MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

JULY 15, 2005

PERMIT TO INSTALL
NO. 305-04A

ISSUED TO
COMPREHENSIVE ENVIRONMENTAL, INC.

LOCATED AT
6011 WYOMING AVENUE
DEARBORN, MICHIGAN 48126

IN THE COUNTY OF
WAYNE

STATE REGISTRATION NUMBER
B9080

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: **5/30/2005**	
DATE PERMIT TO INSTALL APPROVED: **7/15/2005**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

NEW SOURCE REVIEW PERMIT TO INSTALL

Common Abbreviations / Acronyms Used in this Permit to Install

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	NOx	Oxides of Nitrogen
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MDEQ	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns diameter
MIOSHA	Michigan Occupational Safety & Health Administration	pph	Pound per hour
MSDS	Material Safety Data Sheet	ppm	Parts per million
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppmv	Parts per million by volume
NSPS	New Source Performance Standards	ppmw	Parts per million by weight
NSR	New Source Review	psia	Pounds per square inch absolute
PS	Performance Specification	psig	Pounds per square inch gauge
PSD	Prevention of Significant Deterioration	scf	Standard cubic feet
PTE	Permanent Total Enclosure	sec	Seconds
PTI	Permit to Install	SO_2	Sulfur Dioxide
RACT	Reasonable Available Control Technology	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
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. **[R336.1201(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, PO 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. **[R336.1201(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 R336.1210, 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. **[R336.1201(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. **[R336.1201(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 R336.1219 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[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. **[R336.1901]**

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 malfunciton, whichever is first. The written reports shall include all of the information required in Rule 912(5). **[R336.1912]**

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 Act 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 R336.1301, 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 R336.1303. **[R336.1301]**

    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 R336.1370(2). **[R336.1370]**

13. Except as allowed by Rule 285 (a), (b), and (c), the permittee shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application, without prior notification to and approval by the Air Quality Division. **[R336.1201(1)]**

14. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EUSTABILIZE	A waste stabilization operation which processes non-hazardous liquid and solid waste using chemical stabilization. Reagents include: lime, ash, clay, or polymer. The process includes two existing and one proposed 30,000 gallon processing chambers in a building. All emissions from the stabilization building are controlled by a wet scrubber.	SVSTABIL
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

The following conditions apply to: EUSTABILIZE

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
1.1a	PM10	EUSTABILIZE	0.0124 grains/dry standard cubic foot	Test Protocol	SC 1.12, 1.13	R336.1225, R336.1331
1.1b	PM10	EUSTABILIZE	3.4 pph	Hourly	SC 1.12, 1.13	R336.1225, R336.1331
1.1c	PM10	EUSTABILIZE	14.9 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 1.12, 1.13	R336.1225, R336.1331

Material Usage Limits

1.2 The permittee shall not process more than 100,000 gallons of waste material through EUSTABILIZE per day or more than 36 million gallons of waste material through EUSTABILIZE per 12-month rolling time period as determined at the end of each calendar month. **[R336.1225, R336.1702]**

Process/Operational Limits

1.3 The permittee shall keep all doors, windows, etc. of the treatment building closed while processing, as defined in R336.116(p), waste material. The only exception to this condition will be during times of entering or exiting the treatment building, at which times exposure shall be kept to a minimum. **[R336.1901]**

1.4 The permittee shall not operate EUSTABILIZE unless the Malfunction Abatement Plan, submitted to the AQD District Supervisor for approval, is implemented and maintained. If the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the malfunction abatement plan

within 45 days after such an event occurs and submit the revised plan to the AQD District Supervisor. **[R336.1901, R336.1910]**

1.5 The permittee shall not operate EUSTABILIZE unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations, submitted to the AQD District Supervisor for approval, has been implemented and is maintained. **[Act 451 324.5524]**

1.6 The permittee shall maintain negative pressure in the EUSTABILIZE building during normal operation. This includes, but is not limited to, complying with SC 1.3 and maintaining the treatment building's proper structural integrity. Negative pressure shall be verified using the procedure outlined in Appendix A. **[R336.1901]**

Equipment

1.7 The permittee shall not operate EUSTABILIZE unless the wet scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining and operating the wet scrubber in accordance with the Malfunction Abatement Plan. **[R336.1225, R336.1331, R3136.1910]**

Testing

1.8 Verification and quantification of odor emissions from EUSTABILIZE, by testing at owner's expense, in accordance with Department requirements, will be required for continued operation. Within 90 days after permit issuance, a complete stack sampling and odor threshold analysis plan using the Dynamic Dilution Method shall be submitted to the AQD. The stack sampling plan shall include provisions for various plant operating conditions, and odor neutralizer system operation (if any). The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **[R336.1901, R336.2001, R336.2003, R336.2004]**

1.9 Verification of the negative static pressure in the waste treatment building by testing, at owner's expense, in accordance with Department requirements, will be required for operating approval. The negative static pressure in the waste treatment building shall be determined by using smoke tubes, or an alternative method as approved by the AQD, and by visual observation of the air movement and direction. Alternative testing procedures and associated operational parameters must have prior approval by the AQD District Supervisor. Permittee shall conduct the verification tests at least once every year. Any request for a change in the testing frequency must be submitted to the AQD District Supervisor for review and approval. **[R336.1225, R336.1331, R336.2001, R336.2003]**

Monitoring

1.10 The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor the following wet scrubber operating parameters on a continuous basis. **[R336.1901, R3136.1910]**

a) The scrubber liquid pH,
b) the scrubber liquid hypochlorite concentration,
c) the scrubber liquid level, and
d) the pressure drop across the scrubber.

Recordkeeping/Reporting/Notification

1.11 The permittee shall keep, in a satisfactory manner, daily and 12-month rolling time period, as determined at the end of each calendar month, records of the amount of waste material processed in EUSTABILIZE.

All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1901]**

1.12 The permittee shall keep, in a satisfactory manner, records of the following monitored wet scrubber operating parameters once per every four hours of operation. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1901, R3136.1910]**

a.) The scrubber liquid pH,
b.) the scrubber liquid hypochlorite concentration,
c.) the scrubber liquid level,
d.) a visual evaluation of the scrubber blowdown, and
e.) the pressure drop across the scrubber.

1.13 The permittee shall keep, in a satisfactory manner, a log of the parameters listed below for each EUSTABILIZE batch, on a per batch basis. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1901]**

a.) Times at which each processing chamber is filled,
b.) what chemicals are added to each processing chamber, and
c.) type of material being treated in each processing chamber.

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.14	SVSTABIL	40	30	R336.1225
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

APPENDIX A – Protocol for Determining Building Negative Pressure

CESI will demonstrate that the stabilization building meets the criteria of a permanent total enclosure using US EPA's "Procedure T" described in 40 CFR Section 52.741. These criteria are listed as follows:

1. Any natural draft opening (NDO) shall be at least four (4) equivalent diameters from each VOC/PM emitting point.
2. The total area of all NDOs shall not exceed five (5) percent of the surface area of the enclosure's four walls, floor, and ceiling.
3. The average facial velocity (FV) of air through all NDOs shall be at least 3,600 m/hr (200 fpm). The direction of air through all NDOs shall be into the building.
4. All access doors and windows whose areas are not included in the area calculation described in item 2 and are not included in the calculation in item 3 shall be closed during routine operation of the process.
5. Air emissions must be captured and contained for discharge through a control device.

The demonstration will be submitted to the Air Quality Division within thirty days from the end of the trial operation period.

Furthermore, CESI shall implement a standard operating procedure which includes the following:

a. No more than one large bay door shall be open during normal operation.
b. The main system fan shall be maintained according to vendor's recommendations.
c. The treatment building shall be maintained at negative pressure during normal operation.
d. The main system fan shall continue to run for two hours after waste treatment (i.e. mixing of waste with treatment reagents) activities have stopped.