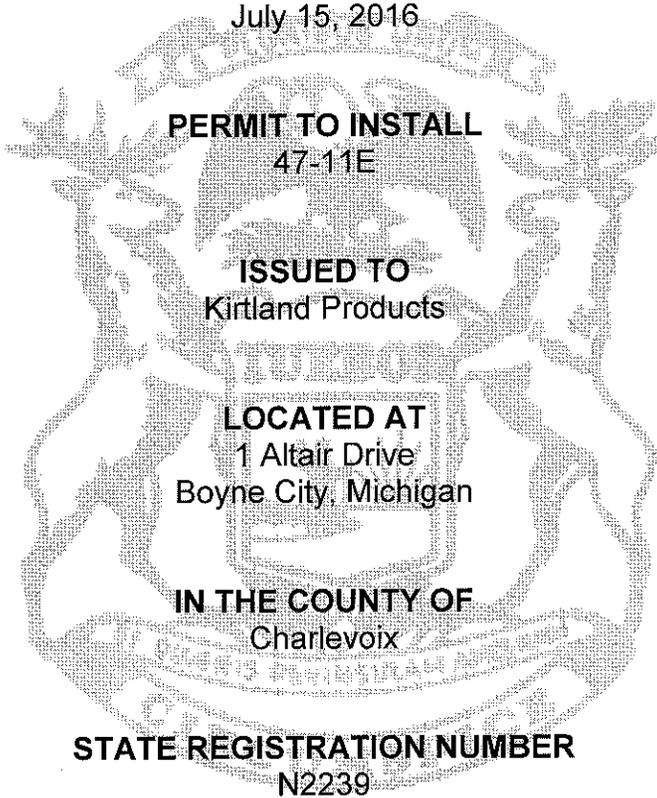


**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

July 15, 2016



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: April 27, 2016	
DATE PERMIT TO INSTALL APPROVED: July 15, 2016	SIGNATURE: <i>Barbara Resman</i>
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	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 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)	Flexible Group ID
EUGRINDER	Green wood grinding system (Process #105) with metering screws, a hammer mill controlled by a cyclone, bin, and transfer screw. The green wood grinding system and wood drying system share a vent stack.	FGGRINDER/DRYER, FGWOODPELLET
EUDRYER	A wood drying system (Process #110) consisting of a rotary drum dryer with a 22 MMBtu per hour wood-fired burner all controlled by a cyclone, and associated transfer conveyors. The green wood grinding system and wood drying system share a vent stack.	FGGRINDER/DRYER, FGWOODPELLET
EUHAMMERMILL	A dry hammer mill system (Process #115) consisting of screw conveyers, magnet, trap, and dry hammer mill controlled by a baghouse.	FGWOODPELLET
EUPELLET	A pelletizing system (Process #125) consisting of bins, screw conveyors, two (2) pellet mill conditioners, and two (2) pellet mills each controlled by a separate cyclone.	FGWOODPELLET
EUCOOLER	Pellet cooling (Process #125) consisting of a drag conveyor, and a pellet cooler controlled by a cyclone.	FGWOODPELLET
EUPELLETSTORAGE	A pellet storage system (Process #130) consisting of screens, conveyors, and a storage silo vented to the plant air system baghouse.	FGWOODPELLET
EUBAGHOUSE	Plant air system (Process #140) controlling fugitive dust from in-plant operations such as shaker screening, packaging, material transfer, bins, etc. Fugitive emissions will be controlled by a baghouse.	FGWOODPELLET
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:
EUHAMMERMILL

DESCRIPTION: A dry hammer mill system (Process #115) consisting of screw conveyers, magnet, trap, and dry hammer mill controlled by a baghouse.

Flexible Group ID: FGWOODPELLET

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VE	5% opacity	6-minute average except one 6-minute average per hour of not more than 10% opacity	Baghouse portion of EUHAMMERMILL	SC VI.2	R 336.1301(1)(c)
2. PM ^a	0.002 lb per 1,000 lb of exhaust gases ^b	Test Protocol*	Baghouse portion of EUHAMMERMILL	SC V.1	R 336.1331(1)(c)
3. PM10	0.045 pph	Test Protocol*	Baghouse portion of EUHAMMERMILL	SC V.1	40 CFR 52.21(c) & (d)
4. PM2.5	0.045 pph	Test Protocol*	Baghouse portion of EUHAMMERMILL	SC V.1	40 CFR 52.21(d)

^aThis is filterable particulate matter.

^bCalculated on a dry gas basis.

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUHAMMERMILL unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the process and emission control equipment, 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 AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUHAMMERMILL unless the baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with the approved MAP as required in SC III.1. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911)**

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 the PM, PM10, and/or PM2.5 emission rates from EUHAMMERMILL 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 and the AQD District Office. 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 Technical Programs Unit and the AQD District Office within 60 days following the last date of the test. **(R 336.1225, 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 336.1205, 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 baghouse. The device shall be equipped with an audible alarm that will sound when the pressure drop is below the minimum level as specified in the approved MAP as required in SC III.1. **(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. SVHAMMERMILL	12	63	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUPELLET

DESCRIPTION: A pelletizing system (Process #125) consisting of bins, screw conveyors, two (2) pellet mill conditioners, and two (2) pellet mills each controlled by a separate cyclone.

Flexible Group ID: FGWOODPELLET

POLLUTION CONTROL EQUIPMENT: Cyclone

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VE	10% opacity	6-minute average except one 6-minute average per hour of not more than 20% opacity	Each cyclone of EUPELLET	SC VI.2	R 336.1301(1)(c)
2. PM ^a	0.040 lb per 1,000 lb of exhaust gases ^b	Test Protocol*	Each cyclone of EUPELLET	SC V.1	R 336.1331(1)(c)
3. PM10	0.55 pph	Test Protocol*	Each cyclone of EUPELLET	SC V.1	40 CFR 52.21(c) & (d)
4. PM2.5	0.55 pph	Test Protocol*	Each cyclone of EUPELLET	SC V.1	40 CFR 52.21(d)

^aThis is filterable particulate matter.

^bCalculated on a dry gas basis.

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUPELLET unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the process and emission control equipment, 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 AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUPELLET unless each cyclone is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with the approved MAP as required in SC III.1. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911)**

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 the PM, PM10, and/or PM2.5 emission rates from EUPELLET 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 and the AQD District Office. 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 Technical Programs Unit and the AQD District Office within 60 days following the last date of the test. **(R 336.1225, 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 336.1205, 40 CFR 52.21(c) & (d))**
2. The permittee shall conduct daily visible emissions observations, either by a certified or a non-certified reader, as required in Emission Limit SC I.1. If visible emissions are observed, a United States Environmental Protection Agency (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 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. SVPELLET	13	47	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUCOOLER

DESCRIPTION: Pellet cooling (Process #125) consisting of a drag conveyor, and a pellet cooler controlled by a cyclone.

Flexible Group ID: FGWOODPELLET

POLLUTION CONTROL EQUIPMENT: Cyclone

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VE	5% opacity	6-minute average except one 6-minute average per hour of not more than 10% opacity	Cyclone portion of EUCOOLER	SC VI.2	R 336.1301(1)(c)
2. PM ^a	0.01 lb per 1,000 lb of exhaust gases ^b	Test Protocol*	Cyclone portion of EUCOOLER	SC V.1	R 336.1331(1)(c)
3. PM10	0.16 pph	Test Protocol*	Cyclone portion of EUCOOLER	SC V.1	40 CFR 52.21(c) & (d)
4. PM2.5	0.16 pph	Test Protocol*	Cyclone portion of EUCOOLER	SC V.1	40 CFR 52.21(d)

^aThis is filterable particulate matter.
^bCalculated on a dry gas basis.
 *Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUCOOLER unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the process and emission control equipment, 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 AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUCCOOLER unless the cyclone is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with the approved MAP as required in SC III.1. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911)**

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 the PM, PM10, and/or PM2.5 emission rates from EUCCOOLER 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 and the AQD District Office. 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 Technical Programs Unit and the AQD District Office within 60 days following the last date of the test. **(R 336.1225, 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 336.1205, 40 CFR 52.21(c) & (d))**
2. The permittee shall perform and document non-certified visible emissions observations as required in Emission Limit SC I.1 on a daily basis when EUCCOOLER is operating. If during the observation there are any visible emissions detected from an emission point, then corrective procedures as defined in the MAP shall be implemented. Records of the non-certified visible emissions observations, USEPA Method 9 observations that are performed, the reason for any visible emissions observed and any corrective actions taken shall be kept on file and in a format acceptable to the AQD. **(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. SVCOOLER	20	47	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUPELLETSTORAGE

DESCRIPTION: A pellet storage system (Process #130) consisting of screens, conveyors, and a storage silo vented to the plant air system baghouse.

Flexible Group ID: FGWOODPELLET

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUPELLETSTORAGE unless the baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with the approved MAP. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911)**

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))**

NA

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. SVBAGHOUSE	18	47	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUBAGHOUSE

DESCRIPTION: Plant air system (Process #140) controlling fugitive dust from in-plant operations such as shaker screening, packaging, material transfer, bins, etc. Fugitive emissions will be controlled by a baghouse.

Flexible Group ID: FGWOODPELLET

POLLUTION CONTROL EQUIPMENT: Baghouse

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VE	5% opacity	6-minute average except one 6-minute average per hour of not more than 10% opacity	EUBAGHOUSE	SC VI.2	R 336.1301(1)(c)
2. PM ^a	0.006 lb per 1,000 lb of exhaust gases ^b	Test Protocol*	EUBAGHOUSE	SC V.1	R 336.1331(1)(c)
3. PM10	0.09 pph	Test Protocol*	EUBAGHOUSE	SC V.1	40 CFR 52.21(c) & (d)
4. PM2.5	0.09 pph	Test Protocol*	EUBAGHOUSE	SC V.1	40 CFR 52.21(d)

^aThis is filterable particulate matter.
^bCalculated on a dry gas basis.
 *Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUBAGHOUSE unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the process and emission control equipment, 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 AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUBAGHOUSE unless the baghouse is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with the approved MAP as required in SC III.1. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911)**

V. TESTING/SAMPLING

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

1. Within 120 days of permit issuance, the permittee shall verify PM, PM10, and PM2.5 emission rates from EUBAGHOUSE at representative operating conditions, by testing at owner's expense, in accordance with Department requirements. A subsequent test shall be performed within 4 years of completion of the initial test. All tests shall be conducted in either October or November, unless otherwise approved by the AQD District Supervisor. No less than 30 days prior to testing, the permittee shall submit a complete test plan, which shall include details about the moisture content of the green wood raw material, to the AQD Technical Programs Unit and the AQD District Office. 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 Technical Programs Unit and the AQD District Office within 45 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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, 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 baghouse. The device shall be equipped with an audible alarm that will sound when the pressure drop is below the minimum level as specified in the approved MAP as required in SC III.1. **(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. SVBAGHOUSE	18	47	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

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
FGGRINDER/DRYER	A wood drying system (Process #110) consisting of a rotary drum dryer with a 22 MMBTU per hour wood-fired burner all controlled by a cyclone, and associated transfer conveyors. The green wood grinding system and wood drying system share a vent stack.	EUGRINDER, EUDRYER
FGWOODPELLET	Each emission unit at the wood pelletizing facility which includes the dryer, hammer mills, material conveyance, the pellet mills, the cooler, and the bagging operation.	EUGRINDER, EUDRYER, EUHAMMERMILL, EUPellet, EUcooler, EUPelletStorage, EUBAGHOUSE

The following conditions apply to:
FGGRINDER/DRYER

DESCRIPTION: A wood drying system (Process #110) consisting of a rotary drum dryer with a 22 MMBTU per hour wood-fired burner all controlled by a cyclone, and associated transfer conveyors. The green wood grinding system and wood drying system share a vent stack.

Emission Units: EUGRINDER, EUDRYER

POLLUTION CONTROL EQUIPMENT: Cyclones

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VE	15% opacity	6-minute average except one 6- minute average per hour of not more than 20% opacity	FGGRINDER/DRYER	SC V.1, SC VI.2	R 336.1301(1)(c)
2. PM ^a	0.137 lb per 1,000 lb of exhaust gases ^b	Test Protocol*	FGGRINDER/DRYER	SC V.1	R 336.1331(1)(c)
3. PM ^a	0.10 lb per 1,000 lb of exhaust gases ^b	Test Protocol*	EUGRINDER portion of FGGRINDER/DRYER	GC 13	R 336.1331(1)(a)
4. PM10	10.0 pph	Test Protocol*	FGGRINDER/DRYER	SC V.1	40 CFR 52.21(c) & (d)
5. PM2.5	10.0 pph	Test Protocol*	FGGRINDER/DRYER	SC V.1	40 CFR 52.21(d)
6. NO _x	8.3 pph	Test Protocol*	EUDRYER portion of FGGRINDER/DRYER	GC 13	40 CFR 52.21(c) & (d)
7. CO	13.5 pph	Test Protocol*	EUDRYER portion of FGGRINDER/DRYER	GC 13	40 CFR 52.21(d)
8. VOC (as carbon)	27.2 pph	Test Protocol*	EUDRYER portion of FGGRINDER/DRYER	GC 13	R 336.1702(a)
9. Formaldehyde (CAS No. 50-00-0)	1.18 pph ¹	Test Protocol*	EUDRYER portion of FGGRINDER/DRYER	GC 13	R 336.1225(1)

^aThis is filterable particulate matter.

^bCalculated on a dry gas basis.

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

1. The permittee shall only combust propane gas for start-up, and dried wood in the burner of EUDRYER. **(R 336.1205(1)(a), R 336.1224, R 336.1702)**
2. The permittee shall only process virgin hardwood and softwood materials through FGGRINDER/DRYER. Hardwood is defined as the wood of a broad-leaved tree, either deciduous or evergreen and softwood is defined as the wood of an evergreen tree. **(R 336.1224, R 336.1225, R 336.1702(a))**
3. The permittee shall comply with the material and process limits allowed in the following table for EUDRYER. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

Moisture Content of Green Wood Material in % by weight	Maximum Allowed Dryer Inlet Temperature	Maximum Allowed Green Wood Input (pounds per hour)
48% (and less)	888°F	24,952
49% to 50%	923°F	24,452
51% to 52%	960°F	24,033
53% to 54%	997°F	23,626
55% to 56%	1035°F	23,257

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGGRINDER/DRYER unless a MAP as described in Rule 911(2), for the process and emission control equipment, 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 AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

2. The permittee shall maintain the efficiency of the burner portion on EUDRYER to control CO emissions by fine tuning the burner for proper burner operation and performance on an annual basis. **(40 CFR 52.21(d))**
3. 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 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)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The maximum design heat input capacity of the burner portion of EUDRYER shall not exceed 22.0 MMBTU per hour on a fuel heat input basis, as certified by the equipment manufacturer. **(R 336.1205(1)(a))**
2. The permittee shall not operate FGGRINDER/DRYER unless the respective cyclones are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with the approved MAP for FGGRINDER/DRYER as required in SC III.1. **(R 336.1301, R 336.1331, R 336.1910, R 336.1911)**

V. TESTING/SAMPLING

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

1. Within 120 days of permit issuance, the permittee shall verify opacity, PM, PM10, and PM2.5 emission rates from FGGRINDER/DRYER at representative operating conditions, by testing at owner's expense, in accordance with Department requirements. A subsequent test shall be performed within 4 years of completion of the initial test. All tests shall be conducted in either October or November, unless otherwise approved by the AQD District Supervisor. No less than 30 days prior to testing, the permittee shall submit a complete test plan, which shall include details about the moisture content of the green wood raw material, to the AQD Technical Programs Unit and the AQD District Office. 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 Technical Programs Unit and the AQD District Office within 45 days following the last date of the test. **(R 336.1301, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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, R 336.1301, R 336.1331, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall conduct daily visible emissions observations, either by a certified or a non-certified reader, as required in Emission Limit SC I.1. 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 and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall monitor and record, the pounds per hour of green wood material processed in EUDRYER, averaged on a daily basis, in a manner as approved by the AQD District 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 336.1224, R 336.1225, R 336.1702(a))**
4. The permittee shall monitor and record the moisture content of the green wood material fed into FGGRINDER/DRYER, on a daily basis, in a manner as approved by the AQD District 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(a))**

5. The permittee shall keep records of the annual burner tune ups as described in SC III.2 for EUDRYER. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 52.21(d))**
6. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, a device to monitor and record the temperature at the inlet of EUDRYER on a continuous basis. 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(a))**

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. SVGRINDER/DRYER	40	63	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to:
FGWOODPELLET

DESCRIPTION: Each emission unit at the wood pelletizing facility which includes the dryer, hammer mills, material conveyance, the pellet mills, the cooler, and the bagging operation.

Emission Units: EUGRINDER, EUDRYER, EUHAMMERMILL, EUPELLET, EUCOOLER, EUPELLETSTORAGE, EUBAGHOUSE

POLLUTION CONTROL EQUIPMENT: Various

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGWOODPELLET for more than 5,930 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(3))**
2. The permittee shall not operate FGWOODPELLET unless a 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)**
3. The permittee shall review and update the program for continuous fugitive emissions control. The review and update shall include discussions on any material not previously addressed in the program. The permittee shall submit the updated MAP and any documentation generated through review of the MAP to the AQD District Supervisor within 45 days of permit issuance. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
4. The permittee shall review and update the existing MAP for all equipment. At a minimum, the MAP should be updated to address:
 - a. Indicators of proper control;
 - b. Any operational changes, such as cleaning cycle frequency for the baghouses; and
 - c. Any operational procedures that have been adopted to optimize performance.

The permittee shall submit the updated MAP and any documentation generated through review of the MAP to the AQD District Supervisor within 45 days of permit issuance. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

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), 40 CFR 52.21(c) & (d))**
2. The permittee shall monitor and record in a satisfactory manner, the hours of operation of FGWOODPELLET on a monthly and a 12-month rolling time period as determined at the end of each calendar month. The record shall include the time and duration of operation. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA