

Alphabetical Listing of Common Abbreviations/Acronyms used in this Permit to Install.

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	°F	Degrees Fahrenheit
CEM	Continuous Emission Monitoring	BTU	British Thermal Unit
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
GACS	Gallon of Applied Coating Solids	hr	Hour
GC	General Condition	H ₂ S	Hydrogen Sulfide
HAP	Hazardous Air Pollutant	HP	Horsepower
HVLP	High Volume Low Pressure *	Lb	Pound
ID	Identification	M	Meter
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NO _x	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter less than 10 microns diameter
NSPS	New Source Performance Standards	pph	Pound per hour
NSR	New Source Review	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SRN	State Registration Number	THC	Total Hydrocarbons
TAC	Toxic Air Contaminant	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		VOC	Volatile Organic Compounds
		yr	Year

* 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, altered, 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, reconstruction, relocation, or alteration 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 person to whom this permit was issued, 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, reconstruction, relocation, or alteration 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 owner or operator of a source, process, or process equipment shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant in excess of standards for more than one hour, or of any air contaminant in excess of standards for more than two hours, as required in this rule, to the District Supervisor, Air Quality Division. 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 District Supervisor within ten days, with the information required in this rule. **[R336.1912]**
8. Approval of this permit does not exempt the person to whom this permit was issued from complying with any future applicable requirements which may be promulgated under Part 55 of Act 451, PA 1994 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 Act 451, PA 1994, 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, a person 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), applicant 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 applicant to conduct acceptable performance tests, at the applicant'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	Reference No.
EU-SHREDDER	Scrap metal shredder with cyclone, baghouse, and associated conveyors.	SV-SHREDDER	1
EU-TROMMEL	Rotating trommel screen with baghouse, and scrap metal size separator.	SV-TROMMEL	2
EU-EDDYCURRENT	Shaker tables, four (4) eddy current machines with cyclone followed in series by a baghouse, and associated conveyors.	SV-EDDYCURRENT	3
EU-SANDFLOW	Eight (8) sand flow separators with baghouse, and associated conveyors.	SV-SANDFLOW	4
EU-THERMALSAND	Feed hopper, indirect natural gas-heated rotary kiln, rotary cooling drum, air classifier, associated transfer conveyors, and a high efficiency cyclone followed in series by a cartridge filter dust collector to control the kiln, cooling drum, and classifier.	SV-THERMALSAND	5
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: EU-SHREDDER

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirement
1.1a	PM	EU-SHREDDER	0.60 pounds	Per hour	GC 14	R336.1331 & 40 CFR 52.21 (c) & (d)
1.1b	PM	EU-SHREDDER	0.01 Lbs/1000 Lbs of exhaust gas*	Test Protocol	GC 14 SC 1.2	R336.1301, R336.1331, & 40 CFR 52.21 (c) & (d)
1.1c	Mercury	EU-SHREDDER	0.0012 pounds	Per hour	GC 14	R336.1225 & 40 CFR 52.21 (c) & (d)
*Calculated on a dry gas basis.						

Visible Emission Limits

1.2 Visible emissions from EU-SHREDDER shall not exceed a 6-minute average of 5 percent opacity.
[R336.1301 and R336.1901]

Material Usage Limits

- 1.3 The applicant shall only process non-ferrous scrap sheet, clips, pipes and castings in EU-SHREDDER. **[R336.1224, R336.1225, and R336.1901]**
- 1.4 The applicant shall not process any asbestos tailing or asbestos containing materials in EU-SHREDDER pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Part 61, Subpart M. **[R336.1224, R336.1225, and R336.1901]**

Process/Operational Limits

- 1.5 The applicant shall not operate EU-SHREDDER for more than 6,240 hours per 12-month rolling time period as determined at the end of each calendar month. A written log of the hours of operation shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **[R336.1224 and R336.1331]**
- 1.6 The applicant shall not operate EU-SHREDDER unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **[R336.1911]**
- 1.7 All non-metallic and waste materials generated by EU-SHREDDER shall be contained and disposed of in an acceptable manner in compliance with all applicable state and federal rules and regulations. **[R336.1224, R336.1225, and R336.1901]**

Equipment

- 1.8 The applicant shall not operate EU-SHREDDER unless the cyclone and baghouse are installed, maintained, and operated in a satisfactory manner. **[R336.1301, R336.1331, R336.1901, and R336.1910]**
- 1.9 The applicant shall equip and maintain the baghouse portion of EU-SHREDDER with a broken bag detector. **[R336.1224, R336.1331, R336.1901, and R336.1910]**
- 1.10 The applicant shall not operate the baghouse portion of EU-SHREDDER unless a gauge which measures the pressure drop across the baghouse collector and sounds an alarm when the pressure drop exceeds the manufacturer's recommendation is installed, maintained, and operated in a satisfactory manner. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

Monitoring

- 1.11 The applicant shall monitor and record the pressure drop from the baghouse portion of EU-SHREDDER on a daily basis in a manner and with instrumentation acceptable to the District Supervisor, Air Quality Division. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

Recordkeeping/Reporting/Notification

- 1.12 Monthly records shall be kept on the types and origin of the non-ferrous scrap metal processed in EU-SHREDDER. The records are for the purpose of compliance demonstration and shall be kept in a format that has been approved by the Air Quality Division District Supervisor. This information shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1224, R336.1225, R336.1702(a) and R336.1901]**

1.13 The permittee shall keep, according to a method acceptable to the AQD District Supervisor, daily records of pressure drop for the baghouse portion of EU-SHREDDER. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1992, R336.2920, 40 CFR 52.21 © & (d)]

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.13a	SV-SHREDDER	37.5	40	R336.1224, R336.1225, R336.1901, and 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EU-TROMMEL

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirement
2.1a	PM	EU-TROMMEL	0.64 pounds	Per hour	GC 14	R336.1331 & 40 CFR 52.21 (c) & (d)
2.1b	PM	EU-TROMMEL	0.01 Lbs/1000 Lbs exhaust gas*	NA	GC 14 SC 2.2	R336.1301, R336.1331, & 40 CFR 52.21 (c) & (d)
*Calculated on a dry gas basis.						

Visible Emission Limits

2.2 Visible emissions from EU-TROMMEL shall not exceed a 6-minute average of 5 percent opacity. **[R336.1301, and R336.1901]**

Material Usage Limits

2.3 The applicant shall not process any asbestos tailing or asbestos containing materials in EU-TROMMEL pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Part 61, Subpart M. **[R336.1224, R336.1225, and R336.1901]**

Process/Operational Limits

2.4 The applicant shall not operate EU-TROMMEL unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **[R336.1911]**

2.5 All non-metallic and waste materials generated by EU-TROMMEL shall be contained and disposed of in an acceptable manner in compliance with all applicable state and federal rules and regulations. **[R336.1224, R336.1225, and R336.1901]**

Equipment

2.6 The applicant shall not operate EU-TROMMEL unless the baghouse is installed, maintained, and operated in a satisfactory manner. **[R336.1301, R336.1331, R336.1901, and R336.1910]**

2.7 The applicant shall equip and maintain the baghouse portion of EU-TROMMEL with a broken bag detector. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

2.8 The applicant shall not operate the baghouse portion of EU-TROMMEL unless a gauge which measures the pressure drop across the baghouse collector and sounds an alarm when the pressure drop exceeds the manufacturer's recommendation is installed, maintained, and operated in a satisfactory manner. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

2.9 The applicant shall not operate EU-TROMMEL unless the process equipment in the emission unit is located within a structure consisting of at a minimum three walls and a roof. **[R336.1224, R336.1301, and R336.1901]**

Monitoring

2.10 The applicant shall monitor and record the pressure drop from the baghouse portion of EU-TROMMEL on a daily basis in a manner and with instrumentation acceptable to the District Supervisor, Air Quality Division. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

Recordkeeping/Reporting?notification

2.11 The permittee shall keep, according to a method acceptable to the AQD District Supervisor, daily records of pressure drop for the baghouse portion of EU-TROMMEL. 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, R336.1910, 40 CFR 52.21 © & (d)]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
2.12	SV-TROMMEL	24	40	R336.1224, R336.1225, R336.1901, and 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EU-EDDYCURRENT

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirement
3.1a	PM	EU-EDDYCURRENT	0.38 pounds	Per hour	GC 14	R336.1331 & 40 CFR 52.21 (c) & (d)
3.1b	PM	EU-EDDYCURRENT	0.01 Lbs/1000 Lbs. of exhaust*	Test Protocol	GC 14 SC 3.2	R336.1301, R336.1331, & 40 CFR 52.21 (c) & (d)
*Calculated on a dry gas basis.						

Visible Emission Limits

3.2 Visible emissions from EU-EDDYCURRENT shall not exceed a 6-minute average of 5 percent opacity. **[R336.1301, and R336.1901]**

Material Usage Limits

3.3 The applicant shall not process any asbestos tailing or asbestos containing materials in EU-EDDYCURRENT pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Part 61, Subpart M. **[R336.1224, R336.1225, and R336.1901]**

Process/Operational Limits

3.4 The applicant shall not operate EU-EDDYCURRENT unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **[R336.1911]**

3.5 All non-metallic and waste materials generated by EU-EDDYCURRENT shall be contained and disposed of in an acceptable manner in compliance with all applicable state and federal rules and regulations. **[R336.1224, R336.1225, and R336.1901]**

Equipment

3.6 The applicant shall not operate EU-EDDYCURRENT unless the baghouse is installed, maintained, and operated in a satisfactory manner. **[R336.1301, R336.1331, R336.1901, and R336.1910]**

3.7 The applicant shall equip and maintain the baghouse portion of EU-EDDYCURRENT with a broken bag detector. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

3.8 The applicant shall not operate the baghouse portion of EU-EDDYCURRENT unless a gauge which measures the pressure drop across the baghouse collector and sounds an alarm when the pressure drop exceeds the manufacturer's recommendation is installed, maintained, and operated in a satisfactory manner. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

3.9 The applicant shall not operate EU-EDDYCURRENT (excepting the shaker tables) unless the process equipment in the emission unit is located within a structure consisting of at a minimum three walls and a roof. **[R336.1224, R336.1301, and R336.1901]**

Monitoring

3.10 The applicant shall monitor and record the pressure drop from the baghouse portion of EU-EDDYCURRENT on a daily basis in a manner and with instrumentation acceptable to the District Supervisor, Air Quality Division. [R336.1224, R336.1331, R336.1901, and R336.1910]

Recordkeeping/Reporting/Notification

3.11 The permittee shall keep, according to a method acceptable to the AQD District Supervisor, daily records of pressure drop for the baghouse portion of EU-EDDYCURRENT. 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, R336.1910, 40 CFR 52.21 © & (d)]

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
3.12a	SV-EDDYCURRENT	20	40	R336.1224, R336.1225, R336.1901, and 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EU-SANDFLOW

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirement
4.1a	PM	EU-SANDFLOW	2.0 pounds	Per hour	GC 14	R336.1331 & 40 CFR 52.21 (c) & (d)
4.1b	PM	EU-SANDFLOW	0.02 Lbs/1000 Lbs of exhaust gas*	Test Protocol	GC 14 SC 4.2	R336.1301, R336.1331, & 40 CFR 52.21 (c) & (d)
*Calculated on a dry gas basis.						

Visible Emission Limits

4.2 Visible emissions from the EU-SANDFLOW shall not exceed a 6-minute average of 5 percent opacity. [R336.1301, and R336.1901]

Material Usage Limits

4.3 The applicant shall not process any asbestos tailing or asbestos containing materials in EU-SANDFLOW pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Part 61, Subpart M. [R336.1224, R336.1225, and R336.1901]

Process/Operational Limits

4.4 The applicant shall not operate EU-SANDFLOW unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. [R336.1911]

4.5 All non-metallic and waste materials generated by EU-SANDFLOW shall be contained and disposed of in an acceptable manner in compliance with all applicable state and federal rules and regulations. [R336.1224, R336.1225, and R336.1901]

Equipment

4.6 The applicant shall not operate EU-SANDFLOW unless the baghouse is installed, maintained, and operated in a satisfactory manner. [R336.1301, R336.1331, R336.1901, and R336.1910]

4.7 The applicant shall equip and maintain the baghouse portion of EU-SANDFLOW with a broken bag detector. [R336.1224, R336.1331, R336.1901, and R336.1910]

4.8 The applicant shall not operate the baghouse portion of EU-SANDFLOW unless a gauge which measures the pressure drop across the baghouse collector and sounds an alarm when the pressure drop exceeds the manufacturer's recommendation is installed, maintained, and operated in a satisfactory manner. [R336.1224, R336.1331, R336.1901, and R336.1910]

4.9 The applicant shall not operate EU-SANDFLOW unless the process equipment in the emission unit is located within a structure consisting of at a minimum three walls and a roof. [R336.1224, R336.1301, and R336.1901]

Monitoring

4.10 The applicant shall monitor and record the pressure drop from the baghouse portion of EU-SANDFLOW on a daily basis in a manner and with instrumentation acceptable to the District Supervisor, Air Quality Division. All records shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **[R336.1224, R336.1331, R336.1901, and R336.1910]**

Recordkeeping/Reporting/Notification

4.11 The permittee shall keep, according to a method acceptable to the AQD District Supervisor, daily records of pressure drop for the baghouse portion of EU-SANDFLOW. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.19010, R336.1910, 40 CFR 52.21 © & (d)]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
4.12a	SV-SANDFLOW	35	40	R336.1224, R336.1225, R336.1901, and 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EU-THERMALSAND

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirement
5.1a	PM	EU-THERMALSAND	0.1 pounds	Per Hour	GC 14	R336.1331, 40 CFR 52.21 © & (d)
5.1b	PM	EU-THERMALSAND	0.01 Lbs/1000 Lbs. of exhaust gas*	Test Protocol	GC14 SC5.2	R336.1301, R336.1331, 40 CFR 52.21 © & (d)
5.1c	VOCs	EU-THERMALSAND	0.6 POUNDS	Per Hour	SC 5.3 SC 5.4 SC 5.17	R336.1225 R336.1702(a),

*Calculated on a dry gas bases.

Visible Emission Limits

5.2 Visible emissions from the EU-THERMALSAND shall not exceed a 6-minute average of 5 percent opacity. **[R336.1301 and R336.1901]**

Material Usage Limits

5.3 The VOC content of all sand processed in EU-THERMALSAND shall not exceed 2 percent by weight. **[R336.1224, R336.1225, R336.1702(a), and R336.1901]**

5.4 The permittee shall not process more than 1,000 pounds per hour nor 1,040 tons per 12-month rolling time period, as determined at the end of each calendar month, of sand through EU-THERMALSAND. **[R336.1224, R336.1225, R336.1702, R336.1901, and 40 CFR 52.21 © & (d)]**

5.5 The applicant shall not process any asbestos tailing or asbestos containing materials in EU-THERMALSAND pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Part 61, Subpart M. **[R336.1224, R336.1225, and R336.1901]**

Process/Operational Limits

5.6 The applicant shall not operate EU-THERMALSAND unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **[R336.1911]**

5.7 All non-metallic and waste materials generated by EU-THERMALSAND shall be contained and disposed of in an acceptable manner in compliance with all applicable state and federal rules and regulations. **[R336.1224, R336.1225, and R336.1901]**

5.8 The permittee shall not operate the rotary kiln portion of EU-THERMALSAND unless a minimum temperature of 1400 °F, a minimum retention time of three seconds, and a minimum destruction efficiency of 97 percent by weight are maintained. **[R336.1225, R336.1702, and R336.1910]**

- 5.9 The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and UUU, as they apply to EU-THERMALSAND. **[40 CFR Part 60 Subparts A and Subpart UUU]**

Equipment

- 5.10 The applicant shall not operate EU-THERMALSAND unless the cyclone and cartridge filter dust collector are installed, maintained, and operated in a satisfactory manner. **[R336.1301.0 R336.1331, R336.1901, and R336.1910]**
- 5.11 The permittee shall not operate the cartridge filter dust collector portion of EU-THERMALSAND unless a gauge, which measures the pressure drop across the dust collector and activates an audible alarm or visual indicator when the pressure drop exceeds the manufacturer's recommendation is installed, maintained and operated in a satisfactory manner. **[R336.1224, R336.1331, and R336.1910]**
- 5.12 The applicant shall not operate EU-THERMALSAND unless the process equipment in the emission unit (excluding the cyclone and cartridge filter dust collector) is located within a structure consisting of at a minimum three walls and a roof. **[R336.1224, R336.1301, and R336.1901]**

Monitoring

- 5.13 The applicant shall monitor and record the pressure drop from the cartridge filter dust collector portion of EU-THERMALSAND on a daily basis in a manner and with instrumentation acceptable to the AQD District Supervisor. **[R336.1224, R336.1331, R336.1901, and R336.1910]**
- 5.14 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature from the rotary kiln portion of EU-THERMALSAND on a continuous basis. **[R336.1225, R336.1702, and R336.1901]**

Testing

- 5.15 At least once each calendar month the permittee shall obtain, by sampling, an analysis of the VOC content of the sand. The sample shall be analyzed using approved federal Reference Test Methods. Any request for a change in the sampling frequency must be submitted to the AQD District Supervisor for review and approval. **[R336.1225, R336.1702, and R336.1901]**
- 5.16 Within 180 days after commencement of trial operation, verification of VOC emission rates from EU-THERMALSAND, by testing at owner's expense, in accordance with Department requirements will be required. Stack testing procedures and the location of stack testing ports shall be in accordance with federal Reference Methods, respectively, 40 CFR Part 60 Appendix A. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates and destruction efficiency includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **[R336.2001, R336.2003, R336.2004, and R336.1702(a)]**

Recordkeeping/Reporting/Notification

- 5.17 The permittee shall keep a written record of the sand processed in EU-THERMALSAND on a monthly basis:
- a) Pounds per hour for each calendar day of sand processed.

- b) Calculations determining the amount of sand processed in tons per 12-month rolling time period as determined at the end of each calendar month.

The records are for the purpose of compliance demonstration and shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1224, R336.1225, R336.1702, and R336.1901]**

- 5.18 The permittee shall keep, according to a method acceptable to the AQD District Supervisor, daily records of pressure drop for the cartridge filter dust collector portion of EU-THERMALSAND. 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, R336.1910, and 40 CFR 52.21 © & (d)]**
- 5.19 The permittee shall keep, in a satisfactory manner, daily records of temperature for the rotary kiln portion of EU-THERMALSAND. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1702, and R336.1910]**
- 5.20 The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. **[40 CFR 60.7]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height above Ground Level (feet)	Applicable Requirement
	SV-THERMALSAND	24	47	R336.1224, R336.1225, R336.1901, and 40 CFR 52.21© & (d)

The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.

Appendix A

FUGITIVE DUST CONTROL PLAN

Shredder Plant and Roadways

Haul Roads

1. Speed of vehicles will be posted and limited to 10 mph.
2. Haul truck and loader travel will occur on paved/concrete areas only.
3. Fugitive emissions around the shredder and haul roads will be controlled by spraying water with a water truck or through the use of a dust suppressant, as necessary, to maintain visible emissions of less than five percent. A record of all application shall be kept on file and made available upon request to the Air Quality Division (AQD).
4. All roadways/plant yard shall be swept, as needed, between applications of fugitive dust control compounds.

Material Storage

5. Material storage areas will be located on paved/concrete surfaces only.
6. Accumulation of soil and other non-metallic materials in and around the material storage areas will be minimized to the extent possible. Material storage piles will be covered or wetted, as necessary, to maintain visible emissions of less than five percent.
7. Outdoor non-metallic waste storage piles and containers will be covered or sprayed with water or a dust suppressant, as necessary, to maintain visible emissions of less than five percent.

Plant

8. The drop height from conveyors to the storage piles and from the front-end loader or grapple to process equipment will be kept at a minimum to reduce potential fugitive emissions.

AQD/MDEQ Inspection

9. The provisions and procedures of this plan are subject to adjustment if following an inspection and written notification the AQD finds the fugitive dust requirements and/or the permitted opacity limits are not being met.