

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

March 24, 2015

**PERMIT TO INSTALL
16-15**

**ISSUED TO
Schneider Iron & Metal, Inc.**

**LOCATED AT
100 State Street
Kingsford, Michigan**

**IN THE COUNTY OF
Dickinson**

**STATE REGISTRATION NUMBER
N3753**

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: February 20, 2015	
DATE PERMIT TO INSTALL APPROVED: March 24, 2015	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
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
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 (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	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, 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 48909-7760, 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 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 R 336.1219 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 R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(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	An 80-ton per hour METSO scrap metal shredder (hammer mill) equipped with a Smart Water Injection System, followed by a rotary drum magnetic separator, a Z-Box with a cyclone, and associated conveyors, material storage, and process activities including but not limited to management of materials associated with the shredding operations.	11-15-2013	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: An 80-ton per hour METSO scrap metal shredder (hammer mill) equipped with a Smart Water Injection System, followed by a rotary drum magnetic separator, a Z-Box with a cyclone, and associated conveyors, material storage, and process activities including but not limited to management of materials associated with the shredding operations.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Smart Water Injection System on the shredder (hammer mill), Cyclone on the Z-Box

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 dry exhaust gases	Test Protocol*	Z-Box portion of EU-SHREDDER	GC 13, SC IV.3	R 336.1331(1)(c)
2. PM10	2.0 pph	Test Protocol*	Z-Box portion of EU-SHREDDER	GC 13, SC IV.3	40 CFR 52.21 (c) & (d)
3. PM2.5	2.0 pph	Test Protocol*	Z-Box portion of EU-SHREDDER	GC 13, SC IV.3	40 CFR 52.21 (c) & (d)

* Test protocol will specify averaging time.

4. Visible emissions from around the shredder (hammer mill) portion of EU-SHREDDER shall not exceed a six-minute average of 10 percent opacity. **(R 336.1301(1)(c), R 336.1331(1)(c))**
5. Visible emissions from the Z-Box portion of EU-SHREDDER shall not exceed a six-minute average of 10 percent opacity. **(R 336.1301(1)(c), R 336.1331(1)(c))**
6. 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(1)(c))**

II. MATERIAL LIMITS

1. The permittee shall not process more than 114,400 tons of material through EU-SHREDDER per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a), R 336.1224, R 336.1702(a))**
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, 40 CFR Part 61 Subpart M)**
3. The permittee shall not process batteries in EU-SHREDDER.¹ **(R 336.1224, R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU-SHREDDER for more than 6 hours per calendar day and 1,430 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a), R 336.1225, 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))**
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).¹ **(R 336.1224)**
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).¹ **(R 336.1224, R 336.1225)**
5. The permittee shall only process gas tanks if they are flattened or punctured.¹ **(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 covered bunker with a minimum of 3-sides, the total volume of which shall not exceed 7,200 cubic yards.¹ **(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))**
8. The permittee shall not operate EU-SHREDDER unless a written plan ("Permit to Install Compliance Plan") demonstrating compliance with SC II.2, SC II.3, SC III.2, SC III.3, SC III.4, and SC III.5 is submitted within 90 days of permit issuance and is implemented and maintained. The permittee shall submit the written plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the written plan shall be considered approved. **(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 submitted within 90 days of permit issuance and 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 336.1910, 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)**
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)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU-SHREDDER unless the Smart Water Injection System is installed, maintained, and operated in a satisfactory manner. Satisfactory manner means operating the Smart Water Injection System in accordance with the MAP required in SC III.9. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall install, calibrate, maintain and operate, in a satisfactory manner, devices to monitor the water injection rate for the Smart Water Injection System and the shredder motor current on a continuous basis on the shredder (hammer mill) portion of EU-SHREDDER. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
3. The permittee shall not operate the Z-Box portion of EU-SHREDDER unless the cyclone is installed, maintained, and operated in a satisfactory manner. Satisfactory manner means operating the Z-Box in accordance with the MAP required in SC III.9. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

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

NA

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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall record (when operating) and keep, in a satisfactory manner, records of the water injection rate for the Smart Water Injection 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 336.1910)**
3. The permittee shall keep, in a satisfactory manner, records of the operating hours per calendar day and per 12-month rolling time period as determined at the end of each calendar month for EU-SHREDDER. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, 40 CFR 52.21 (c) and (d))**
4. The permittee shall keep, in a satisfactory manner, records 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 336.1205, R 336.1224, R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-ZBOXCYCLONE	NA	25	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPENDIX A

Nuisance Minimization Plan Fugitive Dust

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 (6) inches of the top of any sideboard, side panel or tailgate. Otherwise, the truck shall be tarped.

III. Site Roadways and 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 (5) 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 a period of five years 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 (5) 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 a period of five years 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 emission limits are not being met.