MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

May 19, 2008

PERMIT TO INSTALL
No. 382-00B

ISSUED TO
Central Michigan Hardwoods, Inc.

LOCATED AT
110 South 64 Avenue
Coopersville, Michigan 49404

IN THE COUNTY OF
Ottawa

STATE REGISTRATION NUMBER
N6929

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: **4/29/2008**	
DATE PERMIT TO INSTALL APPROVED: **5/19/2008**	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
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	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
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
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	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_2	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

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, 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 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 Identification

Emission Unit ID	*Emission Unit Description*	Stack Identification
EUBOILER	Biomass Combustion System Model #2200 Wood-fired Boiler (16.72 MM BTU/Hour) with Multiclone Dust Collector (Clarage Model No. MTSA-12-9CYT-A-WRV-STD)	SVBOILER
EUSILO	Waste wood storage silo with cyclone control	N/A
EU-KILN1	Indirect steam-heated lumber drying kiln. Charge capacity of 32 MBF. MBF is equivalent to one thousand board feet.	SV-KILN1
EU-KILN2	Indirect steam-heated lumber drying kiln. Charge capacity of 32 MBF.	SV-KILN2
EU-KILN3	Indirect steam-heated lumber drying kiln. Charge capacity of 32 MBF.	SV-KILN3
EU-KILN4	Indirect steam-heated lumber drying kiln. Charge capacity of 32 MBF.	SV-KILN4
EU-KILN5	Indirect steam-heated lumber drying kiln. Charge capacity of 40 MBF.	SV-KILN5
EU-KILN6	Indirect steam-heated lumber drying kiln. Charge capacity of 40 MBF.	SV-KILN6
EU-KILN7	Indirect steam-heated lumber drying kiln. Charge capacity of 45 MBF.	SV-KILN7
EU-KILN8	Indirect steam-heated lumber drying kiln. Charge capacity of 45 MBF.	SV-KILN8
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.		

Flexible Group Identification

Flexible Group ID	Emission Units Included in Flexible Group	Stack Identification
FGKILNS	EU-KILN1, EU-KILN2, EU-KILN3, EU-KILN4, EU-KILN5, EU-KILN6, EU-KILN7, EU-KILN8.	SV-KILN1, SV-KILN2, SV-KILN3, SV-KILN4, SV-KILN5, SV-KILN6, SV-KILN7, SV-KILN8.

EUBOILER

EMISSION UNIT CONDITIONS

DESCRIPTION
Biomass Combustion System Model #2200 Wood-fired Boiler (16.72 MM BTU/Hour) with Multiclone Dust Collector.

POLLUTION CONTROL EQUIPMENT
Multiclone Dust Collector (Clarage Model No. MTSA-12-9CYT-A-WRV-STD)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.50 lbs per 1000 lbs of exhaust gases*	Test Protocol	EUBOILER	GC 13	R 336.1331
2. PM-10	4.18 pph	Test Protocol	EUBOILER	GC 13	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

* calculated to 50 percent excess air.

II. MATERIAL LIMIT(S)

1. The permittee shall burn only virgin waste wood in EUBOILER. **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUBOILER unless the multiclone is installed, maintained, and operated in a satisfactory manner. **(R 336.1225, R 336.1331, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING
Records shall be maintained on file for a period of five years.

1. NA

VI. MONITORING/RECORDKEEPING
Records shall be maintained on file for a period of five years.

1. The permittee shall comply with the reporting and recordkeeping requirements of the federal Standards of Performance for New Stationary Sources, 40 CFR 60, Subpart Dc, §60.48c. The

permittee shall submit the notifications to the AQD District Supervisor within the time frames specified in 40 CFR 60.48c. **(40 CFR 60.48c)**

VII. REPORTING

1. NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER	11.8	45	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. NA

EUSILO

EMISSION UNIT CONDITIONS

DESCRIPTION
Waste wood storage silo with cyclone control.

POLLUTION CONTROL EQUIPMENT
Cyclone

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NA					

II. MATERIAL LIMIT(S)

1. NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not transfer wood waste into EUSILO unless the cyclone is installed, maintained, and operated in a satisfactory manner. **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING
Records shall be maintained on file for a period of five years.

1. NA

VI. MONITORING/RECORDKEEPING
Records shall be maintained on file for a period of five years.

1. NA

VII. REPORTING

1. NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. NA			

IX. OTHER REQUIREMENT(S)

1. NA

FGKILNS

FLEXIBLE GROUP CONDITIONS

DESCRIPTION
Eight (8) indirect steam-heated lumber drying kilns.

Emission Units: EU-KILN1, EU-KILN2, EU-KILN3, EU-KILN4, EU-KILN5, EU-KILN6, EU-KILN7, EU-KILN8

POLLUTION CONTROL EQUIPMENT
NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC (as carbon)	14.1 tpy *	12-month rolling time period as determined at the end of each calendar month.	FGKILNS	SC VI.1, SC VI.2	R 336.1702(a)

* VOC calculations are based on the amount of wood dried (in MBF) multiplied by its corresponding VOC emission factor in pounds carbon per thousand board feet (lbs C/MBF).

II. MATERIAL LIMIT(S)

1. The permittee shall only process hardwood in FGKILNS. (Hardwood is defined as the wood of a broad-leafed tree, either deciduous or evergreen.) **(R 336.1225, R 336.1702(a), R 336.1901)**

2. The permittee shall not dry more than 6,556 MBF of wood in FGKILNS per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING
Records shall be maintained on file for a period of five years.

1. NA

VI. MONITORING/RECORDKEEPING
Records shall be maintained on file for a period of five years.

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a))**

2. The permittee shall keep the following information on a monthly basis for FGKILNS:

   a. The wood species and amount in MBF dried per calendar month.

   b. The wood species and amount in MBF dried per 12-month rolling time period as determined at the end of each calendar month.

   c. The VOC emission factor (in lbs C/MBF) for each wood species dried. (The worse-case VOC emission factor is assumed to be 4.3 lbs C/MBF. VOC emissions in general are based on emission factors from "Factors Affecting Lumber Kiln VOC Emissions," M.R. Milota, Oregon State University or an alternative emission factor acceptable to the AQD District Supervisor.)

   d. VOC mass emission calculations determining the monthly emission rate in tons per calendar month.

   e. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file at the facility and made available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.1901)**

VII. REPORTING

1. NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged to the ambient air:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-KILN1	25	27.2	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. SV-KILN2	25	27.2	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
3. SV-KILN3	25	27.2	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
4. SV-KILN4 (represents 2 vents)	31 x 31	25.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
5. SV-KILN5 (represents 4 vents)	21 x 21	22.5	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
6. SV-KILN6 (represents 4 vents)	21 x 21	22.5	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
7. SV-KILN7 (represents 7 vents)	22	26.2	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
8. SV-KILN8 (represents 2 vents)	22 x 22	28.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. NA