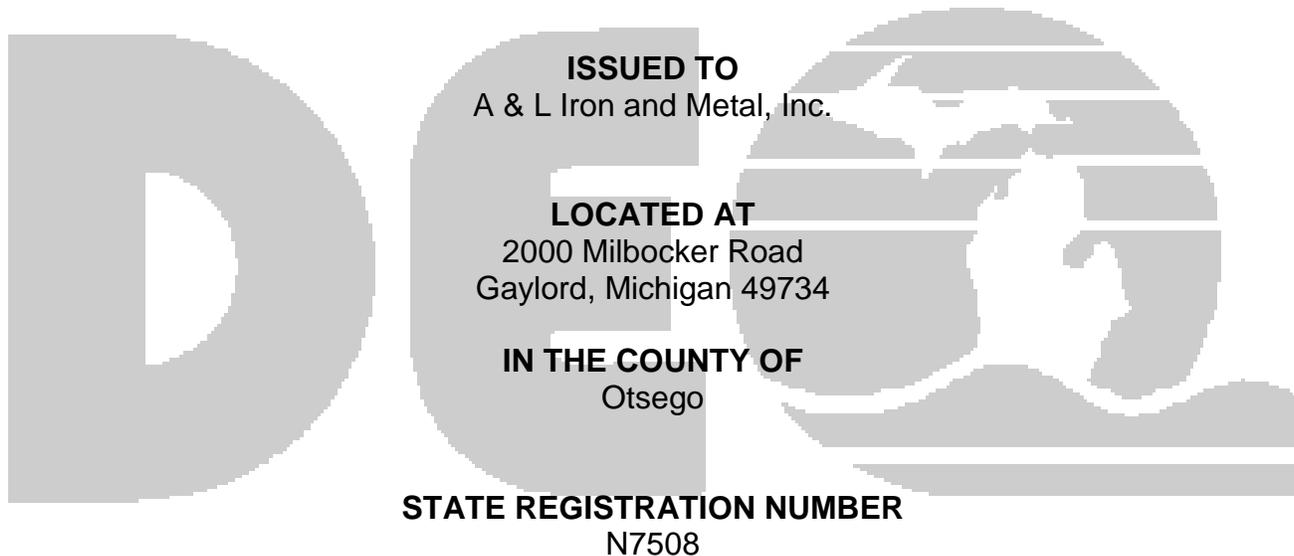


**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

July 17, 2009

**PERMIT TO INSTALL  
No. 176-05B**



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: <b>6/16/2009</b>	
DATE PERMIT TO INSTALL APPROVED: <b>7/17/2009</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant/Measurement Abbreviations</b>	
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 <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	NO <sub>x</sub>	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM10	PM less than 10 microns diameter
MSDS	Material Safety Data Sheet	PM2.5	PM less than 2.5 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonably Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO <sub>2</sub>	Sulfur Dioxide
SC	Special Condition	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
TEQ	Toxicity Equivalence Quotient	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. **(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 SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-SHREDDER	A scrap metal shredder equipped with an American Pulverizer programmable two-circuit water pumping wet suppression system, magnetic separator systems (electro-magnetic drums), eddy current separator, shaker and feeder oscillators, associated conveyors, material storage, and all associated process activities including but not limited to management of materials associated with the shredding operations.	June 2006 / July 22, 2008 / July 17, 2009	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-SHREDDER**

**DESCRIPTION:** A scrap metal shredder equipped with a programmable water pumping wet suppression system, magnetic separator systems (electro-magnetic drums), eddy current separator, shaker and feeder oscillators, associated conveyors, material storage, and all associated process activities including but not limited to management of materials associated with the shredding operations.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** Programmable water pumping wet suppression system

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.050 lbs per 1000 lbs of exhaust gases*	Test Protocol	EU-SHREDDER	GC 13, SC V.1	R 336.1331
2. PM10	5.30 pph	Test Protocol	EU-SHREDDER	GC 13, SC V.1	R 336.2803, R 336.2804, 40 CFR 52.21 Subparts (c) & (d)
3. Chromium, hexavalent	0.0005 pph	Test Protocol	EU-SHREDDER	GC 13, SC V.1	R 336.1224, R 336.1225

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
4. Lead	0.025 pph	Test Protocol	EU-SHREDDER	GC 13, SC V.1	R 336.1901, 40 CFR 52.21 Subpart (d)
5. Mercury	0.0027 pph	Test Protocol	EU-SHREDDER	GC 13, SC V.1	R 336.1224, R 336.1225
* Calculated on a dry gas basis					

6. Visible emissions from around the enclosure hood portion and the stack from EU-SHREDDER shall not exceed a six-minute average of 10 percent opacity. **(R 336.1301, R 336.1331, R 336.1901)**
7. Visible emissions from the conveyors and transfer points of EU-SHREDDER shall not exceed a six-minute average of 10 percent opacity. **(R 336.1301, R 336.1901)**

**II. MATERIAL LIMITS**

1. The permittee shall not process more than 183,040 tons of material through EU-SHREDDER per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1224, R 336.1225, R 336.1901)**
2. The permittee shall not process any asbestos tailing or waste materials containing asbestos in EU-SHREDDER pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subpart M. **(R 336.1224, R 336.1225, R 336.1901, 40 CFR Part 61 Subpart M)**
3. The permittee shall not process batteries in EU-SHREDDER. **(R 336.1224, R 336.1225, R 336.1901)**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate EU-SHREDDER for more than 4,576 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**
2. The permittee shall remove and properly dispose of all fluids from materials to be shredded, materials including but not limited to vehicles, appliances, and industrial machinery (or inspect and/or document that removal has been performed). Fluids shall include, at a minimum, gasoline, motor oil, antifreeze, transmission oil, brake oil, power steering fluid, hydraulic fluid, and differential fluid. **(R 336.1224, R 336.1702(a), R 336.1901)**
3. The permittee shall remove and properly dispose of all freon or other chlorofluorocarbons/halogenated chlorofluorocarbons (CFCs/HCFCs) from materials to be shredded, materials including but not limited to air conditioning units in vehicles, appliances, and industrial machinery (or inspect and/or document that removal has been performed). **(R 336.1224, R 336.1901)**
4. The permittee shall remove and properly dispose of all mercury-containing devices from materials to be shredded, materials including but not limited to vehicles, appliances, and industrial machinery (or inspect and/or document that removal has been performed). **(R 336.1224, R 336.1225, R 336.1901)**
5. The permittee shall only process gas tanks if they are flattened or punctured. **(R 336.1224, R 336.1901)**
6. The permittee shall store all non-metal and automotive shredder residue (e.g., fluff) generated by EU-SHREDDER in a bunker with a minimum of 3-sides, the total volume of which shall not exceed 500 cubic yards. **(R 336.1301, R 336.1901)**

7. All fluids, non-metal, and waste materials generated by the EU-SHREDDER shall be contained and disposed of or recycled in an acceptable manner in compliance with all applicable state and federal rules and regulations. **(R 336.1224, R 336.1702(a), R 336.1901)**
8. The permittee shall maintain an approved written plan ("Permit to Install Compliance Plan") demonstrating compliance with Special Conditions SC II.2, SC II.3, SC III.2, SC III.3, SC III.4, and SC III.5. The permittee shall not operate EU-SHREDDER unless the approved plan, or an alternate plan, approved in writing, by the AQD District Supervisor is implemented and maintained. **(R 336.1224, R 336.1702(a), R 336.1901)**
9. The permittee shall not operate EU-SHREDDER unless a malfunction abatement plan (MAP) as described in Rule 911(2), is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

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 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911)**

10. The permittee shall prevent fires from starting in the pile of non-metal and automotive shredder residue (e.g., fluff) through regular and frequent applications of water as needed. **(R 336.1310, R 336.1901)**
11. The permittee 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. **(R 336.1371, R 336.1372, R 336.1901)**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-SHREDDER unless the programmable water pumping wet suppression system is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910)**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor the water injection rate for the programmable water pumping wet suppression system and the shredder motor current on a continuous basis on EU-SHREDDER. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910)**
3. The permittee shall not operate EU-SHREDDER unless the conveyor, which carries the dry non-metal and automotive shredder residue, is covered and a chute at the discharge end of the conveyor is in place. **(R 336.1301, R 336.1901)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after installation of the programmable water pumping wet suppression and the stack required in SC VIII.1, verification of opacity, PM, PM10, hexavalent chromium, lead, and mercury at maximum (or as close to maximum as possible) operating conditions from EU-SHREDDER, by testing at owner's expense, in accordance with Department requirements, will be required. No less than 30 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 includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.2001, R 336.2003)**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

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 monitoring/recordkeeping special condition. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1901)**
2. The permittee shall record (when operating) and keep, in a satisfactory manner, records of the water injection rate for the programmable water pumping wet suppression system and the shredder motor current on EU-SHREDDER. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910)**
3. The permittee shall keep, in a satisfactory manner, a written log of the operating hours per 12-month rolling time period as determined at the end of each calendar month. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))**
4. The permittee shall keep, in a satisfactory manner, a written record of the amount of material processed in EU-SHREDDER in tons per 12-month rolling time period as determined at the end of each calendar month. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1901)**

#### **VII. REPORTING**

NA

#### **VIII. STACK/VENT RESTRICTIONS**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/ Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-SHREDDER	36	65	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

#### **IX. OTHER REQUIREMENTS**

1. Within seven days of completing the installation of the programmable water pumping wet suppression system and the stack required in SC VIII.1, the permittee shall notify the AQD District Supervisor, in writing, as to the date the installation was completed. **(R 336.1224, R 336.1301, R 336.1331, R 336.1901, R 336.1910)**

## APPENDIX A

### Fugitive Dust Control Plan

#### I. Plant

The drop distance at each transfer point throughout the plant shall be reduced to the minimum the equipment can achieve.

#### II. Truck Traffic

On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within six inches of the top of any sideboard, side panel or tailgate, otherwise, the truck shall be tarped.

#### III. Site Roadways and the Plant Yard

- a) The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet an opacity limit of five percent.
- b) All paved roadways/plant yard shall be swept, as needed, between applications of dust suppressants.
- c) A record of all applications of dust suppressants, and roadway and the plant yard sweepings shall be kept on file for the most recent five-year period and be made available to the AQD upon request.

#### IV. Storage Piles

- a) Stockpiling of all nonmetallic materials shall be performed to minimize drop distance and control potential dust problems.
- b) Stockpiles shall be watered on an as needed basis in order to meet an opacity limit of five percent. Equipment to apply water or dust suppressant shall be available at the site, or on call for use at the site, within a given operating day.
- c) A record of all watering shall be kept on file for the most recent five-year period and be made available to the AQD upon request.

#### V. AQD/MDEQ Inspection

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