



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: June 14, 2005
RE: Sturgis Iron & Metal Co. / 039-20972-00622
FROM: Paul Dubenetzky
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, Room 1049, 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.dot 1/10/05



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**NEW SOURCE CONSTRUCTION PERMIT
AND MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY**

**Sturgis Iron and Metal Co., Elkhart Metal Division
1514 West Lusher Avenue
Elkhart, Indiana 46517**

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

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

| | |
|---|--|
| Operation Permit No.: MSOP 039-20972-00622 | |
| Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality | Issuance Date: June 14, 2005 Expiration Date: June 14, 2010 |

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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)]

The Permittee plans to construct and operate a stationary automobile shredding and ferrous scrap separation plant.

Authorized Individual: Director of Operations
Source Address: 1514 West Lusher Avenue, Elkhart, Indiana 46517
Mailing Address: P.O. Box 4537, Elkhart, Indiana 47514
General Source Phone: (574) 295-0155
SIC Code: 5093
County Location: Elkhart
Source Location Status: Nonattainment area for 8-hour ozone standard
Attainment area for all other criteria pollutants
Source Status: Minor Source Operating Permit
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

The stationary source is approved to construct and operate the following emissions units and pollution control devices:

- (a) One (1) automobile shredder, identified as 01-01 Shredder, to be constructed in 2005, consisting of an 8,000 Hp Wendt scrap shredder, with a maximum capacity of 400 tons per hour, using water sprays at the materials feed chute, cutter head, and materials output chute.
- (b) Twenty-seven (27) conveyor transfer points, identified as 01-02 Conveyor, to be constructed in 2005, each with a maximum capacity of 400 tons per hour of wetted material.
- (c) Two (2) ferrous/non-ferrous metal separation processes, identified as 02-01A and 02-01B, to be constructed in 2005, each consisting of magnetic separators and a z-box/cyclone air separation system, with a combined maximum capacity of 400 tons per hour, and exhausting to stacks 02-01 S1 and 02-01 S2, respectively.
- (d) One (1) conveyor transfer point, identified as 02-02 Conveyor, to be constructed in 2005, with a maximum capacity of 100 tons per hour of dry material.
- (e) One (1) non-ferrous metal separation process, identified as 03-01, to be constructed in 2005, consisting of a trammel, conveyor, magnetic separator and eddy current separator, with a maximum capacity of 70 tons per hour with emissions exhausting inside the building.
- (f) A diesel fuel storage tank and dispensing facility, having a maximum capacity of 20,000 gallons (75.7 cubic meters) of diesel fuel.

- (g) Paved and unpaved roads and parking lots with public access.
- (h) Repainting of customer scrap metal bins, using less than five (5) gallons of paint per day and having a potential to emit less than 15 pounds of VOC per day.

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

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.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

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.5 Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]

This permit 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 of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

B.6 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.7 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (2) 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 2-6.1-6 and an Operation Permit Validation Letter is issued.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

B.8 Phase Construction Time Frame

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the IDEM may revoke this permit to construct if the construction of the automobile and ferrous scrap separation plant has not begun within eighteen (18) months from the effective date of this permit or if during the construction of the automobile and ferrous scrap separation plant, work is suspended for a continuous period of one (1) year or more.

The OAQ may extend such time upon satisfactory showing that an extension, formally requested by the Permittee is justified.

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted 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) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

- (d) 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.10 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days (this time frame is determined on a case by case basis but no more than ninety (90) days) after issuance of this permit, including the following information on each emissions unit:
 - (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 Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMP's 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 PMP whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) 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.11 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a non-road engine, as defined in 40 CFR 89.2.

B.12 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] [IC13-17-3-2][IC 13-30-3-1]

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 this title or the conditions of this permit or any operating permit revisions;
- (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 processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (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.13 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)]:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

B.14 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (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.15 Credible Evidence [326 IAC 1-1-6]

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

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 5-1-3 (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 non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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.5 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on March 21, 2005. The plan consists of:

Fugitive particulate matter emissions resulting from vehicle traffic on paved and unpaved roads and parking lots shall be controlled by sweeping and/or flushing with water on an as-needed basis.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-7-1(34).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements

C.7 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

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 date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ (and local agency) not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, (and local agency), 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.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

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.10 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.11 Compliance Response Plan - Preparation and Implementation

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ, upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

- (3) An automatic measurement was taken when the process was not operating.
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test

- (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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected emissions unit while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that re-testing in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the re-testing deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to non-compliant stack tests.

The response action documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.13 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.14 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, all record keeping requirements not already legally required shall be implemented when operation begins.

C.15 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 Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
- (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) Unless otherwise specified in this permit, any annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit 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 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-6-1-5(a)(1)]:

- (a) One (1) automobile shredder, identified as 01-01 Shredder, to be constructed in 2005, consisting of an 8,000 Hp Wendt scrap shredder, with a maximum capacity of 400 tons per hour, using water sprays at the materials feed chute, cutter head, and materials output chute.
- (b) Twenty-seven (27) conveyor transfer points, identified as 01-02 Conveyor, to be constructed in 2005, each with a maximum capacity of 400 tons per hour of wetted material.
- (c) Two (2) ferrous/non-ferrous metal separation processes, identified as 02-01A and 02-01B, to be constructed in 2005, each consisting of magnetic separators and a z-box/cyclone air separation system, with a combined maximum capacity of 400 tons per hour, and exhausting to stacks 02-01 S1 and 02-01 S2, respectively.
- (d) One (1) conveyor transfer point, identified as 02-02 Conveyor, to be constructed in 2005, with a maximum capacity of 100 tons per hour of dry material.
- (e) One (1) non-ferrous metal separation process, identified as 03-01, to be constructed in 2005, consisting of a trammel, conveyor, magnetic separator and eddy current separator, with a maximum capacity of 70 tons per hour, with emissions exhausting inside the building.

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

D.1.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the metal shredder, ferrous/non-ferrous metal separators, non-ferrous metal separator, and conveyor transfer points shall not exceed the values shown in the following table when operating at the process weight shown:

| Emission Unit | Process Weight (tons/hr) | 326 IAC 6-3-2 Allowable Emissions (lbs/hr) |
|--|--------------------------|--|
| Metal Shredder (01-01) | 400 | 66.3 |
| Conveyors (01-02, 02-02) | 400 | 66.3 |
| Ferrous/Non-Ferrous Metal Separators (each) (02-01A, 02-01B) | 200 | 58.5 |
| Non-Ferrous Metal Separator (03-01) | 70 | 47.8 |

The pounds per hour limitation was calculated with the following equation:
 Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

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

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

Compliance Determination Requirements

D.1.3 Particulate Control

- (a) Pursuant to 326 IAC 6-3-2, and in order to comply with Condition D.1.1, the water sprays shall be in operation and control emissions from the metal shredder at all times that the metal shredder is in operation.
- (b) Pursuant to 326 IAC 6-3-2, and in order to comply with Condition D.1.1, the cyclones shall be in operation and control emissions from the z-box/cyclone metal separators at all times that the z-box/cyclone metal separators are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)][326 IAC 2-6.1-5(a)(2)]

D.1.4 Visible Emissions Notations

- (a) Visible emission notations of the ferrous/non-ferrous metal separator stack exhausts (02-01 S1 and 02-01 S2) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.

Record Keeping and Reporting Requirement

D.1.5 Record Keeping Requirements

- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records of visible emission notations of the ferrous/non-ferrous metal separator stack exhausts once per day.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-6.1-5(a)(1)]:

- (f) A diesel fuel storage tank and dispensing facility, having a maximum capacity of 20,000 gallons (75.7 cubic meters) of diesel fuel.
- (g) Paved and unpaved roads and parking lots with public access.
- (h) Repainting of customer scrap metal bins, using less than five (5) gallons of paint per day and having a potential to emit less than 15 pounds of VOC per day.

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

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

D.2.1 Volatile Organic Compound (VOC) Limitations [326 IAC 8-2-9]

In order for 326 IAC 8-2-9 to be not applicable to the repainting operation, the amount of VOC applied shall be not exceed 15 pounds per day.

D.2.2 Particulate [326 IAC 6-3-2(d)]

In order for 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes) to be not applicable to the repainting operation, the amount of paint applied shall not exceed five (5) gallons per day.

Record Keeping and Reporting Requirement [326 IAC 2-5.1-3(e)] [326 IAC 2-6.1-5(a)(2)]

D.2.3 Volatile Organic Compounds (VOC) [326 IAC 12]

Pursuant to 326 IAC 12 (New Source Performance Standards), the Permittee shall maintain the following information for the 20,000 gallon (75.7 cubic meter) diesel fuel storage tank:

- (a) The vessel dimensions.
- (b) The vessel capacity.

The Permittee shall keep all records as described for the life of the vessel.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE 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).

| | |
|----------------------|---|
| Company Name: | Sturgis Iron and Metal Co., Elkhart Metal Division |
| Address: | 1514 West Lusher Avenue |
| City: | Elkhart, Indiana 46517 |
| Phone #: | (574) 295-0155 |
| MSOP #: | M 039-20972-00622 |

I hereby certify that Sturgis Iron and Metal Co., Elkhart Metal Division is

- still in operation.
- no longer in operation.

I hereby certify that Sturgis Iron and Metal Co., Elkhart Metal Division is

- in compliance with the requirements of MSOP 039-20972-00622.
- not in compliance with the requirements of MSOP 039-20972-00622.

| |
|---------------------------------------|
| Authorized Individual (typed): |
| Title: |
| Signature: |
| Date: |

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.

| |
|-----------------------|
| Noncompliance: |
| |
| |
| |
| |

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967**

**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 ?_____, 100TONS/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 PERM 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:

Sturgis Iron and Metal Co., Elkhart Metal Division
1514 West Lusher Avenue
Elkhart, Indiana 46517

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 Sturgis Iron and Metal Co., Elkhart Metal Division, 1514 West Lusher Avenue, Elkhart, Indiana 46517, completed construction of the automobile shredding and ferrous scrap separation plant on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on March 21, 2005 and as permitted pursuant to Permit No. 039-20972-00622 issued on _____

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

Source Background and Description

| | |
|-----------------------|--|
| Source Name: | Sturgis Iron and Metal Co., Elkhart Metal Division |
| Source Location: | 1514 West Lusher Avenue, Elkhart, Indiana 46517 |
| County: | Elkhart |
| SIC Code: | 5093 |
| Operation Permit No.: | 039-20972-00622 |
| Permit Reviewer: | ERG/ST |

The Office of Air Quality (OAQ) has reviewed an application from Sturgis Iron and Metal Co., Elkhart Metal Division relating to the construction and operation of an automobile shredding and ferrous scrap separation plant.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following emission units and pollution control devices:

- (a) One (1) automobile shredder, identified as 01-01 Shredder, to be constructed in 2005, consisting of an 8,000 Hp Wendt scrap shredder, with a maximum capacity of 400 tons per hour, using water sprays at the materials feed chute, cutter head, and materials output chute.
- (b) Twenty-seven (27) conveyor transfer points, identified as 01-02 Conveyor, to be constructed in 2005, each with a maximum capacity of 400 tons per hour of wetted material.
- (c) Two (2) ferrous/non-ferrous metal separation processes, identified as 02-01A and 02-01B, to be constructed in 2005, each consisting of magnetic separators and a z-box/cyclone air separation system, with a combined maximum capacity of 400 tons per hour, and exhausting to stacks 02-01 S1 and 02-01 S2, respectively.
- (d) One (1) conveyor transfer point, identified as 02-02 Conveyor, to be constructed in 2005, with a maximum capacity of 100 tons per hour of dry material.
- (e) One (1) non-ferrous metal separation process, identified as 03-01, to be constructed in 2005, consisting of a trammel, conveyor, magnetic separator and eddy current separator, with a maximum capacity of 70 tons per hour with emissions exhausting inside the building.
- (f) A diesel fuel storage tank and dispensing facility, having a maximum capacity of 20,000 gallons (75.7 cubic meters) of diesel fuel.
- (g) Paved and unpaved roads and parking lots with public access.

- (h) Repainting of customer scrap metal bins, using less than five (5) gallons of paint per day and having a potential to emit less than 15 pounds of VOC per day.

Existing Approvals

This is the first permit to be issued to this source at this location.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justifications such that the water sprays on the metal shredder (01-01 Shredder) and the cyclones on the two (2) ferrous/non-ferrous metal separation processes (02-01A and 02-01B) be considered as an integral part of the metal shredding process and the ferrous/non-ferrous metal separation processes, respectively:

- (a) The materials inputs to the metal shredder consist primarily of crushed and uncrushed automobile bodies. These junk vehicle bodies typically contain flammable liquids and flammable solids. The high speed shearing action of the cutters on the Wendt metal shredder creates high instantaneous temperatures and sparks. The simultaneous presence of flammable materials and ignition sources may result in fires and explosions within the machinery. In order to prevent this, water sprays are directed at the metal shredder's material input chute, cutterhead and materials output chute, thereby thoroughly wetting the material before, during and after it is shredded. This wetting process both prevents explosions within the machinery and extinguishes any materials that ignite.

This wetting process is considered integral to the process because:

1. The water sprays serve a primary purpose other than pollution control. The purpose of the water sprays is to prevent fires and explosions within the machinery. Any fire or explosion of flammable materials within the machinery would damage it and, therefore, must be prevented. Also, any solid materials that caught fire would be transported via automatic conveyor to downline processes, with the possibility of damaging other equipment.
 2. The water sprays have an overall positive net economic effect, and are designed by the manufacturer of the equipment to operate whenever the shredder operates. The constant operation of the water sprays while the shredder is in operation prevents explosions and fires which could result in damage to the shredding machine and unplanned shutdowns of the process. Damage to the machinery would result in repair and replacement costs. Process shutdowns would result in loss of revenue. Either of these results would have substantial negative financial impacts on the company.
- (b) The z-box/cyclone in the ferrous/nonferrous metal separator sorts the shredded metal into ferrous, nonferrous and mixed (tramp) metals by use of an air powered centripetal process. Upon entering the metal separator, the stream of shredded metal is first sorted with magnets into ferrous and non-ferrous materials streams. The "ferrous" materials stream (which, at this point in the process still contains about 4% non-ferrous materials by weight) then enters the z-box/cyclone where, by use of air currents, it is spun, sorted, separated and collected into ferrous and non-ferrous material streams.

The z-box/cyclone is considered integral to process because:

1. The z-box/cyclone serves a primary purpose other than pollution control. The z-box/cyclone is part of the materials sorting and collection mechanism. Its use enables high quality sorting of the input material into ferrous and non-ferrous

materials in a one-pass-through operation. (Without use of the cyclone, a poor quality sorting of materials occurs, requiring reprocessing.)

2. The process cannot operate without the z-box/cyclone. The cyclone creates the air current needed in the z-box/cyclone to sort the shredded metal that passes through the z-box/cyclone into ferrous and nonferrous materials. Without the air current, the shredded metal is not sorted.

IDEM, OAQ has evaluated the justifications and agreed that the water sprays on the metal shredder and the cyclones on the two (2) ferrous/non-ferrous metal separators will be considered as an integral part of the metal shredding and metal separation processes, respectively. Therefore, the permitting level will be determined using the potential to emit after the water sprays and cyclones.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

| Stack ID | Operation | Height (ft) | Diameter (ft) | Flow Rate (acfm) | Temperature (°F) |
|----------|-----------|-------------|---------------|------------------|------------------|
| 02-01 S1 | Separator | 73.5 | 2.5 | 6,000 | Ambient |
| 02-01 S2 | Separator | 73.5 | 2.5 | 6,000 | Ambient |

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on March 21, 2005.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 6).

The source reports that the composition of scrap material input to the shredding operation is 75% ferrous and 25% non-ferrous materials. Because the maximum capacity of the non-ferrous materials separator process (03-01) is 70 tons per hour (613,200 tons per year), the upstream shredder and ferrous separator processes (01-01, 01-02, 02-01A, 02-01B) can only process 2,452,800 tons per year ($2,452,800 \times 0.25 = 613,200$) and the materials conveyor (02-02) can only process 613,200 tons per year, even though the maximum hourly operating capacities for these units are larger. PTE calculations for the entire source take this process bottleneck into account.

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

| Pollutant | Potential to Emit (tons/yr) |
|-----------------|-----------------------------|
| PM | 28.1 |
| PM-10 | 24.4 |
| SO ₂ | 0 |
| VOC | 6.2 |
| CO | 0 |
| NO _x | 0 |

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM is less than 100 tons per year but greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.
- (b) **Fugitive Emissions**
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Elkhart County.

| Pollutant | Status |
|-----------------|------------------------------|
| PM-10 | Attainment |
| PM2.5 | Attainment or Unclassifiable |
| SO ₂ | Attainment |
| NO ₂ | Attainment |
| 1-hour Ozone | Maintenance Attainment |
| 8-hour Ozone | Basic Nonattainment |
| CO | Attainment |
| Lead | Attainment |

- (a) 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 the ozone standards. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset (326 IAC 2-3). See the State Rule Applicability for the source section.
- (b) Elkhart County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability for the source section.
- (c) Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

Source Status

New Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant | Emissions (tons/yr) |
|------------------|---------------------|
| PM | 28.1 |
| PM-10 | 24.4 |
| SO ₂ | 0 |
| VOC | 6.2 |
| CO | 0 |
| NO _x | 0 |
| Single HAP | 0 |
| Combination HAPs | 0 |

This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 326 IAC 2-3, the PSD and Emission Offset requirements do not apply.

Air Quality Impacts from Minor Sources

Modeling Overview: Pursuant to 326 IAC 2-1.1-5, IDEM, OAQ, has conducted a modeling analysis of the Limited Potential to Emit (PTE) of criteria pollutants from this proposed source to estimate whether the Limited PTE of criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS).

Modeling Results – Criteria Pollutants: The modeling results indicate that the Limited PTE of criteria pollutants from this source will not exceed the National Ambient Air Quality Standards (NAAQS).

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit.
- (b) The 20,000 gallon diesel fuel storage tank at this source is not subject to the New Source Performance Standard (NSPS), 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984, because the diesel fuel storage tank has a capacity greater than 75 cubic meters but less than 151 cubic meters and is used to store a liquid with a maximum true vapor pressure less than 15.0 kPa. 40 CFR 60, Subpart Kb was revised on October 15, 2003.

- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit.
- (d) The repainting of customer metal scrap bins is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Miscellaneous Metal Parts and Products Surface Coating Operations (40 CFR 63, Subpart M) because this source is not a major source of HAPs (i.e., the source does not have the potential to emit 10 tons per year or greater of a single HAP or 25 tons per year or greater of a combination of HAPs) as defined in 40 CFR 63, Subpart A. Any change that would increase HAP emissions to greater than ten (10) tons per year of a single HAP or greater than twenty-five (25) tons per year of a combination of HAPs requires prior approval from IDEM, OAQ.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is not in 1 of the 28 source categories and there are no applicable New Source Performance Standards that were in effect on August 7, 1980, therefore, fugitive emissions are not counted towards applicability of PSD.

The PTE for PM, PM10, SO₂, and CO for this automobile shredding and ferrous scrap metal processing facility is less than 250 tons per year. Therefore, pursuant to 326 IAC 2-2, this source is a minor PSD source.

326 IAC 2-3 (Emission Offset)

This source is located in Elkhart County. Elkhart County was designated as a nonattainment area for the 8-hour ozone standard on June 15, 2004. The potential to emit of VOC and NO_x for this source is less than 100 tons per year. Therefore, this source is a minor source under Emission Offset. Any future modifications that increase VOC or NO_x emissions must be reviewed in accordance with 326 IAC 2-3.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of this automobile shredding and ferrous scrap metal processing facility will emit less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Elkhart County and the potential to emit of PM, PM10, SO₂, NO_x, CO and VOC is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

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 the 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.

326 IAC 6-4 (Fugitive Dust Emissions)

The source is subject to 326 IAC 6-4 (Fugitive Dust Emissions) because the source maintains paved and unpaved roads and parking lots with public access. Pursuant to 326 IAC 6-4, the Permittee shall not generate fugitive dust to the extent that some portion of the material escapes

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.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This new source is located in Elkhart County, has fugitive particulate matter emissions greater than 25 tons per year, requires a permit as set forth in 326 IAC 2, and has not received all of the necessary preconstruction approvals before December 13, 1985. Therefore, this new source is subject to the requirements of 326 IAC 6-5. Pursuant to 326 IAC 6-5, the source has submitted a fugitive particulate matter control plan with their permit application. The plan is as follows, and is appended to the permit as Appendix A:

Fugitive particulate matter emissions resulting from vehicle traffic on paved and unpaved roads and parking lots shall be controlled by sweeping and/or flushing with water on an as-needed basis.

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2, the particulate from the metal shredder, ferrous/non-ferrous metal separators, non-ferrous metal separator, and conveyors shall be limited by the following:

| Emission Unit | Process Weight (tons/hr) | 326 IAC 6-3-2 Allowable Emissions (lbs/hr) |
|--|--------------------------|--|
| Metal Shredder (01-01) | 400 | 66.3 |
| Conveyors (01-02, 02-02) | 400 | 66.3 |
| Ferrous/Non-Ferrous Metal Separators (each) (02-01A, 02-01B) | 200 | 58.5 |
| Non-Ferrous Metal Separator (03-01) | 70 | 47.8 |

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 water sprays shall be in operation at all times the metal shredder is in operation, in order to comply with this limit.

The cyclones shall be in operation at all times the z-box/cyclone metal separators are in operation, in order to comply with this limit.

Calculations show that particulate emissions from the metal shredder (01-01 Shredder), the ferrous/non-ferrous metal separators (02-01A and 02-01B) and the conveyors will be in compliance with these limits. (See Appendix A)

The non-ferrous metal separator (03-01) separates non-ferrous metallic from non-metallic materials by use of a sizing screen (trammel), magnetic separator and eddy current (rapidly changing electrical field) separator, as the material travels along a conveyor. Generation of airborne particulate matter is minimal. These emissions are uncontrolled.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The insignificant repainting of customer metal scrap bins is a manufacturing process, as defined in 326 IAC 6-3-1.5(2), and uses less than five (5) gallons of paint per day. Pursuant to 326 IAC 6-3-1(b)(15), this facility is exempt from the requirements of 326 IAC 6-3.

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

The potential VOC emissions from the insignificant repainting of customer metal scrap bins are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

The insignificant repainting of customer metal scrap bins is located in Elkhart County, applies coatings to metal surfaces and does not have actual VOC emissions of greater than 15 pounds per day. Therefore, pursuant to 326 IAC 8-2-1(a)(4), this facility is not subject to the requirements of 326 IAC 8-2-9.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The diesel fuel storage tank is not located in Clark, Floyd, Lake, or Porter County. Therefore, the requirements of 326 IAC 8-9 do not apply to this facility.

326 IAC 12 (New Source Performance Standards)

The 20,000 gallon (75.7 cubic meter) diesel fuel storage tank is subject to the requirements of 326 IAC 12 because it has a volume greater than 75 cubic meters but less than 151 cubic meters and contains a volatile organic liquid with a maximum true vapor pressure less than 15.0 kilopascals. 326 IAC 12 incorporates by reference a version of 40 CFR 60, Subpart Kb, which predates the revisions made to 40 CFR 60, Subpart Kb on October 15, 2003. The following requirements will remain in effect until the State of Indiana incorporates the revised version of 40 CFR, Subpart Kb into its SIP.

Pursuant to 326 IAC 12, the Permittee shall maintain records of the dimensions of the tank and an analysis showing the capacity of the tank. These records shall be maintained for the life of the source.

Conclusion

The construction and operation of this automobile shredding and ferrous scrap separation plant shall be subject to the conditions of the New Source Construction and Minor Source Operating Permit M039-20972-00622.

**Appendix A: Emissions Calculations
PM and PM10 Emissions from the Shredder**

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Division
Address: 1514 West Lusher Avenue, Elkhart, Indiana 46517
NSC/MSOP: M039-20972-00622
Reviewer: ERG/ST
Date: March 25, 2005

| Process ID | Process Description | Maximum Capacity (tons/hour) | PM Emission Factor (lbs/ton) | PTE of PM (tons/year) | PM10 Emission Factor (lbs/ton) | PTE of PM10 (tons/year) |
|------------|---------------------|------------------------------|------------------------------|-----------------------|--------------------------------|-------------------------|
| 01-01 | Metal Shredder | 280 | 0.00257 | 3.15 | 0.00257 | 3.15 |

Assume all PM emissions are equal to PM10.

Material is wetted with water sprays at input feed, cutter head and output feed to minimize explosion and fire hazards.

The maximum hourly capacity for the Shredder (01-01) is limited by downstream capacity of the non-ferrous separation process.

The emission factor for the shredder is from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook"

Appendix D, Table D-10.F, for a comparable metal shredder (1996).

METHODOLOGY

$PTE\ of\ PM/PM10\ (tons/year) = Maximum\ Capacity\ (tons/hour) \times Emission\ Factor\ (lbs/ton) \times 8760\ (hrs/year) \times 1\ ton/2000\ lbs$

**Appendix A: Emissions Calculations
PM and PM10 Emissions from the Conveyors**

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Division
Address: 1514 West Lusher Avenue, Elkhart, Indiana 46517
NSC/MSOP: M039-20972-00622
Reviewer: ERG/ST
Date: March 25, 2005

| Process ID | Process Description | Number of Processes | Maximum Capacity (tons/hour) | PM Emission Factor (lbs/ton) | PTE of PM (tons/year) | PM10 Emission Factor (lbs/ton) | PTE of PM10 (tons/year) |
|------------|-------------------------------|---------------------|------------------------------|------------------------------|-----------------------|--------------------------------|-------------------------|
| 01-02 | Conveyor Transfer Point - wet | 27 | 280 | 0.00014 | 4.64 | 0.000046 | 1.52 |
| 02-02 | Conveyor Transfer Point - dry | 1 | 70 | 0.003 | 0.92 | 0.0011 | 0.34 |

The material input to the conveyors is thoroughly wetted in a previous step (shredding) and remains wetted during transit on the conveyors. The maximum capacity for conveyors (01-02) are limited by downstream capacity of the non-ferrous separation process. The emission factor for conveyor transfer point - wet is from AP-42, Chapter 11.19, Table 11.19.2-2 (SCC 3-05-020-06) (8/04). The emission factor for conveyor transfer point - dry is from AP-42, Chapter 11.19, Table 11.19.2-2 (SCC 3-05-020-06) (8/04).

METHODOLOGY

PTE of PM/PM10 (tons/year) = Number of Processes x Maximum Capacity (tons/hour) x Emission Factor (lbs/ton) x 8760 (hours/year) x 1 ton/2000 lbs

Appendix A: Emission Calculations
PM and PM10 Emissions from the Metal Separators

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Division
Address: 1514 West Lusher Avenue, Elkhart, Indiana 46517
NSC/MSOP: M039-20972-00622
Reviewer: ERG/ST
Date: March 25, 2005

| Process ID | Process Description | Number of Processes | Combined Maximum Capacity (tons/hour) | PM Emission Factor (lbs/ton) | PTE of PM (tons/year) | PM10 Emission Factor (lbs/ton) | PTE of PM10 (tons/year) |
|-------------------|--|---------------------|---------------------------------------|------------------------------|-----------------------|--------------------------------|-------------------------|
| 02-01A, 02-01B | Z-box Ferrous/Non-Ferrous Metal Separators | 2 | 280 | 0.0137 | 16.8 | 0.0137 | 16.8 |

The maximum capacity for Z-box Ferrous/Non-Ferrous Metal Separators (02-01A, 02-01B) are limited by downstream capacity of the non-ferrous separation process.

The emission factor for the ferrous/non-ferrous metal separators are from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook" Appendix D, Table D-11.E, for a comparable metal separator (1996).

METHODOLOGY

PTE of PM/PM10 (tons/year) = Maximum Capacity (tons/hour) x Emission Factor (lbs/ton) x 8760 (hrs/year) x 1 ton/2000 lbs

Appendix A: Emission Calculations
VOC and PM/PM10 Emissions from Metal Coating Booth

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Division
Address: 1514 West Lusher Avenue, Elkhart, Indiana 46517
NSC/MSOP: M039-20972-00622
Reviewer: ERG/ST
Date: March 25, 2005

| Coating Material | Density (lbs/gal) | Weight % Water | Weight % VOC | Weight % Solids | Maximum Usage (gals/hour) | Actual VOC Usage (lbs/day) | PTE of VOC (tons/year) | PTE of PM/PM10 (tons/year) |
|-------------------------|-------------------|----------------|--------------|-----------------|---------------------------|----------------------------|------------------------|----------------------------|
| Metal Primer | 10.5 | 0.0% | 54.2% | 45.8% | 0.25 | 14.2 | 6.20 | 2.63 |
| Metal Topcoat | 8.87 | 0.0% | 63.2% | 36.8% | 0.25 | 14.0 | 6.14 | 1.79 |
| Worst Case Total | | | | | | 14.2 | 6.20 | 2.63 |

Surface coating booth can spray either primer or topcoat. Total assumes worst case coating

Assume all PM = PM10

Assume transfer efficiency for a spray gun is equal to 50%.

Assume all VOC is emitted.

METHODOLOGY

Actual VOC Usage (lbs/day) = Density (lbs/gal) x Weight % VOC (%) x Max. Usage (gals/hr) x 10 (hrs/day)

PTE of VOC (tons/year) = Density (lbs/gal) x Weight % VOC x Maximum Usage (gals/hour) x 8760 (hrs/year) x 1 ton/2000 lbs

PTE of PM/PM10 (tons/year) = Density (lbs/gal) x Weight % Solids x Maximum Usage (gals/hour) x 8760 (hrs/year) x 1 ton/2000 lbs x (1-Transfer Efficiency %)

**Appendix A: Emission Calculations
Fugitive Emissions from Paved Roads**

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Division
Address: 1514 West Lusher Avenue, Elkhart, Indiana 46517
NSC/MSOP: M039-20972-00622
Reviewer: ERG/ST
Date: March 25, 2005

1. Emission Factors:

According to AP-42, Chapter 13.2.1 - Paved Roads (12/03), the PM/PM10 emission factors for paved roads can be estimated from the following equation:

$$E = k \times (sL/2)^a \times (w/3)^b - C$$

where:

E = emission factor (lb/vehicle mile traveled) = 0.6 (g/m²) (AP-42, Table 13.2.1-3)
sL = road surface silt loading (g/m²) = 21.2 tons (see the calculations below)
w = mean vehicle weight (tons) = 0.082 for PM and 0.016 for PM10
k = empirical constant = 0.65
a = empirical constant = 1.5
b = empirical constant = 0.00047 for PM and PM10 (AP-42, Table 13.2.1-2)
C = emission factor for vehicle exhaust (lb/VMT) =

PM Emission Factor = $0.082 \times (0.6/2)^{0.65} \times (21.5/3)^{1.5} - 0.00047 = 0.70 \text{ lbs/mile}$

PM10 Emission Factor = $0.016 \times (0.6/2)^{0.65} \times (21.5/3)^{1.5} - 0.00047 = 0.14 \text{ lbs/mile}$

length of paved roads in one direction = 0.22 mile

2. Potential to Emit (PTE) of PM/PM10 from Paved Roads:

| Vehicle Type | * Trucks per day | *Average Vehicle Weight | * Total Trip Number | Traffic Component | Component Vehicle Weight | Vehicle Mile Traveled (VMT) | PTE of PM | PTE of PM10 |
|----------------------|------------------|-------------------------|---------------------|-------------------|--------------------------|-----------------------------|-------------|-------------|
| | | (tons) | (trips/yr) | (%) | (tons) | (miles/yr) | (tons/yr) | (tons/yr) |
| HH scrap receiving | 25 | 28.0 | 9,125 | 17.9% | 5.00 | 3,975 | 1.40 | 0.27 |
| HH scrap shipping | 25 | 28.0 | 9,125 | 17.9% | 5.00 | 3,975 | 1.40 | 0.27 |
| Semi scrap receiving | 25 | 29.5 | 9,125 | 17.9% | 5.27 | 3,975 | 1.40 | 0.27 |
| Semi scrap shipping | 25 | 29.5 | 9,125 | 17.9% | 5.27 | 3,975 | 1.40 | 0.27 |
| Pickup Truck | 40 | 2.30 | 14,600 | 28.6% | 0.66 | 6,360 | 2.24 | 0.44 |
| Total | 140 | | | 100% | 21.2 | 22,259 | 7.83 | 1.52 |

* This information is provided by the source.

Methodology

Component Vehicle Weight = Average Vehicle Weight (tons) x Traffic Component (%)

(Note that the summation of the component vehicle weight equals the Mean Vehicle Weight.)

VMT(miles/yr) = 0.22 mile/trip x 2 x Total Trip Numbers (trips/yr)

PTE of PM/PM10 (tons/yr) = VMT (miles/yr) x Emission Factor (lbs/mile) x 1 tons/ 2000 lbs

Appendix A: Emission Calculations
Fugitive Emissions from Unpaved Roads

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Division
Address: 1514 West Lusher Avenue, Elkhart, Indiana 46517
NSC/MSOP: M039-20972-00622
Reviewer: ERG/ST
Date: March 25, 2005

1. Emission Factors:

According to AP-42, Chapter 13.2.2 - Unpaved Roads (12/03), the PM/PM10 emission factors for unpaved roads can be estimated from the following equation:

$$E = k \times (s/12)^a \times (w/3)^b$$

where:

E = emission factor (lb/vehicle mile traveled)
s = surface material silt content (%) = 2.6 % (source)
w = mean vehicle weight (tons) = 59.0 tons
k = empirical constant = 4.9 for PM and 1.5 for PM10
a = empirical constant = 0.7 for PM and 0.9 for PM10
b = empirical constant = 0.45 for PM and PM10

PM Emission Factor = $4.9 \times (2.6/12)^{0.7} \times (59/3)^{0.45}$ = **6.4 lbs/mile**

PM10 Emission Factor = $1.5 \times (2.6/12)^{0.9} \times (59/3)^{0.45}$ = **1.4 lbs/mile**

2. Potential to Emit (PTE) of PM/PM10 from Unpaved Roads:

| Vehicle Type | * Miles per day | *Average Vehicle Weight (tons) | Traffic Component (%) | Component Vehicle Weight (tons) | Vehicle Mile Traveled (VMT) (miles/yr) | PTE of PM (tons/yr) | PTE of PM10 (tons/yr) |
|----------------|-----------------|--------------------------------|-----------------------|---------------------------------|--|---------------------|-----------------------|
| 10-yard Loader | 45.6 | 59 | 100% | 59.0 | 11,856 | 38.0 | 8.58 |

* This information is provided by the source.

Methodology

VMT(miles/yr) = Miles per day (miles) x Days of Operation (days/yr)

PTE of PM/PM10 (tons/yr) = VMT (miles/yr) x Emission Factor (lbs/mile) x 1 tons/ 2000 lbs

OFFICE OF AIR QUALITY

Minor Source Criteria Pollutant Modeling Screening Form - Raw Data

General Permit Information

Permit Number: M039-20972-00622

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Division

City: Elkhart

County: Elkhart

Permit Reviewer: ERG/ST

Date results are needed: _____

Source Specific Information

TABLE 1 - Criteria Pollutant Emission Rates (lb/hr) - based on the highest allowable emissions rate

| Stack ID | CO | NO _x | PM ₁₀ | Pb | SO ₂ |
|----------|----|-----------------|------------------|----|-----------------|
| 02-01 S1 | 0 | 0 | 1.915 | 0 | 0 |
| 02-01 S2 | 0 | 0 | 1.915 | 0 | 0 |
| | | | | | |
| | | | | | |
| | | | | | |

Totals:

| | | | | |
|---|---|------|---|---|
| 0 | 0 | 3.83 | 0 | 0 |
|---|---|------|---|---|

**TABLE 2 - Stack Information: (All heights are from ground level)
For non-circular stacks, take the average of the stack dimensions as the stack diameter.**

| Stack ID | Stack Height (ft) | Flow Rate (acfm) | Stack Temp. (°F) | Stack Diameter (ft) | Closest building related to stack: | | |
|----------|-------------------|------------------|------------------|---------------------|------------------------------------|------------|-------------|
| | | | | | Height (ft) | Width (ft) | Length (ft) |
| 02-01 S1 | 73.5 | 6,000 | ambient | 2.5 | | | |
| 02-01 S2 | 73.5 | 6,000 | ambient | 2.5 | | | |
| 0 | | | | | | | |
| 0 | | | | | | | |
| 0 | | | | | | | |
| 0 | | | | | | | |

Closest Property Line (Distance in feet): 275 No No building (Please check if this applies)

OFFICE OF AIR QUALITY

Minor Source Criteria Pollutant Modeling Screening Form - Modeling Results

General Permit Information

Permit Number: M039-20972-00622

Company Name: Sturgis Iron and Metal Co., Elkhart Metal Div Model Used (*Please check one*):

City: Elkhart SCREEN ISCST

County: Elkhart Date Modeling Completed: 3/31/2005

Permit Reviewer: ERG/ST Modeler: ERG/ST

Date results are needed: NA

Modeling Results

TABLE 3 - Criteria Pollutants - Maximum Concentration (ug/m3):

| Averaging Period | CO | NOX | PM10 | Pb | SO2 |
|---------------------------------|-------|------|------|------|------|
| 1-hour modeled concentration | | | | | |
| NAAQ Standard | 40000 | | | | |
| PASS or FAIL | PASS | | | | |
| 3-hour modeled concentration | | | | | |
| NAAQ Standard | | | | | 1300 |
| PASS or FAIL | | | | | PASS |
| 8-hour modeled concentration | | | | | |
| NAAQ Standard | 10000 | | | | |
| PASS or FAIL | PASS | | | | |
| 24-hour modeled concentration | | | 29 | | |
| NAAQ Standard | | | 150 | | 365 |
| PASS or FAIL | | | PASS | | PASS |
| Quarterly modeled concentration | | | | | |
| NAAQ Standard | | | | 1.5 | |
| PASS or FAIL | | | | PASS | |
| Annual modeled concentration | | | 5.8 | | |
| NAAQ Standard | | 100 | 50 | | 80 |
| PASS or FAIL | | PASS | PASS | | PASS |