



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: June 21, 2012

RE: Rochester Iron & Metal / 049 - 31685 - 00037

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER.dot12/03/07



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## New Source Construction and Minor Source Operating Permit OFFICE OF AIR QUALITY

**Rochester Iron & Metal  
1552 Wentzel Street  
Rochester, Indiana 46975**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No. M049-31685-00037	
Issued by:  Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 21, 2012 Expiration Date: June 21, 2017

## TABLE OF CONTENTS

<b>A. SOURCE SUMMARY</b> .....	<b>4</b>
A.1    General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]	
A.2    Emission Units and Pollution Control Equipment Summary	
<b>B. GENERAL CONDITIONS</b> .....	<b>6</b>
B.1    Definitions [326 IAC 2-1.1-1]	
B.2    Revocation of Permits [326 IAC 2-1.1-9(5)]	
B.3    Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]	
B.4    Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.5    Term of Conditions [326 IAC 2-1.1-9.5]	
B.6    Enforceability	
B.7    Severability	
B.8    Property Rights or Exclusive Privilege	
B.9    Duty to Provide Information	
B.10   Annual Notification [326 IAC 2-6.1-5(a)(5)]	
B.11   Preventive Maintenance Plan [326 IAC 1-6-3]	
B.12   Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.13   Termination of Right to Operate [326 IAC 2-6.1-7(a)]	
B.14   Permit Renewal [326 IAC 2-6.1-7]	
B.15   Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]	
B.16   Source Modification Requirement	
B.17   Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2] [IC 13-17-3-2][IC 13-30-3-1]	
B.18   Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]	
B.19   Annual Fee Payment [326 IAC 2-1.1-7]	
B.20   Credible Evidence [326 IAC 1-1-6]	
<b>C. SOURCE OPERATION CONDITIONS</b> .....	<b>11</b>
<b>Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]</b>	
C.1    Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2    Permit Revocation [326 IAC 2-1.1-9]	
C.3    Opacity [326 IAC 5-1]	
C.4    Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5    Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6    Fugitive Dust Emissions [326 IAC 6-4]	
C.7    Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
<b>Testing Requirements [326 IAC 2-6.1-5(a)(2)]</b>	
C.8    Performance Testing [326 IAC 3-6]	
<b>Compliance Requirements [326 IAC 2-1.1-11]</b>	
C.9    Compliance Requirements [326 IAC 2-1.1-11]	
<b>Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]</b>	
C.10   Compliance Monitoring [326 IAC 2-1.1-11]	
C.11   Instrument Specifications [326 IAC 2-1.1-11]	
<b>Corrective Actions and Response Steps</b>	
C.12   Response to Excursions or Exceedances	
C.13   Actions Related to Noncompliance Demonstrated by a Stack Test	

**Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]**

- C.14 Malfunctions Report [326 IAC 1-6-2]
- C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]
- C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2]  
[IC 13-14-1-13]

**D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 16**

**Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]**

- D.1.1 Best Available Control Technology (BACT) Avoidance Limit [326 IAC 8-2-12]
- D.1.2 Particulate Emission Limitations [326 IAC 6-3-2]
- D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

**Compliance Determination Requirements**

- D.1.4 Volatile Organic Compounds
- D.1.5 Particulate Control

**Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]**

- D.1.6 Record Keeping Requirements
- D.1.7 Reporting Requirements

Annual Notification ..... 19  
MSOP Quarterly Report..... 20  
Malfunction Report ..... 21  
Affidavit of Construction ..... 23

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary metal recycling operation.

Source Address:	1552 Wentzel Street, Rochester, Indiana 46975
General Source Phone Number:	(574) 223-4300
SIC Code:	5093 (Scrap and Waste Materials)
County Location:	Fulton
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary

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This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) electric vehicle/metal shredder, identified as EU-01, approved for construction in 2012, with a maximum throughput capacity of 90 tons/hr, using an integral water spray injection system as fire/explosion suppression and particulate control, and exhausting to the ambient atmosphere.
- (b) One (1) magnetic separator, identified as EU-02, approved for construction in 2012, with a maximum throughput capacity of 90 tons per hour, utilizing no control devices, and exhausting to the ambient atmosphere.
- (c) One (1) non-ferrous trommel, identified as EU-03, approved for construction in 2012, with a maximum throughput capacity of 22.5 tons per hour, utilizing no control devices, and exhausting to the ambient atmosphere.
- (d) One (1) ferrous metal conveying system, identified as EU-04, approved for construction in 2012, with a maximum throughput capacity of 67.5 tons per hour, utilizing no control devices, exhausting to the ambient atmosphere, and consisting of:
  - (1) One (1) dry conveyor to the shredder;
  - (2) One (1) wet conveyor from the shredder to magnetic separator;
  - (3) One (1) wet conveyor from the magnetic separator to the non-ferrous stockpile;
  - (4) Four (4) ferrous material process conveyors; and
  - (5) Eight (8) non-ferrous material process conveyors.
- (e) One (1) Z-box/cyclone clarifier, identified as EU-05, approved for construction in 2012, with a maximum throughput capacity of 67.5 tons/hr. The Z-box is used to separate heavy materials from light materials using a counter-flow forced air stream cascade system, equipped with a

cyclone particle collector with the cyclone exhaust recirculated internally within the Z-box separator and reused for the forced air stream cascade system. To minimize leakage of air from the Z-box separator, the unit is equipped with hanging curtains at the material inlet and outlet, and the cyclone particle collection hopper is equipped with a rotary air lock mechanism.

- (f) Scrap metal and fluff storage piles, loading and unloading of scrap metal and fluff storage piles, and loading of trucks with processed scrap metal and fluff.
- (g) Paved and unpaved roadways and parking lots with public access.

## SECTION B GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-1.1-1]

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

### B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

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This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

### B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

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- (a) This permit, M049-31685-00037, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

### B.5 Term of Conditions [326 IAC 2-1.1-9.5]

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Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### B.6 Enforceability

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Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

**B.7 Severability**

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

**B.8 Property Rights or Exclusive Privilege**

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This permit does not convey any property rights of any sort or any exclusive privilege.

**B.9 Duty to Provide Information**

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- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]**

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- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

**B.11 Preventive Maintenance Plan [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The Permittee shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M049-31685-00037 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.13 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.14 Permit Renewal [326 IAC 2-6.1-7]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:

- (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and
- (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.15 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]**

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

**B.16 Source Modification Requirement**

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

**B.17 Inspection and Entry**

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[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air

pollution control equipment), practices, or operations regulated or required under this permit;

- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.18 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

**B.19 Annual Fee Payment [326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

**B.20 Credible Evidence [326 IAC 1-1-6]**

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For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

**C.6 Fugitive Dust Emissions [326 IAC 6-4]**

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The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

**C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

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The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

**Testing Requirements [326 IAC 2-6.1-5(a)(2)]**

**C.8 Performance Testing [326 IAC 3-6]**

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(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

**Compliance Requirements [326 IAC 2-1.1-11]**

**C.9 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

**Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]**

**C.10 Compliance Monitoring [326 IAC 2-1.1-11]**

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

**C.11 Instrument Specifications [326 IAC 2-1.1-11]**

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(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

### **Corrective Actions and Response Steps**

#### **C.12 Response to Excursions or Exceedances**

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Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

#### **C.13 Actions Related to Noncompliance Demonstrated by a Stack Test**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

### **Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]**

#### **C.14 Malfunctions Report [326 IAC 1-6-2]**

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

#### **C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]**

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

#### **C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]**

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or

certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) electric vehicle/metal shredder, identified as EU-01, approved for construction in 2012, with a maximum throughput capacity of 90 tons/hr, using an integral water spray injection system as fire/explosion suppression and particulate control, and exhausting to the ambient atmosphere.
- (b) One (1) magnetic separator, identified as EU-02, approved for construction in 2012, with a maximum throughput capacity of 90 tons per hour, utilizing no control devices, and exhausting to the ambient atmosphere.
- (c) One (1) non-ferrous trommel, identified as EU-03, approved for construction in 2012, with a maximum throughput capacity of 22.5 tons per hour, utilizing no control devices, and exhausting to the ambient atmosphere.
- (d) One (1) ferrous metal conveying system, identified as EU-04, approved for construction in 2012, with a maximum throughput capacity of 67.5 tons per hour, utilizing no control devices, exhausting to the ambient atmosphere, and consisting of:
  - (1) One (1) dry conveyor to the shredder;
  - (2) One (1) wet conveyor from the shredder to magnetic separator;
  - (3) One (1) wet conveyor from the magnetic separator to the non-ferrous stockpile;
  - (4) Four (4) ferrous material process conveyors; and
  - (5) Eight (8) non-ferrous material process conveyors.
- (e) One (1) Z-box/cyclone clarifier, identified as EU-05, approved for construction in 2012, with a maximum throughput capacity of 67.5 tons/hr. The Z-box is used to separate heavy materials from light materials using a counter-flow forced air stream cascade system, equipped with a cyclone particle collector with the cyclone exhaust recirculated internally within the Z-box separator and reused for the forced air stream cascade system. To minimize leakage of air from the Z-box separator, the unit is equipped with hanging curtains at the material inlet and outlet, and the cyclone particle collection hopper is equipped with a rotary air lock mechanism.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

#### D.1.1 Best Available Control Technology (BACT) Avoidance Limit - VOC [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

- (a) The VOC emissions from the vehicle/metal shredder (EU-01) shall not exceed 24.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month
- (b) The Permittee shall drain and remove (to the extent possible) all fluids from vehicles, appliances, industrial machinery, and other metal scrap received by the Permittee prior to

shredding; or the Permittee shall document that inspections have been performed to confirm the non-existence of fluids. Fluids shall include, but are not limited to, gasoline, motor oil, antifreeze, transmission oil, brake oil, power steering fluid, hydraulic fluid, and differential fluid.

Compliance with these limits shall limit the potential to emit of VOC from the vehicle/metal shredder (EU-01) to less than twenty five (25) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) not applicable.

**D.1.2 Particulate Emission Limitations [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the emission units shall not exceed the pound per hour limitations identified in the table below:

Emission Unit ID	Emission Unit Description (No. of units)	Maximum Throughput Rate (tons/hr)	326 IAC 6-3-2 Total Allowable Particulate Emission Rate (lbs/hr)
EU-01	Vehicle/Metal Shredder (1)	90	50.23
EU-05	Z-box/Cyclone Clarifier (1)	67.5	47.42

The pound per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

**D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]**

A Preventive Maintenance Plan is required for the vehicle/metal shredder (EU-01) and the integral water spray injection system. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.1.4 Volatile Organic Compounds (VOCs)**

In order to comply with Condition D.1.1(a), the Permittee shall determine VOC emissions from the vehicle/metal shredder (EU-01) according to the following formula:

$$VOC = \frac{V(EF_V) + M(EF_M)}{2,000 \text{ lbs/ton}}$$

where:

- VOC = tons of VOC emissions per 12-month consecutive period
- V = tons of vehicles/automobiles processed per 12-month consecutive period
- M = tons of metal (non-vehicle) processed per 12-month consecutive period
- EF<sub>V</sub> = 0.25 lb/ton emission factor for vehicle/automobile emissions
- EF<sub>M</sub> = 0.14 lb/ton emission factor for metal (non-vehicle) emissions

**D.1.5 Particulate Control**

In order to ensure compliance with Condition D.1.2, the integral water spray injection system shall be in operation and control emissions from the vehicle/metal shredder (EU-01) at all times that the vehicle/metal shredder is in operation.

## **Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]**

### **D.1.6 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.1.1 and D.1.4, the Permittee shall maintain records of:
- (1) The material throughput of vehicles/automobiles to EU-01 each month and each compliance period;
  - (2) The material throughput of metal (non-vehicle) to EU-01 each month and each compliance period;
  - (3) The VOC emissions calculated using the equation in Condition D.1.4 each month and each compliance period; and
  - (4) Inspections to confirm that all fluids were drained and removed (to the extent possible) from vehicles, appliances, industrial machinery, and other metal scrap received by the Permittee prior to shredding.
- (b) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

### **D.1.7 Reporting Requirements**

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A quarterly summary of the information to document the compliance status with Conditions D.1.1(a) and D.1.4 shall be submitted using the reporting form located at the end of this permit, or its equivalent, no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	Rochester Iron & Metal
<b>Address:</b>	1552 Wentzel Street
<b>City:</b>	Rochester, Indiana 46975
<b>Phone #:</b>	(574) 223-4300
<b>MSOP #:</b>	M049-31685-00037

I hereby certify that Rochester Iron & Metal is :

still in operation.

no longer in operation.

I hereby certify that Rochester Iron & Metal is :

in compliance with the requirements of MSOP M049-31685-00037.

not in compliance with the requirements of MSOP M049-31685-00037.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE AND ENFORCEMENT BRANCH**

**MSOP Quarterly Report**

Source Name: Rochester Iron & Metal  
 Source Address: 1552 Wentzel Street, Rochester, IN 46975  
 MSOP Permit No.: M049-31685-00037  
 Facility: Vehicle/Metal Shredder (EU-01)  
 Parameter: VOC Emissions  
 Limit: VOC emissions from the vehicle/metal shredder shall not exceed 24.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The Permittee shall determine VOC emissions from the vehicle/metal shredder (EU-01) according to the following formula:

$$\text{VOC} = \frac{V(\text{EF}_V) + M(\text{EF}_M)}{2,000 \text{ lbs/ton}}$$

where:

- VOC = tons of VOC emissions per 12-month consecutive period
- V = tons of vehicles/automobiles processed per 12-month consecutive period
- M = tons of metal (non-vehicle) processed per 12-month consecutive period
- EF<sub>V</sub> = 0.25 lb/ton emission factor for vehicle/automobile emissions
- EF<sub>M</sub> = 0.14 lb/ton emission factor for metal (non-vehicle) emissions

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Emissions (tons)	VOC Emissions (tons)	VOC Emissions (tons)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

**MALFUNCTION REPORT**  
**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**COMPLIANCE AND ENFORCEMENT BRANCH**  
**FAX NUMBER: (317) 233-6865**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?\_\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ?\_\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES?\_\_\_\_\_, 25 TONS/YEAR VOC ?\_\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ?\_\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ?\_\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?\_\_\_\_\_, 25 TONS/YEAR FLUORIDES ?\_\_\_\_\_, 100 TONS/YEAR CARBON MONOXIDE ?\_\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?\_\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?\_\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?\_\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ?    Y        N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y        N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM / PM  
ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_  
ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:  
CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_  
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_  
INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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Mail to: Permit Administration and Support Section  
Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Rochester Iron & Metal  
1552 Wentzel Street  
Rochester, Indiana 46975

Affidavit of Construction

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of \_\_\_\_\_  
(Company Name)
4. I hereby certify that Rochester Iron & Metal 1552 Wentzel Street, Rochester, Indiana 46975, completed construction of the metal recycling operation on \_\_\_\_\_ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on March 29, 2012 and as permitted pursuant to New Source Construction Permit and Minor Source Operating Permit No. M049-31685-00037, Plant ID No. 049-00037 issued on \_\_\_\_\_.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature \_\_\_\_\_  
Date \_\_\_\_\_

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of Indiana  
on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_. My Commission expires: \_\_\_\_\_.

Signature \_\_\_\_\_  
Name \_\_\_\_\_ (typed or printed)

**Indiana Department of Environmental Management  
Office of Air Quality**

Technical Support Document (TSD) for a New Source Construction and  
Minor Source Operating Permit (MSOP)

**Source Description and Location**

**Source Name:** Rochester Iron & Metal  
**Source Location:** 1552 Wentzel Street, Rochester, IN 46975  
**County:** Fulton County  
**SIC Code:** 5093 (Scrap and Waste Materials)  
**Operation Permit No.:** M049-31685-00037  
**Permit Reviewer:** Jason R. Krawczyk

On March 29, 2012 the Office of Air Quality (OAQ) received an application from Rochester Iron & Metal related to the construction and operation of a new stationary metal recycling operation.

**Existing Approvals**

There have been no previous approvals issued to this source.

**County Attainment Status**

The source is located in Fulton County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.

<sup>1</sup>Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.  
 Unclassifiable or attainment effective April 5, 2005, for PM<sub>2.5</sub>.

- (a) **Ozone Standards**  
 Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Fulton County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
  
- (b) **PM<sub>2.5</sub>**  
 Fulton County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM<sub>2.5</sub> significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

- (c) Other Criteria Pollutants  
Fulton County has been classified as attainment or unclassifiable in Indiana for all regulated criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

#### **Fugitive Emissions**

- (a) The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.
- (b) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD and/or Part 70 Permit applicability.

#### **Background and Description of New Source Construction**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Rochester Iron & Metal on March 29, 2012, relating to the construction and operation of a new stationary metal recycling operation.

The following is a list of the new emission units and pollution control devices:

- (a) One (1) electric vehicle/metal shredder, identified as EU-01, approved for construction in 2012, with a maximum throughput capacity of 90 tons/hr, using an integral water spray injection system as fire/explosion suppression and particulate control, and exhausting to the ambient atmosphere.
- (b) One (1) magnetic separator, identified as EU-02, approved for construction in 2012, with a maximum throughput capacity of 90 tons per hour, utilizing no control devices, and exhausting to the ambient atmosphere.
- (c) One (1) non-ferrous trommel, identified as EU-03, approved for construction in 2012, with a maximum throughput capacity of 22.5 tons per hour, utilizing no control devices, and exhausting to the ambient atmosphere.
- (d) One (1) ferrous metal conveying system, identified as EU-04, approved for construction in 2012, with a maximum throughput capacity of 67.5 tons per hour, utilizing no control devices, exhausting to the ambient atmosphere, and consisting of:
- (1) One (1) dry conveyor to the shredder;
  - (2) One (1) wet conveyor from the shredder to magnetic separator;
  - (3) One (1) wet conveyor from the magnetic separator to the non-ferrous stockpile;
  - (4) Four (4) ferrous material process conveyors; and
  - (5) Eight (8) non-ferrous material process conveyors.
- (e) One (1) Z-box/cyclone clarifier, identified as EU-05, approved for construction in 2012, with a maximum throughput capacity of 67.5 tons/hr. The Z-box is used to separate heavy materials from light materials using a counter-flow forced air stream cascade system, equipped with a cyclone particle collector with the cyclone exhaust recirculated internally within the Z-box separator and reused for the forced air stream cascade system. To minimize leakage of air from the Z-box separator, the unit is equipped with hanging curtains at the material inlet and outlet, and the cyclone particle collection hopper is equipped with a rotary air lock mechanism.

- (f) Scrap metal and fluff storage piles, loading and unloading of scrap metal and fluff storage piles, and loading of trucks with processed scrap metal and fluff.
- (g) Paved and unpaved roadways and parking lots with public access.

**“Integral Part of the Process” Determination**

The applicant has submitted the following information to justify why the water spray injection system should be considered an integral part of the vehicle/metal shredder:

- (a) The potential for elevated temperatures in the shredder presents two operational and safety challenges. First, the equipment can malfunction because of the stress of the high temperature on the metal equipment. Second, the elevated temperatures and the presence of flammable materials such as non-metallic car parts like dashboards, upholstery, and carpeting create a risk of fire and/or explosion. To minimize both these risks, water is injected into the shredder to reduce operating temperature and to prevent formation of explosive or flammable dusts. Although the water injection has the effect of reducing air pollutant emissions, this is a secondary role of the system. The primary role of the water injection is to maintain safe operating conditions so the equipment can run without risk of malfunction of fire/explosion. The shredder would not be able to operate normally without the water injection. As a result, the water injection system should be considered an inherent part of the process and not air pollution control equipment as defined in 326 IAC 1-2-3.

IDEM, OAQ has evaluated the information submitted and agrees that the water spray injection system should be considered an integral part of the vehicle/metal shredding process. This determination is based on the fact that the primary purpose of the water spray injection system is to prevent equipment malfunctions, fires, and explosions. Therefore, the permitting level will be determined using the potential to emit after the water spray injection system. Operating conditions in the proposed permit will specify that the water spray injection system shall operate at all times when the vehicle/metal shredder is in operation.

**Enforcement Issues**

There are no pending enforcement actions related to this source.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

**Permit Level Determination – MSOP**

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	Greater than 25, Less than 100
PM10 <sup>(1)</sup>	Greater than 25, Less than 100
PM2.5	Less than 25
SO <sub>2</sub>	Less than 25
NO <sub>x</sub>	Less than 25
VOC	Greater than 25, Less than 100
CO	Less than 25
GHGs as CO <sub>2</sub> e	Less than 100,000

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Single HAPs	Less than 10
Combined HAPs	Less than 25

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of PM, PM10, and VOC are each less than one hundred (100) tons per year, but greater than or equal to twenty-five (25) tons per year. The PTE of all other regulated criteria pollutants are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A Minor Source Operating Permit (MSOP) will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

**PTE of the Entire Source After Issuance of the MSOP**

The table below summarizes the potential to emit of the entire source after issuance of this MSOP, reflecting all limits, of the emission units.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Vehicle/Metal Shredder (EU-01)	7.17	7.17	7.17	-	-	24.90	-	-	3.26	0.83 Toluene
Magnetic Separator (EU-02)	0.02	0.01	Negl.	-	-	-	-	-	-	-
Non-ferrous Trommel (EU-03)	0.10	0.03	Negl.	-	-	-	-	-	-	-
Conveyors (EU-04)	1.17	0.62	0.60	-	-	-	-	-	-	-
Z-Box /Cyclone Clarifier (EU-05)	2.44	2.44	2.44	-	-	-	-	-	-	-
<b>Total PTE (Non-Fugitive)</b>	<b>11.43</b>	<b>10.27</b>	<b>10.21</b>	-	-	<b>24.90</b>	-	-	<b>3.26</b>	<b>0.83 Toluene</b>
Drop Operations (Fugitive)	0.39	0.19	0.03	-	-	-	-	-	-	-
Paved Roadways (Fugitive)	7.55	1.51	0.37	-	-	-	-	-	-	-
Unpaved Roadways (Fugitive)	15.73	4.01	0.40	-	-	-	-	-	-	-
<b>Total PTE (Fugitive)</b>	<b>23.67</b>	<b>5.70</b>	<b>0.80</b>	-	-	-	-	-	-	-
<b>Total PTE of Entire Source (Non-Fugitive + Fugitive)</b>	<b>35.11</b>	<b>15.97</b>	<b>11.01</b>	-	-	<b>24.90</b>	-	-	<b>3.26</b>	<b>0.83 Toluene</b>
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

Negl. = negligible

\*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

\*\*The 100,000 CO<sub>2</sub>e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

In order to render the requirements of 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

- (a) VOC emissions from the vehicle/metal shredder (EU-01) shall not exceed 24.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The Permittee shall drain and remove (to the extent possible) all fluids from vehicles, appliances, industrial machinery, and other metal scrap received by the Permittee prior to shredding; or the Permittee shall document that inspections have been performed to confirm the non-existence of fluids. Fluids shall include, but are not limited to, gasoline, motor oil, antifreeze, transmission oil, brake oil, power steering fluid, hydraulic fluid, and differential fluid.

Compliance with these limits shall limit the potential to emit VOC from the vehicle/metal shredder to less than twenty five (25) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) not applicable.

<b>Federal Rule Applicability Determination</b>
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New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard (NSPS) for Metallic Mineral Processing Plants, 40 CFR 60, Subpart LL (326 IAC 12), are not included in the permit since the source does not meet the definition of a metallic mineral processing plant, as defined in 40 CFR 60.381. The source operates a metal recycling facility and does not produce metallic mineral concentrates from ore.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Primary Nonferrous Metals Area Sources - Zinc, Cadmium, and Beryllium, 40 CFR 63, Subpart GGGGGG, are not included in the permit, since this source is not a primary zinc production facility or primary beryllium production facility. The source is a metal recycling facility.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Secondary Nonferrous Metals Processing Area Sources, 40 CFR 63, Subpart TTTTTT, are not included in the permit, since the source does not engage in secondary nonferrous metals processing as defined in 40 CFR 63.11472.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63, Subpart XXXXXX, are not included in the permit since the source is not primarily engaged in operations which are classified in one of the nine source categories listed in 40 CFR 63.11514(a)(1) through (9).
- (f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

### State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))  
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than 100,000 tons of CO<sub>2</sub>e per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (d) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
The source is not subject to the requirements of 326 IAC 6-5, because potential fugitive particulate emissions are less than 25 tons per year.
- (h) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.
- (i) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

Vehicle/Metal Shredding (EU-01)

- (j) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the vehicle/metal shredder (EU-01) shall not exceed 50.23 pounds per hour when operating at a process weight rate of 90 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

The integral water spray injection system shall be in operation at all times the vehicle/metal shredder is in operation.

- (k) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The unlimited VOC potential emissions from the vehicle/metal shredder (EU-01) are greater than twenty-five (25) tons per year. However, the source shall limit the VOC potential emissions from the vehicle/metal shredder to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

In order to render the requirements of 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

- (1) VOC emissions from the vehicle/metal shredder (EU-01) shall not exceed 24.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) The Permittee shall drain and remove (to the extent possible) all fluids from vehicles, appliances, industrial machinery, and other metal scrap received by the Permittee prior to shredding; or the Permittee shall document that inspections have been performed to confirm the non-existence of fluids. Fluids shall include, but are not limited to, gasoline, motor oil, antifreeze, transmission oil, brake oil, power steering fluid, hydraulic fluid, and differential fluid.

Compliance with these limits shall limit the potential to emit VOC from the vehicle/metal shredder to less than twenty five (25) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) not applicable.

Magnetic Separator (EU-02)

- (l) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-1(b)(14), the Magnetic Separator (EU-02) is not subject to the requirements of 326 IAC 6-3-2 since it has potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Non-ferrous Trommel (EU-03)

- (m) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-1(b)(14), the Non-ferrous Trommel (EU-03) is not subject to the requirements of 326 IAC 6-3-2 since it has potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Conveyor System (EU-04)

- (n) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-1(b)(14), each of the conveyors, comprising the Conveyor System (EU-04), is not subject to the requirements of 326 IAC 6-3-2 since they each have potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Z-Box / Cyclone (EU-05)

- (o) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the Z-Box/cyclone clarifier (EU-05) shall not exceed 47.42 pounds per hour when operating at a process weight rate of 67.5 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Based on calculations, no control device is needed to comply with this limit.

**Compliance Determination, Monitoring and Testing Requirements**

- (a) The compliance determination and/or monitoring requirements applicable to this source are as follows:
- (1) The Permittee shall determine VOC emissions from the vehicle/metal shredder (EU-01) according to the following formula:
- $$\text{VOC} = \frac{V(\text{EF}_V) + M(\text{EF}_M)}{2,000 \text{ lbs/ton}}$$
- where:
- VOC = tons of VOC emissions per 12-month consecutive period  
V = tons of vehicles/automobiles processed per 12-month consecutive period  
M = tons of metal (non-vehicle) processed per 12-month consecutive period  
EF<sub>V</sub> = 0.25 lb/ton emission factor for vehicle/automobile emissions  
EF<sub>M</sub> = 0.14 lb/ton emission factor for metal (non-vehicle) emissions
- (2) The integral water injection system shall be in operation and control emissions from the vehicle/metal shredder at all times that the vehicle/metal shredder is in operation.
- (b) There are no testing requirements applicable to this source.

**Conclusion and Recommendation**

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on March 29, 2012.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction and MSOP No. M049-31685-00037. The staff recommends to the Commissioner that this New Source Construction and MSOP be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.in.gov/idem](http://www.in.gov/idem)



**Appendix A: Emissions Calculations**  
**Unlimited Vehicle/Metal Shredder Emissions**

Company Name: Rochester Iron & Metal  
 Source Address: 1552 Wentzel Street, Rochester, IN 46975  
 Permit Number: M049-31685-00037  
 Plt ID: 049-00037  
 Reviewer: Jason R. Krawczyk  
 Date: April 3, 2012

**Particulate Emissions**

Process Description	Maximum Capacity (tons/hr)	Particulate Emission Factor (lbs/ton)	PTE of PM/PM10/PM2.5	
			(lb/hr)	(tons/yr)
Vehicle/Metal Shredder	90	0.0403	3.627	<b>15.89</b>

**Note:**

Material is wetted with an integral water spray injection system to minimize explosion and fire hazards.  
 The emission factor for the shredder is from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook" Appendix D, Table D-10.E for dry milling of an 80% Auto & 20% Scrap throughput mixture.  
 Assumed PM = PM10 = PM2.5

**Methodology:**

PTE of PM/PM10 (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)  
 PTE of PM/PM10 (tons/yr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton) \* 8760 hrs / 2000 lbs.

**VOC Emissions**

Process Description	Maximum Capacity (tons/hr)	VOC Emission Factor Auto (lbs/ton)	VOC Emission Factor Sheet (lbs/ton)	Auto PTE of VOC		Sheet PTE of VOC	
				(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Vehicle/Metal Shredder	90	0.25	0.14	22.50	<b>98.55</b>	12.60	55.19

**Note:**

VOC emission factor is from the April 2010 Jackson, Michigan shredder VOC study conducted by OmniSource Corporation facility for a similar unit.  
 The PTE is based on the worst-case assumption that 100% auto scrap is being processed.

**Methodology:**

PTE of VOC (lb/hr) = Maximum Capacity (tons/hr) \* VOC Emission Factor (lbs/ton)  
 PTE of VOC (ton/yr) = Maximum Capacity (tons/hr) \* VOC Emission Factor (lbs/ton) \* 8,760 hrs / 2,000 lbs.

HAP Emissions (Auto Shredding)		Organic HAPs												Metal HAPs			Polychlorinated Biphenyls
Process Description	Maximum Capacity (tons/hr)	Hexane	Benzene	MIBK	Trichloroethene	Toluene	Ethylbenzene	m,p-Xylenes	Styrene	o-Xylene	Cumene	Naphthalene	Isooctane	Cadmium	Chromium	Lead	PCB's
		(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)
Vehicle/Metal Shredder	90	0.0037	0.0019	0.0002	0.0005	0.0083	0.0019	0.0068	0.0009	0.0025	0.0002	0.0002	0.00543	1.16E-06	1.28E-06	7.89E-06	0.0000873
		Hexane	Benzene	MIBK	Trichloroethene	Toluene	Ethylbenzene	m,p-Xylenes	Styrene	o-Xylene	Cumene	Naphthalene	Isooctane	Cadmium	Chromium	Lead	PCB's
		(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
		<b>1.47</b>	<b>0.76</b>	<b>0.10</b>	<b>0.21</b>	<b>3.29</b>	<b>0.76</b>	<b>2.68</b>	<b>0.34</b>	<b>0.99</b>	<b>0.08</b>	<b>0.06</b>	<b>2.14</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>
<b>Combined HAPs:</b>																	<b>12.91</b>

HAP Emissions (Sheet Shredding)		Organic HAPs																	
Process Description	Maximum Capacity (tons/hr)	Chloromethane	1,3 Butadiene	Acrolein	Dichloroethene	Hexane	Benzene	Trichloroethene	Methyl Methacrylate	MIBK	Toluene	Ethylbenzene	m,p-Xylenes	Styrene	o-Xylene	Cumene	1,4 Dichlorobenzene	Naphthalene	
		(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)	(lbs/ton)
Vehicle/Metal Shredder	90	0.0002	0.00003	0.00003	0.00006	0.00077	0.00025	0.00004	0.00007	0.00054	0.00241	0.00075	0.00261	0.00039	0.00103	0.00010	0.00004	0.00020	
		Chloromethane	1,3 Butadiene	Acrolein	Dichloroethene	Hexane	Benzene	Trichloroethene	Methyl Methacrylate	MIBK	Toluene	Ethylbenzene	m,p-Xylenes	Styrene	o-Xylene	Cumene	1,4 Dichlorobenzene	Naphthalene	
		(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	
		0.01	0.01	0.01	0.02	0.30	0.10	0.02	0.03	0.21	0.95	0.29	1.03	0.15	0.41	0.04	0.02	0.08	
<b>Combined HAPs:</b>																			<b>3.68</b>

**Note:**

Organic HAP Emission Factors determined from the April 2010 TO-15 stack test performed at the Jackson, Michigan OmniSource Corporation facility. Emission Factors are averages of three test runs.  
 The Organic HAP PTE is based on the worst-case assumption that 100% auto scrap is being processed.  
 Metal HAP and PCB emission factors from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook" Appendix D, Table D-11.F

**Methodology:**

HAP Emissions (tons/yr) = Maximum Capacity (tons/hr) \* HAP (lbs/ton) \* 8,760 hrs / 2000 lbs

**Appendix A: Emissions Calculations  
Limited Vehicle/Metal Shredder Emissions**

**Company Name:** Rochester Iron & Metal  
**Source Address:** 1552 Wentzel Street, Rochester, IN 46975  
**Permit Number:** M049-31685-00037  
**Plt ID:** 049-00037  
**Reviewer:** Jason R. Krawczyk  
**Date:** April 3, 2012

**Particulate Emissions**

Process Description	Maximum Allowable Scrap Throughput to	Particulate Emission Factor	PTE of PM/PM10/PM2.5	
	(tons/yr)		(lb/ton)	(lb/hr)
Vehicle/Metal Shredder	355714	0.0403	8.06	7.17

**Note:**  
 Material is wetted with an integral water spray injection system to minimize explosion and fire hazards.  
 The emission factor for the shredder is from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook" Appendix D, Table D-10.E for dry milling of an 80% Auto & 20% Scrap throughput mixture.  
 Maximum capacity = 90 tons/hr.  
 Assumed PM = PM10 = PM2.5

**Methodology:**

PTE of PM/PM10 (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)  
 PTE of PM/PM10 (tons/yr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton) \* 8760 hrs / 2000 lbs.

**VOC Emissions**

Process Description	VOC Emission Factor		Maximum Allowable Auto Throughput to Avoid BACT	Auto PTE of VOC		Maximum Allowable Scrap Throughput to Avoid BACT	Sheet / Scrap PTE of VOC	
	Auto	Sheet / Scrap		(lb/hr)	(ton/yr)		(lb/hr)	(ton/yr)
Vehicle/Metal Shredder	0.25	0.14	199200	22.50	24.90	355714	12.60	24.90

**Note:**  
 VOC emission factor is from the April 2010 Jackson, Michigan shredder VOC study conducted by OmniSource Corporation facility for a similar unit.  
 The PTE is based on the worst-case assumption that 100% auto scrap is being processed.  
 In order to avoid 326 IAC 8-1-6 (BACT), the source as agreed to limit VOC emissions to less than 24.9 tons per (12) twelve consecutive month period.  
 Maximum capacity = 90 tons/hr.

**Methodology:**

PTE of VOC (lb/hr) = Maximum Capacity (tons/hr) \* VOC Emission Factor (lbs/ton)  
 PTE of VOC (ton/yr) = Maximum Allowable Throughput (tons/hr) \* VOC Emission Factor (lbs/ton) \* 8,760 hrs / 2,000 lbs.

HAP Emissions (Auto Shredding)		Organic HAPs											Metal HAPs			Polychlorinated Biphenyls	
Process Description	Maximum Allowable Throughput to	Hexane	Benzene	MIBK	Trichloroethylene	Toluene	Ethylbenzene	m,p-Xylenes	Styrene	o-Xylene	Cumene	Napthalene	Isooctane	Cadmium	Chromium	Lead	PCB's
Vehicle/Metal Shredder	199200	0.0037	0.0019	0.0002	0.0005	0.0083	0.0019	0.0068	0.0009	0.0025	0.0002	0.0002	0.00543	#####	#####	#####	0.00008730
		(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
		0.37	0.19	0.02	0.05	0.83	0.19	0.68	0.08	0.25	0.02	0.02	0.54	0.00	0.00	0.00	0.01
<b>Combined HAPS:</b>																	<b>3.26</b>

HAP Emissions (Sheet/Scrap Shredding)		Organic HAPs														1,4	Napthalene		
Process Description	Maximum Allowable Throughput to	Chloromethane	1,3 Butadiene	Acrolein	Dichloroethene	Hexane	Benzene	Trichloroethylene	Methyl Methacrylate	MIBK	Toluene	Ethylbenzene	m,p-Xylenes	Styrene	o-Xylene	Cumene	Dichlorobenzene	Napthalene	
Vehicle/Metal Shredder	355714	0.00002	0.00003	0.00003	0.00006	0.00077	0.00025	0.00004	0.00007	0.00054	0.00241	0.00075	0.00261	0.00039	0.00103	0.00010	0.00004	0.00020	
		(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	
		2.93E-03	4.89E-03	5.87E-03	1.09E-02	0.14	4.38E-02	6.86E-03	1.19E-02	0.10	0.43	0.13	0.46	0.07	0.18	1.75E-02	6.85E-03	3.53E-02	
<b>Combined HAPS:</b>																			<b>1.66</b>

**Note:**  
 Organic HAP Emission Factors determined from the April 2010 TO-15 stack test performed at the Jackson, Michigan OmniSource Corporation facility. Emission Factors are averages of three test runs.  
 The Organic HAP PTE is based on the worst-case assumption that 100% auto scrap is being processed.  
 Metal HAP and PCB emission factors from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook" Appendix D, Table D-11.F

**Methodology:**

HAP Emissions (tons/yr) = Maximum Allowable Throughput to Avoid BACT (tons/yr) \* HAP (lbs/ton) / 2000 lbs

**Appendix A: Emissions Calculations  
Magnetic Separator Particulate Emissions**

**Company Name:** Rochester Iron & Metal  
**Source Address:** 1552 Wentzel Street, Rochester, IN 46975  
**Permit Number:** M049-31685-00037  
**Pit ID:** 049-00037  
**Reviewer:** Jason R. Krawczyk  
**Date:** April 3, 2012

**Unlimited Particulate Matter Emissions**

Process Description	Number of Emission Points	Maximum Capacity (tons/hr)	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	Unlimited PTE of PM		Unlimited PTE of PM10		Unlimited PTE of PM2.5	
						(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Magnetic Separator - wet*	1	90	1.40E-04	4.60E-05	1.30E-05	0.01	0.06	4.14E-03	0.02	1.17E-03	0.01
<b>Potential Emissions:</b>						<b>0.06</b>		<b>0.02</b>		<b>0.01</b>	

**Limited Particulate Matter Emissions**

Process Description	Number of Emission Points	Maximum Allowable Throughput to Avoid BACT**	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	Limited PTE of PM		Limited PTE of PM10		Limited PTE of PM2.5	
						(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Magnetic Separator - wet*	1	355/14	1.40E-04	4.60E-05	1.30E-05	0.01	0.02	4.14E-03	0.01	1.17E-03	0.00
<b>Potential Emissions:</b>						<b>0.02</b>		<b>0.01</b>		<b>0.00</b>	

**Note:**

Emissions from magnetic separation of metal scrap are calculated using emission factors for crushed stone conveyor transfer points from AP-42, Chapter 11.19, Table 11.19.2-2 (SCC 3-05-020-06) (8/04).

\* The water spray injection system on the vehicle/metal shredder is considered an integral control device. This system leaves the items downstream wet. Therefore controlled emission factors are used for these conveyor transfer points.

\*\*The throughput through the magnetic conveyor is artificially limited due to the vehicle/metal shredder throughput limit

**Methodology:**

Unlimited PTE (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)

Unlimited PTE (tons/yr) = Number of Emission Points \* Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton) \* 8760 (hrs/yr) \* 1 ton/2000 lbs

Limited PTE (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)

Limited PTE (tons/yr) = Number of Emission Points \* Maximum Allowable Throughput to Avoid BACT (tons/yr) \* Emission Factor (lbs/ton) \* 1 ton / 2,000 lbs

**Appendix A: Emissions Calculations  
Non-ferrous Trommel Particulate Emissions**

**Company Name:** Rochester Iron & Metal  
**Source Address:** 1552 Wentzel Street, Rochester, IN 46975  
**Permit Number:** M049-31685-00037  
**Plt ID:** 049-00037  
**Reviewer:** Jason R. Krawczyk  
**Date:** April 3, 2012

**Unlimited Particulate Matter Emissions**

Process Description	Number of Emission Points	Maximum Capacity (tons/hr)	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	Unlimited PTE of PM		Unlimited PTE of PM10		Unlimited PTE of PM2.5	
						(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Non-ferrous Trommel	1	22.5	2.20E-03	7.40E-04	5.00E-05	0.05	0.22	1.67E-02	0.07	1.13E-03	0.00
<b>Potential Emissions:</b>							<b>0.22</b>		<b>0.07</b>		<b>0.00</b>

**Limited Particulate Matter Emissions**

Process Description	Number of Emission Points	Maximum Allowable Throughput to Avoid BACT*	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	Limited PTE of PM		Limited PTE of PM10		Limited PTE of PM2.5	
						(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Non-ferrous Trommel	1	88928.5	2.20E-03	7.40E-04	5.00E-05	0.05	0.10	1.67E-02	0.03	1.13E-03	2.22E-03
<b>Potential Emissions:</b>							<b>0.10</b>		<b>0.03</b>		<b>2.22E-03</b>

**Note:**

Emissions from the trommel are calculated using emission factors for crushed stone screening from AP-42, Chapter 11.19, Table 11.19.2-2 (SCC 3-05-020-06) (8/04) .

\*The throughput through the Non-ferrous Trommel is artificially limited due to the vehicle/metal shredder throughput limit.

**Methodology:**

Unlimited PTE (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)

Unlimited PTE (tons/yr) = Number of Emission Points \* Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton) \* 8760 (hrs/yr) \* 1 ton/2000 lbs

Limited PTE (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)

Limited PTE (tons/yr) = Number of Emission Points \* Maximum Allowable Throughput to Avoid BACT (tons/yr) \* Emission Factor (lbs/ton) \* 1 ton / 2,000 lbs

**Appendix A: Emissions Calculations  
Conveyor Particulate Emissions**

**Company Name: Rochester Iron & Metal  
Source Address: 1552 Wentzel Street, Rochester, IN 46975  
Permit Number: M049-31685-00037  
Plt ID: 049-00037  
Reviewer: Jason R. Krawczyk  
Date: April 3, 2012**

**Unlimited Particulate Matter Emissions**

Process Description	Number of Emission Points	Maximum Capacity (tons/hr)	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	Unlimited PTE of PM		Unlimited PTE of PM10		Unlimited PTE of PM2.5	
						(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Feeder Conveyor to Shredder - dry**	1	90	3.00E-03	1.10E-03	1.10E-03	0.27	1.18	9.90E-02	0.43	9.90E-02	0.43
Conveyor from Shredder to Magnetic Separator - wet*	1	90	1.40E-04	4.60E-05	1.30E-05	0.01	0.06	4.14E-03	0.02	1.17E-03	0.01
Conveyor from Magnetic Separator to non-ferrous stockpile - wet*	1	22.5	1.40E-04	4.60E-05	1.30E-05	0.00	0.01	1.04E-03	0.00	2.93E-04	0.00
Ferrous Material process conveyors - wet*	4	67.5	1.40E-04	4.60E-05	1.30E-05	0.04	0.17	1.24E-02	0.05	3.51E-03	0.02
Non-ferrous Material process conveyors - dry**	8	22.5	3.00E-03	1.10E-03	1.10E-03	0.54	2.37	1.98E-01	0.87	1.98E-01	0.87
<b>Potential Emissions:</b>						<b>3.78</b>		<b>1.38</b>		<b>1.32</b>	

**Limited Particulate Matter Emissions**

Process Description	Number of Emission Points	Maximum Allowable Throughput to Avoid BACT***	PM Emission Factor (lbs/ton)	PM10 Emission Factor (lbs/ton)	PM2.5 Emission Factor (lbs/ton)	Limited PTE of PM		Limited PTE of PM10		Limited PTE of PM2.5	
						(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Feeder Conveyor to Shredder - dry**	1	355714	3.00E-03	1.10E-03	1.10E-03	0.27	0.53	9.90E-02	0.20	9.90E-02	0.20
Conveyor from Shredder to Magnetic Separator - wet*	1	355714	1.40E-04	4.60E-05	1.30E-05	0.01	0.02	4.14E-03	0.01	1.17E-03	0.00
Conveyor from Magnetic Separator to non-ferrous stockpile - wet*	1	88928.5	1.40E-04	4.60E-05	1.30E-05	0.00	0.01	1.04E-03	0.00	2.93E-04	0.00
Ferrous Material process conveyors - wet*	4	266785.5	1.40E-04	4.60E-05	1.30E-05	0.04	0.07	1.24E-02	0.02	3.51E-03	0.01
Non-ferrous Material process conveyors - dry**	8	88928.5	3.00E-03	1.10E-03	1.10E-03	0.54	1.07	1.98E-01	0.39	1.98E-01	0.39
<b>Potential Emissions:</b>						<b>1.71</b>		<b>0.62</b>		<b>0.60</b>	

**Note:**

Emissions from conveying of metal scrap are calculated using emission factors for crushed stone conveyor transfer points from AP-42, Chapter 11.19, Table 11.19.2-2 (SCC 3-05-020-06) (8/04).  
 \* The water spray injection system on the vehicle/metal shredder is considered an integral control device. This system leaves the items in the downstream conveyors wet. Therefore controlled emission factors are used for these conveyor transfer points.  
 \*\*The conveyor transfer point is a damp process. The emission factor for a dry process was used as a worst case.  
 \*\*\*The throughput through the conveyors is artificially limited due to the vehicle/metal shredder throughput limit.  
 No emission factor is identified for PM2.5 for dry conveying, therefore it is assumed PM10 = PM2.5

**Methodology:**

Unlimited PTE (lb/hr) = Number of Emission Points \* Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)  
 Unlimited PTE (tons/yr) = Number of Emission Points \* Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton) \* 8760 (hrs/yr) \* 1 ton/2000 lbs  
 Limited PTE (lb/hr) = Number of Emission Points \* Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)  
 Limited PTE (tons/yr) = Number of Emission Points \* Maximum Allowable Throughput to Avoid BACT (tons/yr) \* Emission Factor (lbs/ton) \* 1 ton / 2,000 lbs

**Appendix A: Emissions Calculations  
Z-Box/Cyclone Particulate Emissions**

**Company Name:** Rochester Iron & Metal  
**Source Address:** 1552 Wentzel Street, Rochester, IN 46975  
**Permit Number:** M049-31685-00037  
**Plt ID:** 049-00037  
**Reviewer:** Jason R. Krawczyk  
**Date:** April 3, 2012

**Unlimited Particulate Emissions**

Process Description	Maximum Capacity	Particulate Emission Factor	PTE of PM/PM10/PM2.5	
			(lb/hr)	(tons/yr)
Z-Box / Cyclone	(tons/hr)	(lbs/ton)		
	67.5	0.0137	0.92	<b>4.05</b>

**Limited Particulate Emissions**

Process Description	Maximum Allowable Throughput to Avoid BACT	Particulate Emission Factor	PTE of PM/PM10/PM2.5	
			(lb/hr)	(tons/yr)
Z-Box / Cyclone	(tons/yr)	(lbs/ton)		
	355714	0.0137	0.92	<b>2.44</b>

**Note:**

Material is wetted with an integral water spray injection system during the shredder process.

The emission factor for the Z-Box / Cyclone separator is from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook" Appendix D, Table D-11.E for dry processing of an 80% Auto & 20% Scrap throughput mixture.

Assumed PM = PM10 = PM2.5

**Methodology:**

Unlimited PTE of PM/PM10/PM2.5 (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)

Unlimited PTE of PM/PM10/PM2.5 (tons/yr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton) \* 8760 hrs / 2000 lbs.

Limited PTE of PM/PM10/PM2.5 (lb/hr) = Maximum Capacity (tons/hr) \* Emission Factor (lbs/ton)

Limited PTE of PM/PM10/PM2.5 (tons/yr) = Maximum Allowable Throughput to Avoid BACT (tons/yr) \* Particulate Emission Factor (lbs/ton) \* 1 ton / 2,000 lbs

**Appendix A: Emissions Calculations  
Batch Drop Operations**

**Company Name:** Rochester Iron & Metal  
**Source Address:** 1552 Wentzel Street, Rochester, IN 46975  
**Permit Number:** M049-31685-00037  
**Source ID:** 049-00037  
**Reviewer:** Jason R. Krawczyk  
**Date:** April 3, 2012

**Batch Drop Operations (AP-42 Section 13.2.4)**

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

$$E_f = k \cdot (0.0032) \cdot [(U/5)^{1.3} / (M/2)^{1.4}]$$

where:  $E_f$  = Emission factor (lb/ton)

$k$ (PM) =	<u>0.74</u>	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
$k$ (PM10) =	<u>0.35</u>	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
$k$ (PM2.5) =	<u>0.053</u>	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
$U$ =	<u>10.2</u>	= worst case annual mean wind speed (Source: NOAA, 2006*)
$M$ =	<u>11.0</u>	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
$E_f$ (PM) =	<u>5.50E-04</u>	lb PM/ton of material handled
$E_f$ (PM10) =	<u>2.60E-04</u>	lb PM10/ton of material handled
$E_f$ (PM2.5) =	<u>3.94E-05</u>	lb PM2.5/ton of material handled

**Unlimited Particulate Emissions**

Maximum Material Handling Throughput = 90 tons/hr  
 Maximum Material Handling Throughput = 788,400 tons/yr

Type of Activity	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)	PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.22	0.10	0.02
Dumping of materials into feeder bins	0.22	0.10	0.02
Unloading of crushed metal and fluff into storage piles	0.22	0.10	0.02
Loading of crushed metal and fluff into trucks	0.22	0.10	0.02
<b>Total (tons/yr)</b>	<b>0.87</b>	<b>0.41</b>	<b>0.06</b>

**Limited Particulate Emissions**

Maximum Allowable Throughput to Avoid BACT = 355,714 tons/yr

Type of Activity	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)	PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.10	0.05	0.01
Dumping of materials into feeder bins	0.10	0.05	0.01
Unloading of crushed metal and fluff into storage piles	0.10	0.05	0.01
Loading of crushed metal and fluff into trucks	0.10	0.05	0.01
<b>Total (tons/yr)</b>	<b>0.39</b>	<b>0.19</b>	<b>0.03</b>

**Methodology:**

Maximum Material Handling Throughput (tons/yr) = Maximum throughput (90 tons/hr) \* 8,760 hrs/yr

Maximum Allowable Throughput to Avoid BACT = 355,714 tons/yr

Unlimited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)

Limited Potential to Emit (tons/yr) = (Maximum Allowable Throughput to Avoid BACT (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)

\*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

**Appendix A: Emission Calculations**  
**Fugitive Dust Emissions - Paved Roads**

**Company Name: Rochester Iron & Metal**  
**Source Address: 1552 Wentzel Street, Rochester, IN 46975**  
**Permit Number: M049-31685-00037**  
**Source ID: 049-00037**  
**Reviewer: Jason R. Krawczyk**  
**Date: April 3, 2012**

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Passenger cars/Small Trucks (entering plant) (one-way trip)	200.0	1.0	200.0	3.00	600.0	400	0.076	15.2	5530.3
Passenger cars/Small Trucks (leaving plant) (one-way trip)	200.0	1.0	200.0	2.25	450.0	400	0.076	15.2	5530.3
Tractor trailers - delivery (entering plant) (one-way trip)	50.0	1.0	50.0	40.00	2000.0	400	0.076	3.8	1382.6
Tractor trailers - delivery (leaving plant) (one-way trip)	50.0	1.0	50.0	15.00	750.0	400	0.076	3.8	1382.6
Tractor trailers - shipping (entering plant) (one-way trip)	50.0	1.0	50.0	15.00	750.0	400	0.076	3.8	1382.6
Tractor trailers - shipping (leaving plant) (one-way trip)	50.0	1.0	50.0	40.00	2000.0	400	0.076	3.8	1382.6
<b>Total</b>			<b>600.0</b>		<b>6550.0</b>			<b>45.5</b>	<b>16590.9</b>

Average Vehicle Weight Per Trip =  $\frac{10.9}{0.08}$  tons/trip  
Average Miles Per Trip =  $\frac{10.9}{0.08}$  miles/trip

Unmitigated Emission Factor,  $E_f = [k * (sL)^{0.91} * (W)^{1.02}]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	10.9	10.9	10.9	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m <sup>2</sup> = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E_f * [1 - (p/4N)]$  (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor,  $E_{ext} = E_f * [1 - (p/4N)]$   
where p =  $\frac{125}{365}$  days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)  
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f$	0.996	0.199	0.0489	lb/mile
Mitigated Emission Factor, $E_{ext}$	0.911	0.182	0.0447	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Passenger cars/Small Trucks (entering plant) (one-way trip)	2.75	0.55	0.14	2.52	0.50	0.12
Passenger cars/Small Trucks (leaving plant) (one-way trip)	2.75	0.55	0.14	2.52	0.50	0.12
Tractor trailers - delivery (entering plant) (one-way trip)	0.69	0.14	0.03	0.63	0.13	0.03
Tractor trailers - delivery (leaving plant) (one-way trip)	0.69	0.14	0.03	0.63	0.13	0.03
Tractor trailers - shipping (entering plant) (one-way trip)	0.69	0.14	0.03	0.63	0.13	0.03
Tractor trailers - shipping (leaving plant) (one-way trip)	0.69	0.14	0.03	0.63	0.13	0.03
<b>8.26</b>	<b>1.65</b>	<b>0.41</b>	<b>7.55</b>	<b>1.51</b>	<b>0.37</b>	

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Unmitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Mitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PM2.5 = Particulate Matter (<2.5 um)  
PTE = Potential to Emit

**Appendix A: Emission Calculations**  
**Fugitive Dust Emissions - Unpaved Roads**

**Company Name: Rochester Iron & Metal**  
**Source Address: 1552 Wentzel Street, Rochester, IN 46975**  
**Permit Number: M049-31685-00037**  
**Pt ID: 049-00037**  
**Reviewer: Jason R. Krawczyk**  
**Date: April 3, 2012**

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Passenger cars/Small Trucks (entering plant) (one-way trip)	200	1	200.0	3.0	600.0	100	0.019	3.8	1382.6
Passenger cars/Small Trucks (leaving plant) (one-way trip)	200	1	200.0	2.3	450.0	100	0.019	3.8	1382.6
Tractor trailers - delivery (entering plant) (one-way trip)	50	1	50.0	40.0	2000.0	100	0.019	0.9	345.6
Tractor trailers - delivery (leaving plant) (one-way trip)	50	1	50.0	15.0	750.0	100	0.019	0.9	345.6
Tractor trailers - shipping (entering plant) (one-way trip)	50.0	1.0	50.0	15.0	750.0	1000	0.189	9.5	3456.4
Tractor trailers - shipping (leaving plant) (one-way trip)	50.0	1.0	50.0	40.0	2000.0	1000	0.189	9.5	3456.4
<b>Total</b>			<b>600.0</b>		<b>6550.0</b>			<b>28.4</b>	<b>10369.3</b>

Average Vehicle Weight Per Trip =  $\frac{10.9}{0.05}$  tons/trip  
Average Miles Per Trip =  $\frac{10.9}{0.05}$  miles/trip

Unmitigated Emission Factor, Ef =  $k \cdot [(s/12)^a] \cdot [(W/3)^b]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	10.9	10.9	10.9	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E \cdot [(365 - P)/365]$  (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor, Eext =  $E \cdot [(365 - P)/365]$   
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	4.61	1.18	0.12	lb/mile
Mitigated Emission Factor, Eext =	3.03	0.77	0.08	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Passenger cars/Small Trucks (entering plant) (one-way trip)	3.19	0.81	0.08	2.10	0.53	0.05
Passenger cars/Small Trucks (leaving plant) (one-way trip)	3.19	0.81	0.08	2.10	0.53	0.05
Tractor trailers - delivery (entering plant) (one-way trip)	0.80	0.20	0.02	0.52	0.13	0.01
Tractor trailers - delivery (leaving plant) (one-way trip)	0.80	0.20	0.02	0.52	0.13	0.01
Tractor trailers - shipping (entering plant) (one-way trip)	7.97	2.03	0.20	5.24	1.34	0.13
Tractor trailers - shipping (leaving plant) (one-way trip)	7.97	2.03	0.20	5.24	1.34	0.13
<b>Total</b>	<b>23.92</b>	<b>6.10</b>	<b>0.61</b>	<b>15.73</b>	<b>4.01</b>	<b>0.40</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PM2.5 = Particulate Matter (<2.5 um)  
PTE = Potential to Emit



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

## **SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

**TO:** Jason Grube  
Rochester Iron & Metal  
1324 N Lucas St  
Rochester, IN 46975

**DATE:** June 21, 2012

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
New Construction MSOP  
049 - 31685 - 00037

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Bernard Paul B Paul Consulting  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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June 21, 2012

TO: Fulton Co Public Library

From: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Rochester Iron & Metal**  
**Permit Number: 049 - 31685 - 00037**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures  
Final Library.dot 11/30/07

# Mail Code 61-53

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2		Fulton County Commissioners 1093 E 600 N Rochester IN 46975 (Local Official)										
3		Fulton Co Public Library 320 W 7th St Rochester IN 46975-1332 (Library)										
4		Fulton County Health Department 125 E 9th Street #125 Rochester IN 46975-7119 (Health Department)										
5		Rochester City Council and Mayors Office 320 Main St Rochester IN 46975 (Local Official)										
6		Bernard Paul B Paul Consulting, LLC 285 Spring Drive Zionsville IN 46077 (Consultant)										
7		Daniel Miller 1869 N. Old US 31 Rochester IN 46975 (Affected Party)										
8		Jerry & Clea Poor 1919 E. 200 North Rochester IN 46975 (Affected Party)										
9		Joan Utter Living Trust 2502 Captains Court Rochester IN 46975 (Affected Party)										
10		Gawaukee, LLC PO Box 109 Rochester IN 46975 (Affected Party)										
11		William Copeland 471 W 100 North Rochester IN 46975 (Affected Party)										
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