



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

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217/785-1705

## CONSTRUCTION PERMIT

### PERMITTEE

Metal Management Midwest, Inc  
Attn: Debbie Hays  
2500 South Paulina Street  
Chicago, Illinois 60608

Application No.: 21120017

I.D. No.: 031600FFO

Applicant's Designation:

Date Received: December 20, 2021

Subject: Shredder Control Equipment Installation

Date Issued: September 15, 2022

Location: 2500 South Paulina Street, Chicago, Cook County, 60608

This permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of one (1) Cyclone, one (1) Venturi Scrubber, one (1) 14.8 mmBtu/hour Natural Gas-Fired Valveless Regenerative Thermal Oxidizer (VRTO), one (1) Dry Sorbent Injection (DSI) Scrubber equipped with Dry Sorbent Fabric Filter (DSFF) Baghouse, and one (1) Lime Storage Silo with Bin Vent Filter, all control devices to form part of a control train to control emissions from the existing Hammermill Shredder System pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This permit is issued based on the construction of the Cyclone, Venturi Scrubber, Valveless Regenerative Thermal Oxidizer (VRTO), Dry Sorbent Injection (DSI) Scrubber, Dry Sorbent Fabric Filter (DSFF) Baghouse, and Lime Storage Silo with Bin Vent Filter not constituting a new major source or major modification pursuant to Title I of the Clean Air Act, specifically 40 CFR 52.21 and 35 Ill. Adm. Code Part 204 (Prevention of Significant Deterioration (PSD)).
- b. This permit is issued based on the construction of the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse not constituting a new major source or major modification pursuant to Title I of the Clean Air Act, specifically 35 Ill. Adm. Code Part 203 (Major Stationary Sources Construction and Modification).
- c. Operation of the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, DSFF Baghouse, and Lime Storage Silo with Bin Vent Filter is allowed under this Construction Permit until final action is taken on the Federally Enforceable State Operating Permit (FESOP) application for this source. This condition supersedes Standard Condition 6.
- 2a. The Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse, and Lime Storage Silo with Bin Vent Filter are subject to 35 Ill. Adm. Code Part 212 Subpart B (Visible Emissions). Pursuant to 35 Ill. Adm. Code 212.123(a), no

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person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
  - c. The Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, DSFF Baghouse and the Lime Storage Silo with Bin Vent Filter are subject to 35 Ill. Adm. Code Part 212 Subpart L (Particulate Matter Emissions from Process Emission Units). Pursuant to 35 Ill. Adm. Code 212.321(a), except as further provided in 35 Ill. Adm. Code Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
3. The Hammermill Shredder System controlled by VRTO is subject to 35 Ill. Adm. Code Part 214 Subpart K (Process Emission Sources). Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2000 ppm.
- 4a. The Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse is subject to 35 Ill. Adm. Code Part 218 Subpart G (Use of Organic Material). Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code Part 218 Subpart G shall only apply to photochemically reactive material.
  - b. Pursuant to 35 Ill. Adm. Code 218.302(a), emissions of organic material in excess of those permitted by 35 Ill. Adm. Code 218.301 are allowable if such emissions are controlled by one of the following methods:

Flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water.

- c. The Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse is subject to 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units). Pursuant to 35 Ill. Adm. Code 218.986(a), every owner or operator of an emission unit subject to 35 Ill. Adm. Code 218 Subpart TT shall comply with the requirements of 35 Ill. Adm. Code 218.986(a), (b), (c), (d), or (e) below.

Emission capture and control equipment which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from each emission unit.

- 5. This permit is issued based on the Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, DSFF Baghouse, and the Lime Storage Silo with Bin Vent Filter not being subject to the New Source Performance Standards (NSPS) for Metallic Mineral Processing Plants, 40 CFR 60 Subpart LL because the Raw Material Receiving and Handling System, Hammermill Shredder System, Ferrous Material Separation System, Non-Ferrous Material Separation System, and Fines Processing System at this source are not used to produce metallic mineral concentrates from ore.
- 6a. This permit is issued based on the Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) from Off-Site Waste and Recovery Operations, 40 CFR 63 Subpart DD, because the plant site is not a major source of HAP emissions as defined in 40 CFR 63.2.
- b. This permit is issued based on the Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse not being subject to the NESHAP for Primary Nonferrous Metals Area Sources—Zinc, Cadmium, and Beryllium, 40 CFR 63 Subpart GGGGGG, because the source will not be engaged in primary zinc production or primary beryllium production.
- c. This permit is issued based on the Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse not being subject to the NESHAP for Secondary Nonferrous Metals Processing Area Sources, 40 CFR 63 Subpart TTTTTT, because the source will not be engaged in secondary nonferrous metals processing as defined in 40 CFR 63.11472.
- d. This permit is issued based on the Hammermill Shredder System controlled by Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse not being subject to the NESHAP for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63 Subpart XXXXXX, because the source will not be primarily engaged in the operations in one of the nine source categories listed in 40 CFR 63.11514(a)(1) through (9).
- 7a. The Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse shall be in operation at all times when the associated Hammermill Shredder System is in operation and emitting air contaminants. The Bin Vent Filter shall be in operation at all times when the associated Lime Storage Silo is in operation and emitting air contaminants.

- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse associated with the Hammermill Shredder System, and Bin Vent Filter associated with the Lime Storage Silo such that the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, DSFF Baghouse, and Bin Vent Filter are kept in proper working condition and do not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
- c. The enclosure associated with the Hammermill Shredder System shall be inspected daily for structural integrity prior to startup of the Hammermill Shredder System.
- d. The VRTO's combustion chambers shall be preheated to at least the manufacturer's recommended temperature, but no less than the temperature at which compliance was demonstrated in the most recent compliance test, or 1,400°F in the absence of a compliance test. This temperature shall be maintained during operation of the Hammermill Shredder System and calculated as a three-hour block average.
- e. The VRTO shall only be operated with natural gas as the fuel. The use of any other fuel in the VRTO may require that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- f. The VRTO associated with the Hammermill Shredder System shall be equipped with a temperature monitoring device and an audible alarm that is installed, calibrated, operated, and maintained, in accordance with vendor/manufacturer specifications and 35 Ill. Adm. Code 218.105(d)(2). The audible alarm shall be set to alert the operator when the VRTO temperature is below the temperature at which compliance was determined in the most recent compliance test, or 1,400°F in the absence of a compliance test.
- g.
  - i. The Venturi Scrubber associated with the Hammermill Shredder System shall be equipped with a monitoring device and an audible alarm for pressure differential, scrubbant liquid flow rate, and pH of the scrubbant liquid. These monitoring devices shall be installed, calibrated, operated, and maintained in accordance with vendor/manufacturer specifications. The data measured by this device shall be automatically recorded on at least a one (1) minute basis and on an hourly average in an electronic database. The audible alarm shall be set to alert the operator when the pressure differential, scrubbant liquid flow rate, and pH of the scrubbant liquid values are outside the normal operating range.
  - ii. The DSI Scrubber associated with the Hammermill Shredder System shall be equipped with a monitoring device and an audible alarm for pressure differential and sorbent injection rate. These monitoring devices shall be installed, calibrated, operated, and maintained in accordance with vendor/manufacturer specifications. The data measured by this device shall be automatically recorded on at least a one (1) minute basis and on an hourly average in an electronic database. The audible alarm shall be set to alert the operator when the pressure differential and sorbent injection



rate values are outside the normal operating range.

- h. i. The Cyclone and DSFF Baghouse associated with the Hammermill Shredder System shall be equipped with a monitoring device for pressure differential and an audible alarm. These monitoring devices shall be installed, calibrated, operated, and maintained in accordance with vendor/manufacturer specifications. The data measured by this device shall be automatically recorded on at least a one (1) minute basis and on an hourly average in an electronic database. The audible alarm shall be set to alert the operator when the pressure differential values are outside the normal operating range.
- ii. The DSFF Baghouse associated with the Hammermill Shredder System shall be equipped with a bag leak detection system (BLDS) and an audible alarm. This system shall be installed, maintained, and operated in accordance with vendor/manufacturer specifications. The leak detection system must be installed at the outlet of the baghouse. The data measured by this device shall be automatically recorded on at least a one (1) minute basis and on an hourly average in an electronic database. The audible alarm shall be set to alert the operator when a bag leak is detected.
- i. The monitoring devices required in conditions 7(f), (g), and (h) shall be installed, calibrated, and fully operational prior to initial startup of the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse associated with the Hammermill Shredder System. The Permittee shall operate the continuous monitoring devices required by Conditions 7(f), (g) and (h) at all times that the Hammermill Shredder System is in operation.
- j. The Permittee shall install, operate, and maintain a continuous gas flammability monitoring device and an audible alarm for the shredder exhaust gas stream. This device shall measure the percent of the Lower Explosive Limit (% LEL) or percent of the Lower Flammability Limit (% LFL) of the shredder exhaust gas. This monitoring device shall have an accuracy of at least +/-3 percent of full scale. Values measured by this device shall be automatically recorded at least once per second and stored in an electronic data base. The audible alarm shall be set to alert the operator when the % LEL or % LFL values exceed the normal operating range.
- k. The Permittee shall install, operate and maintain a continuous monitoring device for the purpose of determining the gas flow rate to be used to calculate VOM emissions from an event when the emergency bypass vent on the VRTO is open while feed material is being sent to or being processed in the Hammermill Shredder System. This monitoring device shall make measurements at least every minute and have an accuracy of at least  $\pm$  5 percent. The data measured by this device shall be automatically recorded on at least a minute by minute basis and on an hourly average in an electronic database. This monitoring devices shall monitor one of the following operational parameters:
  - i. The amperage or usage of electrical power by the motor for the Cyclone fan;

- ii. The Hammermill Shredder System exhaust gas flow rate; or
- iii. Other operational parameter(s) approved by the Illinois EPA.
- 1. The Permittee shall install, operate, and maintain a continuous monitoring device for the status of the emergency bypass damper for the VRTO associated with the Hammermill Shredder System, (i.e., whether this damper is closed or open). The data collected by this device shall be automatically recorded at least once per second in an electronic database.
- m. The continuous monitoring devices required in conditions 7(j), (k), and (l) shall be installed, calibrated, and fully operational prior to initial startup of the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse associated with the Hammermill Shredder System. The Permittee shall operate the continuous monitoring devices required by Condition 7(j), (k), and (l) at all times that the Hammermill Shredder System is in operation.
- 8a. Emissions and fuel usage from fuel combustion in the VRTO associated with the Hammermill Shredding System shall not exceed the following limits:

- i. Natural gas usage: 12.71 mmscf/month, 127.11 mmscf/year
- ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor (lbs/mmscf)	Emissions	
		(Tons/Mo)	(Tons/Yr)
Carbon Monoxide (CO)	260.56	1.66	16.56
Nitrogen Oxides (NO <sub>x</sub> )	100.0	0.64	6.36
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.01	0.04

These limits are based on the maximum firing rate of the VRTO burner (14.8 mmBtu/hour), maximum natural gas usage, approximately 1% of uncontrolled VOM emissions being emitted as CO emissions due to incomplete combustion, and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998) for NO<sub>x</sub> and SO<sub>2</sub>.

- b. This permit is issued based on negligible emissions of Particulate Matter (PM) from the Lime Storage Silo with Bin Vent Filter. For this purpose, emissions from the Lime Storage Silo with Bin Vent Filter shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
- c. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12-month total).
- 9a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of

determining ground level and ambient air concentrations of such air contaminants:

- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
  - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Conditions 10, 11, and 12 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 10a. Pursuant to 35 Ill. Adm. Code 212.107, for both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method 22, 40 CFR Part 60, Appendix A, except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. 35 Ill. Adm. Code 212 Subpart A shall not apply to 35 Ill. Adm. Code 212.301.
- b. Pursuant to 35 Ill. Adm. Code 212.109, except as otherwise provided in 35 Ill. Adm. Code Part 212, and except for the methods of data reduction when applied to 35 Ill. Adm. Code 212.122 and 212.123, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR Part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.
- c. Pursuant to 35 Ill. Adm. Code 212.110(a), measurement of particulate matter emissions from stationary emission units subject to 35 Ill. Adm.

Code Part 212 shall be conducted in accordance with 40 CFR Part 60, Appendix A, Methods 5, 5A, 5D, or 5E.

- d. Pursuant to 35 Ill. Adm. Code 212.110(b), the volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1 or 1A, 2, 2A, 2C, or 2D, 3, and 4.
  - e. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for opacity or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
11. Pursuant to 35 Ill. Adm. Code 218.988(a), when in the opinion of the Illinois EPA it is necessary to conduct testing to demonstrate compliance with 35 Ill. Adm. Code 218.986, the owner or operator of a VOM emission unit subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT shall, at his own expense, conduct such tests in accordance with the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105.
- 12a. Within sixty (60) days after initial startup of the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse the Permittee shall:
- i. Conduct opacity observations from the Hammermill Shredder System stack during conditions which are representative of maximum emissions in order to demonstrate compliance with 35 Ill. Adm. Code 212.123 and other conditions of this permit. The Permittee shall conduct a second test thirty (30) months after the initial testing under this condition. Thereafter, this testing shall be conducted at least once every (5) five years from the preceding testing date.
  - ii. Measure and quantify the emissions of PM (gr/dscf and lb/hr), PM<sub>10</sub> (gr/dscf and lb/hr), PM<sub>2.5</sub> (gr/dscf and lb/hr), SO<sub>2</sub> (ppmv and lb/hr), CO (ppmv and lb/hr), NO<sub>x</sub> (ppmv and lb/hr), HCl (ppmv and lb/hr), and Metals (ppmv and lb/hr) emissions from the Hammermill Shredder System during conditions which are representative of maximum emissions. The Permittee shall conduct a second test thirty (30) months after the initial testing under this condition. Thereafter, this testing shall be conducted at least once every five (5) years from the preceding testing date.
  - iii. Measure (ppmv) and quantify (lb/hr) from the inlet and outlet emissions of VOM from the VRTO, measure VOM capture efficiency of the capture system, determine the destruction efficiency of the VRTO, and calculate overall VOM control efficiency for the capture system and VRTO, during conditions which are representative of maximum emissions in order to demonstrate compliance with 35 Ill. Adm. Code 218.986(a), and other conditions of this permit. If VOM capture efficiency meets the criteria of a PTE as determined by USEPA Method 204 or an

alternate method adopted by the USEPA to demonstrate capture efficiency, testing under this condition shall be conducted a second time within thirty (30) months from the initial testing date. If VOM capture efficiency continues to meet the criteria of a PTE as determined by USEPA Method 204 or an alternate method adopted by the USEPA to demonstrate capture efficiency, testing under this condition shall be conducted at least once every five (5) years from the preceding testing date. However, if the VOM capture efficiency does not meet the criteria of a PTE, subsequent testing shall be conducted within twelve (12) months from the preceding testing.

- b. The following methods and procedures, as applicable, shall be used for testing of emissions, unless another method is approved by the Illinois EPA: (refer to 40 CFR 51, Appendix M and 40 CFR 60, Appendix A for USEPA test methods).

Sample and Velocity Traverses for Stationary Sources	USEPA Method 1
Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts	USEPA Method 1A
Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)	USEPA Method 2
Direct Measurement of Gas Volume through Pipes and Small Ducts	USEPA Method 2A
Determination of Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)	USEPA Method 2C
Measurement of Gas Volume Flow Rates in Small Pipes and Ducts	USEPA Method 2D
Gas Analysis for the Determination of Dry Molecular Weight	USEPA Method 3
Gas Analysis for the Determination of Dry Molecular Weight-Instrumental Method	USEPA Method 3A
Determination of Moisture Content in Stack Gases	USEPA Method 4
Determination of Particulate Matter from Stationary Sources	USEPA Method 5
Determination of Sulfur Dioxide from Stationary Sources	USEPA Method 6
Determination of Sulfur Dioxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)	USEPA Method 6C
Determination of Nitrogen Oxide Emissions from Stationary Sources	USEPA Method 7
Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)	USEPA Method 7E
Visual Determination of the Opacity of Emissions from Stationary Sources	USEPA Method 9
Determination of Carbon Monoxide from Stationary Sources	USEPA Method 10
Determination of Inorganic Lead Emissions from Stationary Sources	USEPA Method 12
Visual Determination of Fugitive Emissions from Material Sources	USEPA Method 22
Determination of Total Gaseous Nonmethane Organic Emissions as Carbon	USEPA Method 25
Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer	USEPA Method 25A*
Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources	USEPA Method 26

Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources-Isokinetic Method	USEPA Method 26A
Determination of Metals Emissions from Stationary Sources	USEPA Method 29**
Determination of PM <sub>10</sub> and PM <sub>2.5</sub> Emissions from Stationary Sources (Constant Sampling Rate Procedure)	USEPA Method 201A***
Dry Impinger Method for Determining Condensable Particulate Emissions from Stationary Sources	USEPA Method 202
Criteria for and Verification of a Permanent or Temporary Total Enclosure	USEPA Method 204, 204 (A-F)****

\* USEPA Method 25A may only be used if outlet VOM concentration is less than 50 ppm as carbon (non-methane).

\*\* USEPA Method 29 may be used as an alternate to USEPA Method 12 for lead emissions.

\*\*\* USEPA Method 201A is not necessary if all the emissions from USEPA Method 5 and 202 are considered PM<sub>10</sub>/PM<sub>2.5</sub>.

\*\*\*\* Except that an alternative as provided in 35 Ill. Adm. Code 218.105(c) (2) may be used.

- c. Within sixty (60) days prior to the actual date of testing, the Permittee shall submit a written test plan to the Illinois EPA, Bureau of Air, Compliance Section Manager. The Illinois EPA may at the discretion of the Compliance Section Manager (or designee) accept a written test plan less than sixty (60) days prior to testing provided it does not interfere with the Illinois EPA's ability to review and comment on the written plan and does not deviate from the applicable state or federal rules and test methods. This plan shall include at a minimum:
- i. The name (or other identification) of the emission unit(s) to be tested and the name and address of the facility at which they are located;
  - ii. The name and address of the independent testing service(s) performing the tests, with the names of the individuals who may be performing sampling and analysis and their experience with similar tests;
  - iii. The specific determinations of emissions and/or performance which are intended to be made, including the site(s) in the ductwork or stack at which sampling will occur;
  - iv. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum emissions, maximum operating rate, minimum control performance, the levels of operating parameters for the emission unit, including associated control equipment, at or within which compliance is intended to be shown, and the means by which the operating parameters will be determined;
  - v. The test method(s) which will be used, with the specific analysis

method, if the method can be used with different analysis methods. The specific sampling, analytical and quality control procedures which will be used, with an identification of the standard methods upon which they are based;

- vi. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification;
  - vii. Any proposed use of an alternative test method, with detailed justification; and
  - viii. The format and content of the Source Test Report.
- d. The Permittee shall provide the Illinois EPA with written notification of testing at least thirty (30) days prior to testing and again five (5) days prior to the testing to enable the Illinois EPA to have an observer present. This notification shall include the name of emission unit(s) to be tested, scheduled date and time, and contact person with telephone number. The Illinois EPA may at the discretion of the Compliance Section Manager (or designee) accept notifications with shorter advance notice provided such notifications will not interfere with the Illinois EPA's ability to observe testing.
- e. If testing is delayed, the Permittee shall promptly notify the Illinois EPA by e-mail or facsimile, at least five (5) days prior to the scheduled date of testing or immediately, if the delay occurs in the five (5) days prior to the scheduled date. This notification shall also include the new date and time for testing, if set, or a separate notification shall be sent with this information when it is set.
- f. The Permittee shall submit the Final Source Test Report(s) for these tests accompanied by a cover letter stating whether or not compliance was shown, to the Illinois EPA, Bureau of Air, Compliance Section Manager, within thirty (30) days after the test results are compiled, but no later than sixty (60) days after the date of testing or sampling. The Final Source Test Report shall include as a minimum:
- i. General information describing the test, including the name and identification of the emission source which was tested, date of testing, names of personnel performing the tests, and Illinois EPA observers, if any;
  - ii. A summary of results;
  - iii. Description of test procedures and method(s), including description and map of emission units and sampling points, sampling train, testing and analysis equipment, and test schedule;
  - iv. Detailed description of test conditions, including:
    - A. List and description of the equipment (including serial numbers or other equipment specific identifiers) tested and process information (i.e., mode(s) of operation, process rate or throughput, fuel or raw material consumption rate,



- and heat content of the fuels);
  - B. Control equipment information (i.e., equipment condition and operating parameters) during testing; and
  - C. A discussion of any preparatory actions taken (i.e., inspections, maintenance and repair).
- v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration. Identification of the applicable regulatory standards and permit conditions that the testing was performed to demonstrate compliance with, a comparison of the test results to the applicable regulatory standards and permit conditions, and a statement whether the test(s) demonstrated compliance with the applicable standards and permit conditions;
  - vi. An explanation of any discrepancies among individual tests, failed tests or anomalous data;
  - vii. The results and discussion of all quality control evaluation data, including a copy of all quality control data; and
  - viii. The applicable operating parameters of the pollution control device(s) during testing (temperature, pressure drop, flow rate, etc.), if any.
- 13a. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(A)(i), an owner or operator: That uses an afterburner or carbon adsorber to comply with any Section of 35 Ill. Adm. Code Part 218 shall use Illinois EPA and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in 35 Ill. Adm. Code 218.105(d)(3). The continuous monitoring equipment must monitor the following parameters:
- For each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.
- b. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(B), an owner or operator: Must install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of  $\pm 1$  percent of the temperature measured in degrees Celsius or  $\pm 0.5^\circ$  C, whichever is greater.
14. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of

the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status regarding the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

15. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed.
- 16a. Pursuant to 35 Ill. Adm. Code 218.991(a)(2), any owner or operator of a VOM emission unit which is subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart PP, QQ, RR or TT and complying using emission capture and control equipment shall comply with the following:

On and after a date consistent with 35 Ill. Adm. Code 218.106, or on and after the initial start-up date, the owner or operator of a subject VOM source shall collect and record all of the following information each day:

  - i. Control device monitoring data.
  - ii. A log of operating time for the capture system, control devices, monitoring equipment and the associated emission source.
  - iii. A maintenance log for the capture system, control devices and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.
- 17a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
  - i. Records addressing use of good operating practices for the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse associated with the Hammermill Shredder System, and the Bin Vent Filter associated with the Lime Storage Silo:
    - A. Records for periodic inspection of the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, DSFF Baghouse, and the Bin

- Vent Filter with date, individual performing the inspection, and nature of inspection; and
- B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair;
- ii. Daily inspections of the enclosure;
  - iii. Daily records of the following items prior to material being fed to the Hammermill Shredder System:
    - A. Temperature for the VRTO;
    - B. Pressure differential across inlet and outlet of the Cyclone, Venturi Scrubber, DSI Scrubber, and DSFF Baghouse;
    - C. Scrubbant flow rate of the Venturi Scrubber;
    - D. PH of the scrubbant of the Venturi Scrubber;
    - E. Sorbent injection rate of the DSI Scrubber;
    - F. Percent LEL or LFL of the Hammermill Shredder System inlet exhaust gas stream;
    - G. Amperage or usage of electrical power by the motor for the fan in the Cyclone, or inlet gas flow rate to the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse, or any other parameter approved by the Illinois EPA; and
    - H. Status of the emergency bypass vent on the VRTO in the control train for the Hammermill Shredder System, i.e., whether this vent is closed or open;
    - I. Leak detection values for the bag leak detection system on the DSFF Baghouse.
  - iv. Natural gas usage for VRTO (mmscf/month and mmscf/year);
  - v. Type (end of life vehicles and other scrap materials, including percentage of each monthly and yearly) and amount of material processed by the Hammermill Shredder System (tons/month and tons/year);
  - vi. Amount of Lime received (Ton/month and Ton/year);
  - vii. Emissions of PM and PM<sub>10</sub> from Lime Storage Silo with Bin Vent Filter (Ton/month and Ton/year);
  - viii. For each event when the emergency bypass vent on the VRTO is open while feed material is being sent to or being processed in the Hammermill Shredder System (a Bypass Event), the Permittee shall maintain records that include: the date, starting time and duration of the event; a description of the event; the monitored

flammability of the gas stream at the start of the event and for the duration of the event; an estimate of the additional VOM emissions attributable to the event, with supporting data and calculations; the likely explanation for the event; if the stoppage of feed to the Hammermill Shredder System when this vent opens is not automated, the time that feed to this system ceased; and any corrective action undertaken; and

- ix. Monthly and annual emissions of CO, NO<sub>x</sub>, and SO<sub>2</sub> from the VRTO, with supporting calculations (tons/month and tons/year).
  - b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
18. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 19a. Pursuant to 35 Ill. Adm. Code 218.991(a)(3), any owner or operator of a VOM emission unit which is subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart PP, QQ, RR or TT and complying by the use of emission capture and control equipment shall comply with the following:
- On and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a subject VOM emission source shall notify the Illinois EPA:
- i. Of any violation of the requirements of 35 Ill. Adm. Code Part 218 Subpart PP, QQ, RR or TT by sending a copy of any record showing a violation to the Illinois EPA within 30 days following the occurrence of the violation;
  - ii. At least 30 calendar days before changing the method of compliance with 35 Ill. Adm. Code Part 218 Subpart PP or TT from the use of capture systems and control devices to the use of complying coatings, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.991(a)(1). Upon changing the method of compliance with 35 Ill. Adm. Code Part 218 Subpart PP or TT from the use of capture systems and control devices to the use of complying coatings, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.991(a).
- 20a. The Permittee shall submit a written notification to the Illinois EPA, Bureau of Air, Compliance Section Manager, of the initial startup of the Hammermill Shredder System after startup of the Cyclone, Venturi

Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse within seven (7) calendar days of the initial startup.

- b. For all Bypass Events, the Permittee shall submit to the Illinois EPA, Bureau of Air, Compliance Section Manager, within seven (7) calendar days of such event, a report detailing the following information for each event when feed to the shredder was interlocked due to the LEL system: % of LEL detected, duration of the event, and VOM emissions with supporting documentation and calculations.
- 21a. After initial startup of the Cyclone, Venturi Scrubber, VRTO, DSI Scrubber, and DSFF Baghouse, the Permittee shall submit a quarterly report containing the following information for each month of the quarter:
- i. Type (end of life vehicles and other scrap materials, including percentage of each monthly and yearly) and amount of material processed by Hammermill Shredder System;
  - ii. PM, PM<sub>10</sub>, VOM, and HAP emissions from the Hammermill Shredder System, with supporting calculations after the testing required by Condition 12(a) of this permit has been completed; and
  - iii. A summary of all bypass events that occur during the quarter and for each event, this summary shall include the date, starting time and duration, time feed to system ceased, description of the event, monitored flammability at start of the event and for the duration of the event, likely explanation for the event, estimated additional VOM emissions with supporting documentation and calculations due to the event, and any corrective action undertaken.
- b. The Permittee shall submit this quarterly report to the Illinois EPA, Bureau of Air, Compliance Section Manager, within thirty (30) calendar days of the end of a calendar quarter.
- 24a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit or otherwise, the Permittee shall submit a report to the Illinois EPA's Bureau of Air Compliance Section in Springfield, Illinois within thirty (30) days after the exceedance or deviation. The report shall identify the date, time, and duration of the exceedance or deviation, a description and likely cause of the exceedance or deviation, the relevant permit and regulatory provisions affected, the emissions impact of the exceedance or deviation with supporting documentation and calculations, a description of the corrective action taken and/or to be taken to mitigate and address the exceedance or deviation, including action taken and/or to be taken to prevent future occurrence of any such exceedance or deviation and a copy of any relevant records and information to resolve the exceedance or deviation.
- b. One (1) copy of required reports and notifications shall be sent to:
    - i. Via mail or overnight delivery:

Illinois Environmental Protection Agency  
Bureau of Air  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

ii. and electronically:

epa.boa.smu@illinois.gov

It should be noted that this permit does not authorize any increase in the production rate or throughput of the existing Hammermill Shredder System.

If you have any questions on this permit, please call German Barria at 217/785-1705.

Handwritten signature of William D. Marr in cursive script.

William D. Marr  
Manager, Permit Section  
Bureau of Air

WDM:GB:tan



STATE OF ILLINOIS  
ENVIRONMENTAL PROTECTION AGENCY  
DIVISION OF AIR POLLUTION CONTROL  
P. O. BOX 19506  
SPRINGFIELD, ILLINOIS 62794-9506

**STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS  
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.
2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act, and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The Permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:
  - a. to enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
  - b. to have access to and copy any records required to be kept under the terms and conditions of this permit,
  - c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
  - d. to obtain and remove samples of any discharge or emission of pollutants, and
  - e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
  - b. does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,
  - c. does not release the Permittee from compliance with the other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,
  - d. does not take into consideration or attest to the structural stability of any units or parts of the project, and



- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
- 6.
- a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
  - b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
- a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
  - b. upon finding that any standard or special conditions have been violated, or
  - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.

