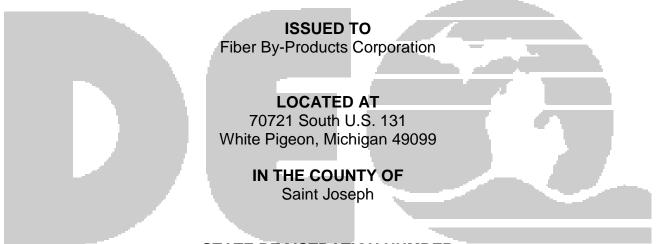
# MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY **AIR QUALITY DIVISION**

January 22, 2009

# **PERMIT TO INSTALL** No. 308-06A



# STATE REGISTRATION NUMBER N7708

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: 9/16/2008

DATE PERMIT TO INSTALL APPROVED: 1/22/2009	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

# PERMIT TO INSTALL

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# **Common Abbreviations / Acronyms**

	Common Acronyms	P	Pollutant/Measurement Abbreviations
AQD	Air Quality Division	Btu	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	со	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
СОМ	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H <sub>2</sub> S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
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	NOx	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM-10	Particulate Matter less than 10 microns diameter
MSDS	Material Safety Data Sheet	pph	Pound per hour
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	psia	Pounds per square inch absolute
PSD	Prevention of Significant Deterioration	psig	Pounds per square inch gauge
PTE	Permanent Total Enclosure	scf	Standard cubic feet
PTI	Permit to Install	sec	Seconds
RACT	Reasonably Available Control Technology	SO <sub>2</sub>	Sulfur Dioxide
ROP	Renewable Operating Permit	THC	Total Hydrocarbons
SC	Special Condition	tpy	Tons per year
SCR	Selective Catalytic Reduction	μg	Microgram
SRN	State Registration Number	VOC	Volatile Organic Compounds
TAC	Toxic Air Contaminant	yr	Year
TEQ	Toxicity Equivalence Quotient		
VE	Visible Emissions		

\* 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

- 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, 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 AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s( authorized by this Permit to Install pursuant to R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. (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 no later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction, 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 nor does it affect any liability for past violations under the Natural Resources and Environmental Protection Act, 1994 PA 451.
- 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.
- 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 Identification**

Emission Unit ID	Emission Unit Description	Stack Identification
EUDRYER	20 MMBtu/hr wood-fired burner, 36 foot long rotary	SVDryer
	drum dryer	
EUBuilding3	Building #3 consists of conveyors, screens, and hoppers to sort and store dried sawdust received directly from semi trucks and/or from EUDRYER. The dried sawdust is loaded into hoppers via front end loaders. A fabric filter baghouse collector controls the general room air and drop points on the equipment. Collected dust is returned to the process.	SVBaghouse3
EUPELLET1	Pellet Mill No. 1 housed in building #2	SVCYCLONE
EUPELLET2	Pellet Mill No. 2 housed in building #2	SVCYCLONE
EUPELLET3	SVCYCLONE	
Changes to the equipment allowed by R 336.1278 to R	described in this table are subject to the requirements of 336.1290.	R 336.1201, except as

# **Flexible Group Identification**

Flexible Group ID	Emission Units Included in Flexible Group	Stack Identification
FGPELLETMILL	EUPELLET1, EUPELLET2, EUPELLET3, and associated conveyors, feed screws, hoppers, storage tanks, storage silo, which service the three (3( pellet mills.	SVCYCLONE
FGFACILITY	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

# The following conditions apply to: EUDRYER

# Pollution Control Equipment: 23,000 acfm multiclone collector for control of particulate matter

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
1.1a	PM	EUDRYER	0.10 lb/1000 lbs exhaust gas	Test Protocol <sup>1</sup>	Special Conditions 1.11	R 336.1331
1.1b	PM <sub>10</sub>	EUDRYER	9.8 pph	Test Protocol <sup>1</sup>	Special Conditions 1.11	R 336.2804 40 CFR 52.21 (d)
1.1c	PM <sub>10</sub>	EUDRYER	42.9 tpy	12-month rolling as determined at the end of each month	Special Condition 1.13	R 336.1205(3)
1.1d	CO	EUDRYER	79.4 tpy	12-month rolling as determined at the end of each month	Special Conditions 1.12, 1.14	R 336.1205(3), R 336.1225

**Emission Limits** 

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
1.1e	VOC	EUDRYER	5.2 pph	Test Protocol <sup>1</sup>	Special	R 336.1225,
					Condition 1.12	R 336.1702(a)
1.1f	VOC	EUDRYER	22.7 tpy	12-month rolling as determined at the end of each month	Special Conditions 1.12, 1.15	R 336.1225, R 336.1702(a)
	<sup>1</sup> Test protocol	will specify averagin	g time period.			

# **Visible Emission Limits**

1.2 Visible emissions from EUDRYER shall not exceed a six-minute average of 20 percent opacity. (R 336.1331)

## **Process/Operational Limits**

- 1.3 The permittee shall only fire propane and wood fuel during startup in EUDRYER. (R 336.1205, R 336.1225)
- 1.4 The temperature, of EUDRYER at the inlet of the dryer, shall not exceed 800 degrees Fahrenheit. (R 336.1225, R 336.1702, R 336.1901)
- 1.5 The moisture content, of the wood fuel fed to EUDRYER, shall not exceed 15 percent by weight. (R 336.1225, R 336.1702, R 336.1901)
- 1.6 The permittee shall not process more than 11.0 oven dried tons of greenwood per hour through EUDRYER as determined by dividing the daily dried tons of greenwood by the daily operating hours. (R 336.1205, R 336.1225, R 336.1702, R 336.1901)
- 1.7 The permittee shall not operate EUDRYER unless a multiclone is installed, maintained and operated in a satisfactory manner, for EUDRYER. (R 336.1331, R 336.1910, R 336.2804, 40 CFR 52.21(d))

## Equipment

- 1.8 The permittee shall not operate EUDRYER unless a gauge is installed, maintained and operated in a satisfactory manner to measure the pressure drop across the multiclone for EUDRYER. The gauge shall be equipped to sound an alarm when the pressure drop exceeds a maximum or minimum level as established during stack testing. (R 336.1331, R 336.1910)
- 1.9 The permittee shall not operate EUDRYER unless a temperature device, which continuously measures the temperature at the inlet of the rotary drum dryer and sounds an alarm when the temperature exceeds 800 °F, is installed, maintained and operated in a satisfactory manner. (R 336.1702, R 336.1910, 40 CFR 52.21(d))

## Testing

1.10 The permittee shall verify the moisture content of the wood fuel for each batch of fuel delivered, for EUDRYER, by sampling at owner's expense, in accordance with the sampling plan approved by the AQD District Supervisor. Verification of moisture content includes keeping a complete report of the sampling results on file at the facility. (R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2804, 40 CFR 52.21 (d))

# Monitoring

- 1.11 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the pressure drop across the multiclone for EUDRYER on a continuous basis. (R 336.1301, R 336.1331, R 336.1910, R 336.1911)
- 1.12 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature at the inlet of the rotary drum dryer for EUDRYER on a continuous basis. (R 336.1702, R 336.1901, R 336.1911)

### Recordkeeping/Reporting/Notification

- 1.13 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of PM<sub>10</sub> emissions, from EUDRYER. 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 336.1205(3))**
- 1.14 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of CO emissions, from EUDRYER. 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 336.1205(3), (R 336.1225)
- 1.15 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of VOC emissions, from EUDRYER. 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 336.1702(a))
- 1.16 The permittee shall keep, in a satisfactory manner, records of the temperature from the inlet of the dryer of EUDRYER, based on an hourly average. 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 336.1225, R 336.1702(a))
- 1.17 The permittee shall keep, in a satisfactory manner, records of the pressure drop across the multiclone for EUDRYER. 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)
- 1.18 The permittee shall keep, in a satisfactory manner, daily records of the amount of greenwood dried per hour through EUDRYER. 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 336.1205, R 336.1225, R 336.1702, R 336.1901)
- 1.19 The permittee shall keep, in a satisfactory manner, sampling records of the moisture content of the wood fuel fed to EUDRYER. 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 336.1331)

### Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches(	Minimum Height Above Ground Level (feet(	Applicable Requirement		
1.20a	SVDRYER	36.0	74.0	R 336.2804		
				40 CFR 52.21(d)		
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.					

### The following conditions apply to: EUBuilding3

# Pollution Control Equipment: 41,000 acfm fabric filter baghouse collector for control of particulate matter

## **Emission Limits**

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
2.1a	PM	EUBuilding3	0.007 lb/1000 lbs exhaust gas	Test Protocol <sup>1</sup>	Special Condition 2.5	R 336.1331
2.1b	PM <sub>10</sub>	EUBuilding3	1.3 pph	Test Protocol <sup>1</sup>	Special Condition 2.5	R 336.2804 40 CFR 52.21 (d)
2.1c	PM <sub>10</sub>	EUBuilding3	5.7 tpy	12-month rolling as determined at the end of each month	Special Condition 2.6	R 336.1205(3)
	<sup>1</sup> Test protocol	will specify averaging	g time period.			

### Visible Emission Limits

2.2 Visible emissions from EUBuilding3 shall not exceed a six-minute average of 20 percent opacity. (R 336.1301)

### **Process/Operational Limits**

2.3 The permittee shall not operate EUBuilding3 unless a fabric filter is installed, maintained and operated in a satisfactory manner. (R 336.1331, R 336.1910, R 336.2804, 40 CFR 52.21 (d))

## Monitoring

2.4 The permittee shall perform and document non-certified visible emissions observations of SVBaghouse3 on a daily basis when EUBuilding3 is operating. If during the observation there are any visible emissions detected from SVBaghouse3, an EPA Method 9 certified visible emissions observation shall be conducted for a minimum of 15 minutes to determine the actual opacity. (R 336.1301, R 336.1331, R 336.1910, R 336.1911)

### Recordkeeping/Reporting/Notification

- 2.5 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of PM<sub>10</sub> emissions, from EUBuilding3. 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 336.1205(3)**)
- 2.6 The permittee shall keep, in a satisfactory manner, records of the non-certified visible emissions observations, EPA Method 9 observations that are performed, the reason for any visible emissions observed, and any corrective actions taken. All records shall be kept 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)

### **Stack/Vent Restrictions**

	Stack & Vent ID	Maximum Diameter (inches(	Minimum Height Above Ground Level (feet(	Applicable Requirement
2.7a	SVBaghouse3	52.4	38.0	R 336.2804 40 CFR 52.21 (d)

### The following conditions apply to: FGPELLETMILL

### Pollution Control Equipment: 15,000 acfm cyclone collector for control of particulate matter

### **Emission Limits**

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
3.1a	PM	FGPELLETMILL	0.10 lb/1000 lbs exhaust gas	Test Protocol <sup>1</sup>	Special Condition 3.6	R 336.1331
3.1d	PM <sub>10</sub>	FGPELLETMILL	2.35 pph	Test Protocol <sup>1</sup>	Special Condition 3.6	R 336.2804 40 CFR 52.21 (d)
3.1e	PM <sub>10</sub>	FGPELLETMILL	10.3 tpy	12-month rolling as determined at the end of each month	Special Conditions 3.7	R 336.1205(3)
	<sup>1</sup> Test protocol	will specify averaging	g time period.			

### Visible Emission Limits

3.2 Visible emissions from FGPELLETMILL shall not exceed a six-minute average of 20 percent opacity. (R 336.1331)

### **Process/Operational Limits**

- 3.3 The permittee shall not process more than 18.0 oven dried tons (ODT) of pellets in FGPELLETMILL per hour as determined by dividing the daily pellet production by the daily operating hours. (R 336.1205(1)(a))
- 3.4 The permittee shall not operate FGPELLETMILL unless the cyclone is installed, maintained and operated in a satisfactory manner, for FGPELLETMILL. (R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (d))

## Equipment

3.5 The permittee shall not operate FGPELLETMILL unless a gauge is installed, maintained and operated in a satisfactory manner to measure the pressure drop across SVCYCLONE. (R 336.1331, R 336.1910)

## Monitoring

3.6 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop across the cyclone for FGPELLETMILL on a continuous basis. (R 336.1301, R 336.1331, R 336.1910)

### Recordkeeping/Reporting/Notification

- 3.7 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of PM<sub>10</sub> emissions, from FGPELLETMILL. 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 336.1205(3))**
- 3.8 The permittee shall keep, in a satisfactory manner, daily production records of pellets by recording the number of bags of pellets produced each day and multiplying by the weight of the bag, for FGPELLETMILL, as required by special condition No. 3.3. 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 336.1205(3))

3.9 The permittee shall record at least once per calendar day (when operating) and keep, in a satisfactory manner, records of the pressure drop across the cyclone for FGPELLETMILL. All records shall be kept 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)

### **Stack/Vent Restrictions**

	Stack & Vent ID	Maximum Diameter (inches(	Minimum Height Above Ground Level (feet(	Applicable Requirement		
3.10a	SVCYCLONE	27.0	33.4	R 336.2804		
				40 CFR 52.21 (d)		
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.					

## The following conditions apply to: FGFACILITY

# **Process/Operational Limits**

- 4.1 The permittee shall not operate FGFACILITY unless a malfunction abatement plan (MAP( as described in Rule 911(2), has been submitted to the AQD District Supervisor and is implemented and maintained. 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 336.1911, R 336.1912)
- 4.2 The permittee shall not operate FGFACILITY unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations, approved by the AQD District Supervisor, has been implemented and is maintained. (R 336.1371, R 336.1901)