MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

August 12, 2008

PERMIT TO INSTALL
No. 330-06A

ISSUED TO
Merrill Community Schools

LOCATED AT
755 W. Alice Street
Merrill, Michigan 48637

IN THE COUNTY OF
Saginaw

STATE REGISTRATION NUMBER
N7713

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: **6/10/2008**	
DATE PERMIT TO INSTALL APPROVED: **8/12/2008**	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	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_2	Sulfur Dioxide
ROP	Renewable Operating Permit	THC	Total Hydrocarbons
SC	Special Condition Number	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 Pemit to Install. **(R336.1219)**

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 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.

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
EU-FURNACE	Pelco Model 2520 shelled corn and wood pellet fired furnace with a manufacturer's rated capacity of 2.5 million Btu's per hour heat input with cyclonic collector, shelled corn and wood pellet feed system, and ash handling system. The capacity of the furnace is being limited to 0.45 million Btu's per hour	SV-FURNACE
EU-CORNSTORAGE	One (1) storage bin and associated handling equipment.	NA
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: EU-FURNACE

Emission Limits

	Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirement
1.1a	PM-10*	1.0 lb/MMBtu	Test Protocol	EU-FURNACE	GC 13	40 CFR 52.21 (c) and (d)
1.1b	PM-10*	0.45 pph	Test Protocol	EU-FURNACE	GC 13	40 CFR 52.21 (c) and (d)
1.1c	CO*	0.40 lb/MMBtu	Test Protocol	EU-FURNACE	GC 13	40 CFR 52.21 (c) and (d)
1.1d	CO*	0.18 pph	Test Protocol	EU-FURNACE	GC 13	40 CFR 52.21 (c) and (d)
1.1e	NOx*	1.25 lb/MMBtu	Test Protocol	EU-FURNACE	GC 13	40 CFR 52.21 (c) and (d)
1.1f	NOx*	0.56 pph	Test Protocol	EU-FURNACE	GC 13	40 CFR 52.21 (c) and (d)
	* These limits are applicable only when the furnace is burning shelled corn					

Visible Emissions

1.2 Visible emissions from EU-FURNACE shall not exceed a six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity. **(R 336.1301)**

Process/Operational Limits

1.3 The permittee shall combust only cleaned shelled corn or wood pellets in EU-FURNACE during normal heating operations. During startup operations only wood pellets and/or liquid flame accelerants (excluding used oil) may be used to initiate a stable flame in the furnace. The permittee shall not combust any type of waste materials, or agricultural product which have been treated with fungicides, pesticides, or any other chemical agents. The permittee shall not

combust any wood pellets which have been produced from painted or preservative-treated wood or which contain any binders or adhesive agents. The permittee shall only combust one fuel at a time. **(R 336.1201(3), R 336.1225)**

1.4 The permittee shall not combust any clean shelled corn in EU-FURNACE which has moisture content in excess of 15 percent by weight. The permittee shall not combust any wood pellets in EU-FURNACE with a moisture content in excess of 8% by weight. **(R 336.1201(3), R 336.1225)**

Material Usage Limits

1.5 The permittee shall not combust more than 65 pounds per hour of shelled corn in EU-Furnace. Compliance with the special condition will be accomplished by establishing a correlation between auger speed (rpm) and shelled corn feed rate (pph) as required by special condition 1.10. **(R 336.1201(3))**

Monitoring

1.6 Previous to initial operation, the permittee shall implement, subject to review and approval by the AQD District Supervisor, a plan designed for routine monitoring of the visible emissions during normal steady-state operating conditions of EU-FURNACE. The plan shall be submitted to the District Office upon request and include provisions for implementing and documenting corrective actions to minimize visible emissions. **(R 336.1201(3), R 336.1301)**

1.7 The permittee shall monitor the auger speed of the shelled corn feed into EU-FURNACE at all times when the furnace is being operated. **(R 336.1201(3))**

Recordkeeping/Reporting/Notification

1.8 The permittee shall record the auger feed rates whenever EU-FURNACE is being used to combust shelled corn. All records shall be kept in a format acceptable to the Air Quality Division, and shall be maintained for at least five years. Alternatively, if the applicant is able to demonstrate to the satisfaction of the Air Quality Division, that the auger feed rate is not capable of exceeding the maximum rotational speed which correlates to a corn feed rate of 65 pounds per hour, through mechanical or control modifications, recordkeeping will not be required. Additionally, the permittee shall maintain records of the type of fuel being used (shelled corn or wood pellets), the moisture content of the fuels, and the daily hours of operation of the furnace. All records shall be compiled on a monthly basis. **(R 336.1201(3))**

1.9 The permittee shall notify the District Supervisor of the date that initial operation of EU-FURNACE commenced. This notification shall be no more than 14 days after initial operation commences. **(R 336.1201(3))**

Testing

1.10 Previous to initial operation of EU-FURNACE, the permittee shall perform a test to establish the relationship between auger feed rate and shelled corn feed rate (lbs per hour). The permittee shall inform the Air Quality Division at least 10 working days in advance of the test, and shall share the results of the testing with the Air Quality Division. **(R 336.1201(3))**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.11	SV-FURNACE	10	37.5	40 CFR 52.21(c) and (d)
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

Miscellaneous

1.11 "Initial Operation" is defined as that period of time, other than equipment testing, when the furnace is intended to operate in normal mode.