. DESIGN/EQUIPMENT PARAMETERS

NA

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/records in a format acceptable to the AQD District Supervisor and make them available 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(3), R 336.1901, 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record in a satisfactory manner, the amount of ODT of wood processed in tons for FGMWF on a monthly and a 12-month rolling time period as determined at the end of each calendar month. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702, R 336.1901, 40 CFR 52.21(c) & (d))**

3. The permittee shall conduct daily visible emissions observations, either by a certified or a non-certified reader. If visible emissions are observed, a USEPA Method 9 certified visible emissions observation, which is a 6-minute average reading consisting of 15 second data points, shall be conducted by a certified reader. Records shall include the visible emissions observations (date, time, name of reader, whether the reader is certified or not), causes of abnormal opacity, corrective actions, and the results of such actions. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

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