



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: May 12, 2006
RE: Gerdau Ameristeel / 035-21872-00076
FROM: Nisha Sizemore
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 03/23/06



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**NEW SOURCE REVIEW AND
FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR QUALITY**

**Gerdau Ameristeel - Muncie Coating
1610 South Macedonia Avenue,
Muncie, Indiana 47302**

(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.

The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

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 FESOP under 326 IAC 2-8.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures and permit revision requirements pursuant to 326 IAC 2-8-11.1, applicable to those conditions.

| | |
|--|--|
| Operation Permit No.: F035-21872-00076 | |
| Issued by: Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality | Issuance Date: May 12, 2006 Expiration Date: May 12, 2011 |

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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 through A.3 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 2-8-3(b)]

The Permittee owns and operates a stationary coated steel rebar manufacturing plant (coating, bending, and shearing)

| | |
|------------------------------|---|
| Authorized Individual: | Mike Barrett, Division Manager |
| Source Address: | 1610 South Macedonia Avenue, Muncie, IN 47302 |
| Mailing Address: | 1810 South Macedonia Avenue, Muncie, IN 47302 |
| General Source Phone Number: | (765) 286-5454 |
| SIC Code: | 3449 (Manufacturing of Miscellaneous Structural Metal Work) |
| County Location: | Delaware |
| Source Location Status: | Nonattainment area for ozone under the 8-hour standard Attainment area for all other criteria pollutants |
| Source Status: | Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not in 1 of 28 Source Categories |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) one (1) wheelabrator shot blaster, constructed in 1988, equipped with three blasting wheels, with a total maximum blasting rate of one (1) ton of steel shot per minute, with a maximum throughput of 20 tons of steel rebar per hour, and with particulate emissions controlled by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99.9%, exhausting through Stack 2;
- (b) one (1) coated steel rebar manufacturing operation, constructed in 1988, consisting of a rebar fabrication building, designated as Fab Shop, and epoxy coating building, designated as Epoxy Shop, with a maximum capacity of 20 tons of steel rebar per hour, and consisting of the following emission units:
 - (1) one (1) electric oven, constructed in 1988, for heating steel rebar prior to the powder coating booth;
 - (2) one (1) electrostatic powder coating booth, constructed in 1988, utilizing spray application method with a total of twelve (12) spray nozzles, a total maximum coating rate of 75 pounds of powder coating (1:1 ratio of virgin and recycled powder) per hour, with a powder coating transfer efficiency of 50%, and with powder overspray collected by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99.9%, and exhausting to the atmosphere. The collected powder is recycled and reused in the coating booth;
 - (3) two (2) polyurethane surface coating lines, designated as Line 1 and Line 2, constructed in 2005 and 2006, respectively, utilizing spray application a two-part polyurethane coating to steel rebar ends, with each line equipped with two (2) rotating spray guns, each gun equipped with two (2) nozzles, a maximum application rate of forty (40) pounds of polyurethane coating per gun per hour,

and particulate emissions controlled by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99%, and a maximum gas flow rate of three thousand (3,000) actual cubic feet per minute (acfm), exhausting through Stack 1 to the atmosphere;

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Insignificant activities that vent to the indoors consisting of operation or use of the following:
 - (1) equipment for bending and shearing of steel rebar;
 - (2) one (1) bench mounted abrasive saw;
 - (3) hand-held power tools including drills, grinders, saws, other cutting tools;
 - (4) three (3) shielded metal arc welding (SMAW) stations, with a maximum wire usage rate less than 200 pounds of wire per year (SMAW Type 7018);
 - (5) lubricating oils, hydraulic oils, machining oils, and/or machining fluids (including coolants) and associated storage vessels;
 - (6) kerosene space heaters;
 - (7) propane-fueled forklifts;
 - (8) pressurized storage tanks and associated piping for liquid natural gas (LNG) (propane); and
 - (9) paved and unpaved roads and parking lots with public access.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5] [IC 13-15-3-6(a)]

- (a) This permit, F035-21872-00076, 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.3 Term of Conditions [326 IAC 2-1.1-9.5]

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.4 Enforceability [326 IAC 2-8-6]

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.5 Severability [326 IAC 2-8-4(4)]

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.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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.8 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.9 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.10 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

- (b) The annual compliance certification report 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 annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.11 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (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 after issuance of this permit, 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 Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

- (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 or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
 - (g) Operations may continue during an emergency only if the following conditions are met:

- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F035-21872-00076 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.14 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

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 nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

- (B) 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 2-8 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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [IC 13-17-3-2] [IC13-30-3-1]

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 FESOP 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.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [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. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) 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.24 Credible Evidence [326 IAC 2-8-4(3)] [326 IAC 2-8-5] [62 FR 8314] [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

Emissions Limitations and Standards [326 IAC 2-8-4(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 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2] [326 IAC 2-3]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable;
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

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 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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 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.7 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 February 21, 2006. The plan is included as Attachment A.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.9 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 46204-2251

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 2-1.1-1(1).

- (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 [326 IAC 2-8-4(3)]

C.10 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 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.11 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 [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for 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 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for the inability to meet this date.

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

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.13 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.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

- (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 [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.17 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

- (2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (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;
 - (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 maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (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 facility 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 retesting in one-hundred and twenty (120) 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.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (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 within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and 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 46204-2251
- (c) 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.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) 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.

Stratospheric Ozone Protection

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction.

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] - Steel Rebar Surface Coating

- (a) one (1) coated steel rebar manufacturing operation, constructed in 1988, consisting of a rebar fabrication building, designated as Fab Shop, and epoxy coating building, designated as Epoxy Shop, with a maximum capacity of 20 tons of steel rebar per hour, and consisting of the following emission units:
- (1) one (1) electric oven, constructed in 1988, for heating steel rebar prior to the powder coating booth;
 - (2) one (1) electrostatic powder coating booth, constructed in 1988, utilizing spray application method with a total of twelve (12) spray nozzles, a total maximum coating rate of 75 pounds of powder coating (1:1 ratio of virgin and recycled powder) per hour, with a powder coating transfer efficiency of 50%, and with powder overspray collected by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99.9%, and exhausting to the atmosphere. The collected powder is recycled and reused in the coating booth;
 - (3) two (2) polyurethane surface coating lines, designated as Line 1 and Line 2, constructed in 2005 and 2006, respectively, utilizing spray application a two-part polyurethane coating to steel rebar ends, with each line equipped with two (2) rotating spray guns, each gun equipped with two (2) nozzles, a maximum application rate of forty (40) pounds of polyurethane coating per gun per hour, and particulate emissions controlled by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99%, and a maximum gas flow rate of three thousand (3,000) actual cubic feet per minute (acfm), exhausting through Stack 1 to the atmosphere;

(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 2-8-4(1)]

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

Pursuant to 326 IAC 6-3-2(d), particulate from the polyurethane surface coating lines shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, at all times that one or more of the polyurethane surface coating lines are in operation, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.1.2 Particulate Emission Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Particulate matter (PM) emissions from the two (2) polyurethane surface coating lines shall not exceed 30.51 pounds per hour combined. Compliance with this limit and the PM limit contained in Condition D.2.2(a) in combination with the potential PM emissions from the powder coating booth and insignificant activities will render 326 IAC 2-2 (PSD) not applicable;
- (b) Particulate matter with a diameter less than ten (10) micrometers (PM10) emissions from the two (2) polyurethane surface coating lines shall not exceed 18.46 pounds per hour combined. Compliance with this limit and the PM10 limit contained in Condition D.2.2(b) in combination with the potential PM10 emissions from the powder coating booth and insignificant activities will satisfy 326 IAC 2-8-4 and will render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the powder coating booth and the two (2) polyurethane surface coating lines and any control devices.

Compliance Determination Requirements

D.1.4 Particulate Control

- (a) In order to comply with Conditions D.1.1 and D.1.2, the baghouse for PM and PM10 control shall be in operation at all times that either of the two (2) polyurethane surface coating lines is in operation.
- (b) Particulate from the powder coating booth shall be controlled by the baghouse at all times that the powder coating booth is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.5 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within one hundred and eighty (180) days after initial startup, in order to demonstrate compliance with Condition D.1.2, the Permittee shall perform PM and PM-10 testing on the two (2) polyurethane surface coating lines stack exhaust utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.6 Visible Emissions Notations

- (a) Visible emission notations of the polyurethane surface coating lines stack exhaust 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.7 Parametric Monitoring

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the powder coating booth, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The Permittee shall record the pressure drop across the baghouse used in conjunction with the polyurethane surface coating lines, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.8 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in either the polyurethane surface coating lines or powder coating booth. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.9 Record Keeping Requirements

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the polyurethane surface coating lines stack exhaust once per day.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain records once per day of the pressure drop during normal operation.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] - Wheelabrator Shot Blaster

- (a) one (1) wheelabrator shot blaster, constructed in 1988, equipped with three blasting wheels, with a total maximum blasting rate of one (1) ton of steel shot per minute, with a maximum throughput of 20 tons of steel rebar per hour, and with particulate emissions controlled by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99.9%, exhausting through Stack 2;

(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 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the shot blaster shall not exceed 4.10 pounds per hour based on a process weight rate equal to 1.0 tons of steel shot per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour}$$

D.2.2 Particulate Emission Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Particulate matter (PM) emissions from the shot blaster shall not exceed 4.10 pounds per hour. Compliance with this limit and the PM limit contained in Condition D.1.2(a) in combination with the potential PM emissions from the powder coating booth and insignificant activities will render 326 IAC 2-2 (PSD) not applicable;
- (b) Particulate matter with a diameter less than ten (10) micrometers (PM10) emissions from the shot blaster shall not exceed 4.10 pounds per hour. Compliance with this limit and the PM10 limit contained in Condition D.1.2(b) in combination with the potential PM10 emissions from the powder coating booth and insignificant activities will satisfy 326 IAC 2-8-4 and will render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the shot blaster and any control devices.

Compliance Determination Requirements

D.2.4 Particulate Control

- (a) In order to comply with Conditions D.2.1 and D.2.2, particulate from the shot blaster shall be controlled by the baghouse at all times that the shot blaster is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.5 Visible Emissions Notations

- (a) Visible emission notations of the shot blaster stack exhaust 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.2.6 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the shot blaster, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.7 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in either the shot blaster. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.8 Record Keeping Requirements

- (a) To document compliance with Condition D.2.5, the Permittee shall maintain records of visible emission notations of the shot blaster stack exhaust once per day.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain records once per day of the pressure drop during normal operation.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Gerdau Ameristeel - Muncie Coating
Source Address: 1610 South Macedonia Avenue, Muncie, IN 47302
Mailing Address: 1810 South Macedonia Avenue, Muncie, IN 47302
FESOP No.: F035-21872-00076

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) _____
- Report (specify) _____
- Notification (specify) _____
- Affidavit (specify) _____
- Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-5674
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Gerdau Ameristeel - Muncie Coating
Source Address: 1610 South Macedonia Avenue, Muncie, IN 47302
Mailing Address: 1810 South Macedonia Avenue, Muncie, IN 47302
FESOP No.: F035-21872-00076

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

| |
|---|
| Facility/Equipment/Operation: |
| Control Equipment: |
| Permit Condition or Operation Limitation in Permit: |
| Description of the Emergency: |
| Describe the cause of the Emergency: |

If any of the following are not applicable, mark N/A

Page 2 of 2

| |
|---|
| Date/Time Emergency started: |
| Date/Time Emergency was corrected: |
| Was the facility being properly operated at the time of the emergency? Y N Describe: |
| Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other: |
| Estimated amount of pollutant(s) emitted during emergency: |
| Describe the steps taken to mitigate the problem: |
| Describe the corrective actions/response steps taken: |
| Describe the measures taken to minimize emissions: |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Gerdau Ameristeel - Muncie Coating
Source Address: 1610 South Macedonia Avenue, Muncie, IN 47302
Mailing Address: 1810 South Macedonia Avenue, Muncie, IN 47302
FESOP No.: F035-21872-00076

Months: _____ **to** _____ **Year:** _____

| | |
|---|-------------------------------|
| <p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p> | |
| <input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD. | |
| <input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |

| | |
|--|-------------------------------|
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

ATTACHMENT A

FUGITIVE DUST CONTROL PLAN

Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:

- (a) Paved roads and parking lots:
 - (1) cleaning by vacuum sweeping on an as needed basis;
 - (2) flushing on an as needed basis;
 - (3) power brooming while wet either from rain or application of water on an as needed basis.

- (b) Unpaved roads and parking lots:
 - (1) treating with emulsified asphalt (or other suitable and effective oil or chemical dust suppressant approved by IDEM OAQ) on an as needed basis;
 - (2) treating with water on an as needed basis;

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

Technical Support Document (TSD) for a New Source Construction Permit
and a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name: Gerdau Ameristeel - Muncie Coating
Source Location: 1610 South Macedonia Avenue, Muncie, IN 47302
County: Delaware
SIC Code: 3449 (Manufacturing of Miscellaneous Structural Metal Work)
Operation Permit No.: 035-21872-00076
Reviewer: Nathan C. Bell

On October 17, 2005, the Office of Air Quality (OAQ) received an application from Gerdau Ameristeel - Muncie Coating relating to the construction and operation of a stationary coated steel rebar manufacturing plant (coating, bending, and shearing).

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (a) one (1) wheelabrator shot blaster, constructed in 1988, equipped with three blasting wheels, with a total maximum blasting rate of one (1) ton of steel shot per minute, with a maximum throughput of 20 tons of steel rebar per hour, and with particulate emissions controlled by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99.9%, exhausting through Stack 2;
- (b) one (1) polyurethane surface coating line, designated as Line 1, constructed in 2005, utilizing spray application a two-part polyurethane coating to steel rebar ends, equipped with two (2) rotating spray guns, each gun equipped with two (2) nozzles, a maximum application rate of forty (40) pounds of polyurethane coating per gun per hour, and particulate emissions controlled by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99%, and a maximum gas flow rate of three thousand (3,000) actual cubic feet per minute (acfm), exhausting through Stack 1 to the atmosphere;
- (c) Insignificant activities that vent to the indoors consisting of operation or use of the following:
 - (1) equipment for bending and shearing of steel rebar;
 - (2) one (1) bench mounted abrasive saw;
 - (3) hand-held power tools including drills, grinders, saws, other cutting tools;
 - (4) three (3) shielded metal arc welding (SMAW) stations, with a maximum wire usage rate less than 200 pounds of wire per year (SMAW Type 7018);
 - (5) lubricating oils, hydraulic oils, machining oils, and/or machining fluids (including coolants) and associated storage vessels;

- (6) kerosene space heaters;
- (7) propane-fueled forklifts;
- (8) pressurized storage tanks and associated piping for liquid natural gas (LNG) (propane); and
- (9) paved and unpaved roads and parking lots with public access.

Unpermitted Emission Units and Pollution Control Equipment

The following unpermitted facilities operating at this source during this review process.

- (a) one (1) coated steel rebar manufacturing operation, constructed in 1988, consisting of a rebar fabrication building, designated as Fab Shop, and epoxy coating building, designated as Epoxy Shop, with a maximum capacity of 20 tons of steel rebar per hour, and consisting of the following emission units:
 - (1) one (1) electric oven, constructed in 1988, for heating steel rebar prior to the powder coating booth;
 - (2) one (1) electrostatic powder coating booth, constructed in 1988, utilizing spray application method with a total of twelve (12) spray nozzles, a total maximum coating rate of 75 pounds of powder coating (1:1 ratio of virgin and recycled powder) per hour, with a powder coating transfer efficiency of 50%, and with powder overspray collected by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99.9%, and exhausting to the atmosphere. The collected powder is recycled and reused in the coating booth;

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following:

- (a) one (1) polyurethane surface coating line, designated as Line 2, to be constructed in 2006, utilizing spray application a two-part polyurethane coating to steel rebar ends, equipped with two (2) rotating spray guns, each gun equipped with two (2) nozzles, a maximum application rate of forty (40) pounds of polyurethane coating per gun per hour, and particulate emissions controlled by one (1) baghouse equipped with twelve (12) Torit cartridge filters, with a control efficiency of 99%, and a maximum gas flow rate of three thousand (3,000) actual cubic feet per minute (acfm), exhausting through Stack 1 to the atmosphere;

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Experimental Trial Exemption No. 035-21734-00076, issued on September 28, 2005, for experimental production of polyurethane coated rebar ends;
- (b) Source Specific Operating Agreement No. 035-21767-00076, issued on October 3, 2005, for Abrasive Cleaning Operations under 326 IAC 2-9-5.

All terms and conditions from previous approvals were incorporated into this FESOP.

Enforcement Issue

IDEM is aware that equipment at this source has been constructed and/or operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the heading Unpermitted Emission Units and Pollution Control Equipment.

IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Stack Summary

| Stack ID | Operation | Height (ft) | Diameter (ft) | Flow Rate (acfm) | Temperature (°F) |
|----------|-----------------------------|-------------|------------------|------------------|------------------|
| Stack 1 | Rebar coating lines 1 and 2 | NA | NA | 3,000 | 70 |
| Stack 2 | Wheelabrator shot blaster | 15.0 | 2.0 ft x 0.66 ft | 9,450 | 70 |

NA = not available

Air Pollution Control Justification as an Integral Part of the Process

The company had submitted the following justification for considering the powder coating recovery system as an integral part of the powder coating booth:

The powder coating recovery system, consisting of one baghouse equipped with twelve (12) Torit cartridge filters, should be considered integral to the normal operation of the coating booth, since there is significant economic benefit gained by collecting and re-using the powder coating. The total initial capital cost of the powder coating booth is approximately \$54,100 and the total annual operational cost for the powder coating recovery system is approximately \$59,200. The powder coating has a minimum unit cost of \$3.47 per pound and is recovered and re-used at a rate of 37.5 pounds per hour. Based on 6000 hours of actual operation per year, the cost savings accrued each year from recovering the powder coating is \$780,750. These annual cost savings cover the initial capital cost and annual operational costs and provide significant economic benefit each year to Gerdau Ameristeel.

IDEM, OAQ has evaluated the justification and agreed that the baghouse will be considered as an integral part of the coating booth based on significant economic benefit. Therefore, the permitting level will be determined using the potential to emit after the baghouse. Particulate from the coating booth shall be controlled by the baghouse at all times that the coating booth is in operation.

Recommendation

The staff recommends to the Commissioner that the application be approved as a FESOP. 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.

An application for the purposes of this review was received on October 17, 2005. Additional information was submitted by the source on December 1, 2005, January 18, 2006, January 19, 2006, January 20, 2006, January 23, 2006, and February 21, 2006.

Emission Calculations

- (a) See Appendix A of this TSD for detailed emissions calculations (Appendix A, pages 1 through 5).
- (b) Based on information provided by the source, there are negligible emissions of regulated criteria pollutants and hazardous air pollutants from the insignificant activities (i.e., electric oven, bending/shearing equipment, abrasive saw, operation of hand-held power tools, kerosene space heaters, operation of propane-fueled forklifts, and storage of liquid natural gas (propane))
- (c) Using the Environmental Protection Agency's (EPA) TANKS Version 4.09b program, it was determined that use and storage of lubricating oils, hydraulic oils, machining oils, and/or machining fluids (including coolants) at this source would have negligible potential emissions of volatile organic compounds (VOCs).

Potential To Emit for Entire Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit (PTE) 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/year) |
|-----------------|-------------------------------|
| PM | 385.6 |
| PM-10 | 380.7 |
| SO ₂ | 0 |
| NO _x | 0 |
| VOC | 0.554 |
| CO | 0 |

| HAPs | Potential To Emit (tons/year) |
|---------------------------------|-------------------------------|
| cobalt | negligible |
| chromium | 1.41 |
| manganese | negligible |
| nickel | negligible |
| lead | 5.62 |
| methylene diphenyl diisocyanate | 0.55 |
| TOTAL HAPs | 7.58 |

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of particulate matter with a diameter less than ten (10) micrometers (PM10) is greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source will be issued a FESOP, because the source will limit its emissions below the Title V levels.
- (b) The PTE (as defined in 326 IAC 2-1.1-1(16)) 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, the source is not subject to the provisions of 326 IAC 2-7.

County Attainment Status

The source is located in Delaware County.

| Pollutant | Status |
|-----------------|------------------------------|
| PM10 | Attainment or Unclassifiable |
| PM2.5 | Attainment or Unclassifiable |
| SO ₂ | Attainment |
| NO ₂ | Attainment or Unclassifiable |
| 1-Hour Ozone | Attainment or Unclassifiable |
| 8-Hour Ozone | Basic Nonattainment |
| CO | Attainment or Unclassifiable |
| Lead | Attainment or Unclassifiable |

- (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 standard. Delaware County has been designated as basic 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.
- (b) Delaware County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 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 – Entire Source section.
- (c) Delaware County has been classified as attainment or unclassifiable for all the other regulated 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.
- (d) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 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.

Potential to Emit of Source After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of the FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

| Operation/Process | Potential to Emit After Issuance (tons/year) | | | | | | | Worst Single HAP |
|---|--|----------------------|-----------------|-----------------|----------------------|--------------|---------------------|----------------------------|
| | PM | PM-10 | SO ₂ | NO _x | VOC | CO | Total HAPs | |
| Shot Blaster ⁽¹⁾ | 17.96 ⁽¹⁾ | 17.96 ⁽¹⁾ | 0 | 0 | 0 | 0 | 0 | 0 |
| Powder Coating Booth ⁽²⁾ | 0.164 | 0.164 | 0 | 0 | 0 | 0 | 0.003 | 0.003 (chromium) |
| Polyurethane Surface Coating Lines | 133.64 ⁽¹⁾ | 80.87 ⁽¹⁾ | 0 | 0 | 0.554 ⁽³⁾ | 0 | 7.58 ⁽³⁾ | 5.62 ⁽³⁾ (lead) |
| Insignificant Activities ⁽³⁾ | 0.002 | 0.002 | negl. | negl. | negl. | negl. | negl. | negl. |
| Total PTE After Issuance | 151.77 | 99.00 | negl. | negl. | 0.554 | negl. | 7.58 | 5.62 (lead) |
| Title V Major Threshold Level | NA | 100 | 100 | 100 | 100 | 100 | 25 | 10 |
| PSD Major Threshold Level | 250 | 250 | 250 | NA | NA | 250 | NA | NA |
| Emission Offset Major Threshold Level | NA | NA | NA | 100 | 100 | NA | NA | NA |

NA = Not applicable; negl. = negligible

(1) In order to satisfy 326 IAC 2-8-4 (FESOP) and to render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable, the source has elected to comply with the following limits:

(A) PM and PM10 emissions from the shot blaster shall each not exceed 4.10 pounds per hour, which is equivalent to 17.96 tons per year.

(B) PM emissions from the two (2) polyurethane surface coating lines shall not exceed 30.51 pounds per hour, which is equivalent to 133.64 tons per year.

(C) PM10 emissions from the two (2) polyurethane surface coating lines shall not exceed 18.46 pounds per hour, which is equivalent to 80.87 tons per year.

Compliance with these limits in combination with the potential PM/PM10 emissions from the powder coating booth and insignificant activities will render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable;

(2) controlled potential to emit

(3) uncontrolled/unlimited potential to emit.

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

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 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/year.

This status is based on the potential to emit calculations of the source (see Appendix A).

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart Mmmm, Surface Coating of Miscellaneous Metal Parts and Products (40 CFR Part 63.3880 - 63.3981), because this source is not a major source of HAPs as defined in 40 CFR 63.2.
- (c) This source is not subject to the requirements of 40 CFR 63, Subpart DDDDD, (63.7480 through 63.7575), NESHAPs for Industrial, Commercial, and Institutional Boilers and Process Heaters, because the source is not a major source of HAPs.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in the permit for this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The requirements of 326 IAC 2-2 (PSD) are not applicable to this source, since this source will be constructed after the applicability date of August 7, 1977, it is not one of the 28 listed source categories defined in 326 IAC 2-2-1(gg)(1), no major modifications were done to this source, and the potential to emit of all attainment regulated pollutants is less than, or limited to less than, 250 tons per year. The source has elected to comply with the following limits:

- (a) PM and PM10 emissions from the shot blaster shall each not exceed 4.10 pounds per hour, which is equivalent to 17.96 tons per year.
- (b) PM emissions from the two (2) polyurethane surface coating lines shall not exceed 30.51 pounds per hour combined, which is equivalent to 133.64 tons per year combined.
- (c) PM10 emissions from the two (2) polyurethane surface coating lines shall not exceed 18.46 pounds per hour combined, which is equivalent to 80.87 tons per year combined.

Compliance with these limits in combination with the potential PM/PM10 emissions from the powder coating booth and insignificant activities will render 326 IAC 2-2 (PSD) not applicable.

326 IAC 2-3 (Emission Offset)

The requirements of 326 IAC 2-3 (Emission Offset) apply to major sources or major modifications constructed in an area designated as non-attainment. This source will be constructed in Delaware County, which has been designated as basic nonattainment for the 8-hour ozone standard. The uncontrolled potential to emit of VOC and NOx are each less than 100 tons per year. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

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

The requirements of 326 IAC 2-4.1 are not applicable to this source, since 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.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is located in Delaware County, it is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, and it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year.

326 IAC 2-8-4 (FESOP)

In order to satisfy 326 IAC 2-8-4 (FESOP) and to render 326 IAC 2-7 (Part 70 Permits) not applicable, the source has elected to comply with the following limits:

- (a) PM10 emissions from the shot blaster shall not exceed 4.10 pounds per hour, which is equivalent to 17.96 tons per year.
- (b) PM10 emissions from the two (2) polyurethane surface coating lines shall not exceed 18.46 pounds per hour combined, which is equivalent to 80.87 tons per year combined.

Compliance with these limits in combination with the potential PM10 emissions from the powder coating booth and insignificant activities will satisfy 326 IAC 2-8-4 (FESOP) and will render 326 IAC 2-7 (Part 70 Permits) not applicable.

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:

- (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 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.

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

This source is subject to 326 IAC 6-5, since it is a new source of fugitive particulate matter emissions, requiring a permit as set forth in 326 IAC 2, and which has not received all the necessary preconstruction approvals before December 13, 1985. Pursuant to 326 IAC 6-5, a fugitive dust control plan must be submitted, reviewed and approved. The fugitive dust control plan for this source includes the following:

Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:

- (a) Paved roads and parking lots:
 - (1) cleaning by vacuum sweeping on an as needed basis;
 - (2) flushing on an as needed basis;
 - (3) power brooming while wet either from rain or application of water on an as needed basis.

- (b) Unpaved roads and parking lots:
 - (1) treating with emulsified asphalt (or other suitable and effective oil or chemical dust suppressant approved by IDEM OAQ) on an as needed basis;
 - (2) treating with water on an as needed basis;

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable, since each of the emission units at this source does not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

State Rule Applicability - Wheelabrator Shot Blaster

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

The requirements of 326 IAC 6-3 are applicable to the shot blaster. Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the shot blaster shall not exceed 4.10 pounds per hour based on a process weight rate equal to 1.0 tons of steel shot per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour}$$

In order to comply with the allowable rate of emission, particulate from the shot blaster shall be controlled by the baghouse at all times that the shot blaster is in operation.

State Rule Applicability - Powder Coating Booth

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

Pursuant to 326 IAC 6-3-1(b)(14), the powder coating booth is exempt from the requirements of 326 IAC 6-3, because it has a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour. IDEM, OAQ has agreed that the baghouse will be considered as an integral part of the powder coating booth and the potential to emit particulates (PM/PM10) will be determined after the baghouse.

Since the baghouse is considered an integral part of the powder coating booth and is necessary to comply with the requirements of 326 IAC 6-3-2, particulate from the powder coating booth shall be controlled by the baghouse at all times that the powder coating booth is in operation.

326 IAC 8-2-9 (Volatile Organic Compounds, Miscellaneous Metal Coating Operations)

Pursuant to 326 IAC 8-2-1(a)(2) and 326 IAC 8-2-1(a)(4) (Applicability) and 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), this rule applies to facilities constructed after November 1, 1980 located in any county, and with potential VOC emissions of greater than twenty-five (25) tons per year or facilities constructed after July 1, 1990 located in any county, and with actual VOC emissions of greater than fifteen (15) pounds per day before add-on controls. The one (1) powder coating booth is not subject to the requirements of 326 IAC 8-2-9 because spray application of the dry powder coatings does not emit VOCs.

State Rule Applicability - Polyurethane Surface Coating Lines

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

The two (2) polyurethane surface coating lines each have potential particulate emissions that are greater than five hundred fifty-one thousandths (0.551) pound per hour and each have the potential to use greater than five (5) gallons per day of surface coatings. Therefore, the requirements of 326 IAC 6-3-2 are applicable to each of the coating lines. Pursuant to 326 IAC 6-3-2(d), particulate from the polyurethane surface coating lines shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, at all times that one or more of the polyurethane surface coating lines are in operation, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

326 IAC 8-2-9 (Volatile Organic Compounds, Miscellaneous Metal Coating Operations)

Pursuant to 326 IAC 8-2-1(a)(2) and 326 IAC 8-2-1(a)(4) (Applicability) and 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), this rule applies to facilities constructed after November 1, 1980 located in any county, and with potential VOC emissions of greater than twenty-five (25) tons per year or facilities constructed after July 1, 1990 located in any county, and with actual VOC emissions of greater than fifteen (15) pounds per day before add-on controls. The requirements of 326 IAC 8-2-9 are not applicable to each of the facilities performing surface coating of metal at this source, since they each have potential VOC emissions less than twenty-five (25) tons per year and actual VOC emissions less than fifteen (15) pounds per day before add-on controls.

State Rule Applicability - Bending, Shearing, Drilling, Grinding, Cutting Equipment

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

Pursuant to 326 IAC 6-3-1(b)(14), equipment at this source used for bending, shearing, drilling, grinding, and/or cutting of metal are each exempt from the requirements of 326 IAC 6-3, because they each have a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

State Rule Applicability - Welding Operations

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

Pursuant to 326 IAC 6-3-1(b)(9), each of the three (3) shielded metal arc welding (SMAW) stations is exempt from the requirements of 326 IAC 6-3, because the potential to consume welding wire for each of the welders is less than six hundred twenty-five (625) pounds per day.

State Rule Applicability - Fuel Combustion

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

Pursuant to 326 IAC 6-3-1(b)(14), the kerosene space heaters are each exempt from the requirements of 326 IAC 6-3, because they each have a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The kerosene space heaters are each not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

Testing Requirements

- (a) Within one hundred and eighty (180) days after initial startup, in order to demonstrate compliance with 326 IAC 2-8-4 (FESOP) and 326 IAC 2-2 (PSD), the Permittee shall perform PM and PM-10 testing on the two (2) polyurethane surface coating lines stack exhaust utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

- (a) The powder coating booth has applicable compliance monitoring requirements as specified below:
 - (1) The Permittee shall record the pressure drop across the baghouse used in conjunction with the powder coating booth, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

- (2) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (3) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the powder coating booth. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (4) Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

These monitoring conditions are necessary because the process must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-8-4 (FESOP), and 326 IAC 2-2 (PSD).

- (b) The two (2) polyurethane surface coating lines have applicable compliance monitoring requirements as specified below:
 - (1) Visible emission notations of the polyurethane surface coating lines stack exhaust 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. 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. 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. 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. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
 - (2) The Permittee shall record the pressure drop across the baghouse used in conjunction with the polyurethane surface coating lines, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
 - (3) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations

may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (4) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the polyurethane surface coating lines. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (3) Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

These monitoring conditions are necessary because the baghouse must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-8-4 (FESOP), and 326 IAC 2-2 (PSD).

- (c) The one (1) wheelabrator shot blaster has applicable compliance monitoring requirements as specified below:

- (1) Visible emission notations of the shot blaster stack exhaust 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. 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. 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. 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. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
- (2) The Permittee shall record the pressure drop across the baghouse used in conjunction with the shot blaster, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (3) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (4) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the shot blaster. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (3) Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

These monitoring conditions are necessary because the baghouse must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-8-4 (FESOP), and 326 IAC 2-2 (PSD).

Conclusion

The construction and operation of this source shall be subject to the conditions of the attached New Source Construction Permit and Federally Enforceable State Operating Permit (FESOP) No 035-21872-00076.

**Appendix A: Emissions Calculations
Emission Summary**

Company Name: Gerdau Ameristeel - Muncie Coating
Address City IN Zip: 1610 S. Macedonia Ave, Muncie, IN 47302
Permit Number: 035-21872
Plt ID: 035-00076
Reviewer: Nathan C. Bell
Date: March 15, 2005

| Uncontrolled Potential Emissions (tons/year) | | | | | | |
|---|---------------------------------|----------------|-------------------|----------------|----------------------|-------------|
| Emissions Generating Activity | | | | | | |
| Category | Pollutant | Welding | Abrasive Blasting | Powder Coating | Polyurethane Coating | TOTAL |
| Criteria Pollutants | PM | 1.8E-03 | 35.04 | 0.164 | 350.4 | 385.6 |
| | PM10 | 1.8E-03 | 30.13 | 0.164 | 350.4 | 380.7 |
| | SO2 | | | | | 0 |
| | NOx | | | | | 0 |
| | VOC | | | | 0.554 | 0.554 |
| | CO | | | | | 0 |
| Hazardous Air Pollutants | cobalt | 1.0E-07 | | | | 1.0E-07 |
| | chromium | 6.0E-07 | | 3.4E-03 | 1.41 | 1.41 |
| | manganese | 1.0E-04 | | | | 1.0E-04 |
| | nickel | 2.0E-07 | | | | 2.0E-07 |
| | lead | | | | 5.62 | 5.62 |
| | methylene diphenyl diisocyanate | | | | 0.55 | 0.55 |
| | Totals | 1.0E-04 | 0.00 | 3.4E-03 | 7.58 | 7.58 |
| Worse Case HAP | | | | | | 5.62 |

Total emissions based on rated capacity at 8,760 hours/year.

| Controlled Potential Emissions (tons/year) | | | | | | |
|---|---------------------------------|----------------|-------------------|----------------|----------------------|--------------|
| Emissions Generating Activity | | | | | | |
| Category | Pollutant | Welding | Abrasive Blasting | Powder Coating | Polyurethane Coating | TOTAL |
| Criteria Pollutants | PM | 1.8E-03 | 0.035 | 0.164 | 3.50 | 3.71 |
| | PM10 | 1.8E-03 | 0.030 | 0.164 | 3.50 | 3.70 |
| | SO2 | | | | | 0 |
| | NOx | | | | | 0 |
| | VOC | | | | 0.554 | 0.554 |
| | CO | | | | | 0 |
| Hazardous Air Pollutants | cobalt | 1.0E-07 | | | | 1.0E-07 |
| | chromium | 6.0E-07 | | 3.4E-03 | 0.014 | 0.017 |
| | manganese | 1.0E-04 | | | | 1.0E-04 |
| | nickel | 2.0E-07 | | | | 2.0E-07 |
| | lead | | | | 0.056 | 0.056 |
| | methylene diphenyl diisocyanate | | | | 0.554 | 0.554 |
| | Totals | 1.0E-04 | 0.00 | 3.4E-03 | 0.624 | 0.628 |
| Worse Case HAP | | | | | | 0.554 |

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emissions Calculations
Welding Operations**

**Company Name: Gerdau Ameristeel - Muncie Coating
Address City IN Zip: 1610 S. Macedonia Ave, Muncie, IN 47302
Permit Number: 035-21872
Plt ID: 035-00076
Reviewer: Nathan C. Bell
Date: March 15, 2005**

Particulate Matter (PM) and Hazardous Air Pollutants (HAPs)

| PROCESS | Number of Stations | Max. electrode consumption per station (lbs/hr) | Max. electrode consumption per station (lbs/day) | Max. electrode consumption (lbs/year) | EMISSION FACTORS* (lb pollutant/lb electrode) | | | | | EMISSIONS (lbs/hr) | | | | | HAPS (lbs/hr) |
|------------------------------------|--------------------|---|--|---------------------------------------|--|---------|---------|----------|---------|-----------------------|---------|---------|---------|---------|------------------|
| | | | | | PM/PM10 | Cr | Co | Mn | Ni | PM /PM10 | Cr | Co | Mn | Ni | |
| Shielded Metal Arc Welding (E7018) | 3 | 0.0076 | 0.2 | 200 | 1.84E-02 | 6.0E-06 | 1.0E-06 | 1.03E-03 | 2.0E-06 | 4.2E-04 | 1.4E-07 | 2.3E-08 | 2.3E-05 | 4.6E-08 | 2.4E-05 |

Abbreviations

Cr = Chromium Mn = Manganese
Co = Cobalt Ni = Nickel

| | | | | | | |
|--|---------|---------|---------|---------|---------|---------|
| Total Potential Emissions lbs/hr | 4.2E-04 | 1.4E-07 | 2.3E-08 | 2.3E-05 | 4.6E-08 | 2.4E-05 |
| Total Potential Emissions lbs/day | 1.0E-02 | 3.3E-06 | 5.5E-07 | 5.6E-04 | 1.1E-06 | 5.7E-04 |
| Total Potential Emissions tons/year | 1.8E-03 | 6.0E-07 | 1.0E-07 | 1.0E-04 | 2.0E-07 | 1.0E-04 |

METHODOLOGY

Welding emissions, lb/hr: (# of stations) * (max. lbs of electrode used/hr/station) * (emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

**Appendix A: Emission Calculations
Wheelabrator Shot Blaster**

**Company Name: Gerdau Ameristeel - Muncie Coating
Address City IN Zip: 1610 S. Macedonia Ave, Muncie, IN 47302
Permit Number: 035-21872
Plt ID: 035-00076
Reviewer: Nathan C. Bell
Date: March 15, 2005**

Emission Factors for Abrasives (Stappa/Alapco, 1991)

| Abrasive | Emission Factor | |
|------------|-----------------------|--------------------|
| | lb PM/ lb abrasive | lb PM-10/ lb PM |
| Sand | 0.041 | 0.7 |
| Grit | 0.01 | 0.7 |
| Steel Shot | 0.004 | 0.86 |
| Other | 0.01 | |

Potential To Emit (tons/yr)

| Emission Unit | Total Maximum Blasting Rate (lbs/hr) | Type of Blasting Media | Uncontrolled PTE of PM (tons/yr) | Uncontrolled PTE of PM10 (tons/yr) | PM/PM10 Collection Efficiency (%) | Controlled PTE of PM (tons/yr) | Controlled PTE of PM10 (tons/yr) |
|---------------------------|--------------------------------------|------------------------|----------------------------------|------------------------------------|-----------------------------------|--------------------------------|----------------------------------|
| Wheelabrator Shot Blaster | 2000 | Steel Shot | 35.04 | 30.13 | 99.9% | 0.0350 | 0.0301 |

Methodology:

Uncontrolled PTE of PM (ton/yr) = Total Maximum Blasting Rate (lb/hr) * Emission Factor (lb PM/lb abrasive) * (8,760 hr/yr) * (1 ton/2,000 lb)

Uncontrolled PTE of PM10 (ton/yr) = Uncontrolled PTE of PM (ton/yr) * (0.86 lb PM10/lb PM)

Controlled PTE (ton/yr) = Uncontrolled PTE (ton/yr) * (1 - control efficiency)

Emission Factors are from Stappa/Alapco, 1991, Section 3, "Abrasive Blasting"

Compliance with 326 IAC 6-3-2:

| | |
|--|-------------------------------|
| Allowable Emissions, $E = 4.10 * P^{0.67}$ (for weight rates up to 60,000 lb/hr) | |
| where | E = emissions in lbs/hr |
| | P = process weight in tons/hr |
| | P = 2000 lbs/hr |
| | = 1.00 tons/hr |
| Allowable PM Emissions, E = | 4.10 lbs/hr |
| | = 98.4 lbs/day |
| | = 18.0 tons/yr |
| The use of baghouses ensure compliance with the limit above. | |

**Appendix A: Emissions Calculations
Powder Coating Booth**

Company Name: Gerdau Ameristeel - Muncie Coating
Address City IN Zip: 1610 S. Macedonia Ave, Muncie, IN 47302
Permit Number: 035-21872
Plt ID: 035-00076
Reviewer: Nathan C. Bell
Date: March 15, 2005

Particulate Matter (PM/PM10)

| Process | Maximum Material Usage (lbs/hr per nozzle) | Number of Nozzles | Total Maximum Material Usage (lbs/hr) | Worse Case Transfer Efficiency | Baghouse Control Efficiency | PTE of PM/PM10 After Baghouse (lbs/hr)* | PTE of PM/PM10 After Baghouse (tons/yr)* |
|----------------------|--|-------------------|---------------------------------------|--------------------------------|-----------------------------|---|--|
| Powder Coating Booth | 6.25 | 12 | 75.0 | 50.0% | 99.9% | 0.038 | 0.164 |

*IDEM, OAQ has agreed that the powder coating recovery system will be considered as an integral part of the powder coating booth and the potential to emit particulate (PM/PM10) will be determined after the dust collectors.

Hazardous Air Pollutants (HAPs)

| Process | PTE of PM/PM10 After Dust Collectors (tons/yr)* | Weight % Chromium | PTE of Chromium (tons/yr) |
|----------------------|---|-------------------|---------------------------|
| Powder Coating Booth | 0.16 | 2.05% | 3.4E-03 |

Methodology

PTE PM/PM10 After Dust Collectors (lbs/hr) = Total Maximum Material Usage (lbs/hr) * Transfer Efficiency * (1 - Control Efficiency)
PTE PM/PM10 After Dust Collectors (tons/yr) = PTE After Dust Collectors (lbs/hr) * 8760 hr/yr * 1 ton/2,000 lbs
PTE of HAPs After Dust Collectors (tons/yr) = PTE of PM/PM10 After Dust Collectors (tons/yr) * Weight % HAP

Compliance with 326 IAC 6-3-2:

| |
|---|
| <p>Allowable Emissions, $E = 4.10 * P^{0.67}$ (for weight rates up to 60,000 lb/hr)</p> <p>where E = emissions in lbs/hr P = process weight in tons/hr P = <input type="text" value="40000"/> lbs/hr = <input type="text" value="20.00"/> tons/hr</p> <p>Allowable PM Emissions, E = <input type="text" value="30.51"/> lbs/hr = <input type="text" value="732.3"/> lbs/day = <input type="text" value="133.6"/> tons/yr</p> <p align="center">The use of dust collectors ensure compliance with the limit above.</p> |
|---|

**Appendix A: Emission Calculations
Polyurethane Coating**

**Company Name: Gerdau Ameristeel - Muncie Coating
Address City IN Zip: 1610 S. Macedonia Ave, Muncie, IN 47302
Permit Number: 035-21872
Plt ID: 035-00076
Reviewer: Nathan C. Bell
Date: March 15, 2005**

Potential Emissions of MDI (VOC/HAP)

Equation 8.4-23 (EIIIP, 2005)*:

$$Ex = \frac{Px * Fnc * Mx * 60 * OH * P_r}{R * T * F_r - \sum(Px)}$$

$$Px = Px,sat * Sx$$

where:

Px,sat = 3.99E-03 = Vapor Pressure (mmHg) of MDI at process temperature

7.72E-05 = Vapor Pressure (psia) of MDI at process temperature

Sx = 0.25 = Saturation Factor (0.25 for flow rates greater than 100 cfm)

Px = 1.93E-05 = Partial Pressure (psia) of MDI at process temperature and flow ra

where: Ex = Potential to Emit (PTE) of MDI (lbs/yr)

P_r = 14.70 = Total System Pressure (psia)

Fnc = 750 = Flow rate for each exhaust hood (cfm)**

MW = 250.26 = Molecular Weight (lb/lbmol) of MD

OH = 8760 = Potential hours of operation per year

T_{proc} = 180 = Process Temperature (oF)**

640.67 = Process Temperature (oR)

R = 10.73 = Universal Gas Constant (psia ft³/lbmol oR)

Potential Emissions of Volatile Organic Compounds (VOCs), Hazardous Air Pollutants (HAPs), and Particulate Matter (PM/PM10)

| Line | Operation | Material | Maximum Usage (lbs/hr) | Weight % Solids | Transfer Efficiency | Weight % Lead | Weight % Chromium | PTE of MDI, (VOC/HAP) (lbs/yr)* | PTE of MDI (VOC/HAP) (tons/yr)* | PTE of PM/PM10 (lbs/hr) | PTE of PM/PM10 (tons/yr) | PTE of Lead (tons/yr) | PTE of Chromium (tons/yr) |
|---|-----------|--------------------|------------------------|-----------------|---------------------|---------------|-------------------|---------------------------------|---------------------------------|-------------------------|--------------------------|-----------------------|---------------------------|
| 1 | Hood 1 | Chemthane 6200 A/B | 40.0 | 100% | 50% | 1.60% | 0.40% | 277.0 | 0.14 | 20.0 | 87.6 | 1.4E+00 | 3.5E-01 |
| 1 | Hood 2 | Chemthane 6200 A/B | 40.0 | 100% | 50% | 1.60% | 0.40% | 277.0 | 0.14 | 20.0 | 87.6 | 1.4E+00 | 3.5E-01 |
| 2 | Hood 1 | Chemthane 6200 A/B | 40.0 | 100% | 50% | 1.60% | 0.40% | 277.0 | 0.14 | 20.0 | 87.6 | 1.4E+00 | 3.5E-01 |
| 2 | Hood 2 | Chemthane 6200 A/B | 40.0 | 100% | 50% | 1.60% | 0.40% | 277.0 | 0.14 | 20.0 | 87.6 | 1.4E+00 | 3.5E-01 |
| Total Uncontrolled Potential to Emit (PTE) = | | | | | | | | 1108.0 | 0.55 | 80.0 | 350.4 | 5.62 | 1.41 |

| | | | | | |
|---|--|--------------|-------------|-------------|-------------|
| Control Efficiency of Baghouse = | | 99.0% | | | |
| Total Controlled Potential to Emit (PTE) = | | 0.80 | 3.50 | 0.06 | 0.01 |

326 IAC 8-2-9 Applicability Based on Actual Hours of Operation

Actual hours of operation per year = 1332 hrs/yr**
 Actual hours of operation per day = 4.4 hrs/day**
 Actual MDI Emissions = 0.14 lbs/day per hood
 Number of hoods = 4 hoods
 Total Actual MDI = 0.56 lbs/day

326 IAC 8-2-9 is not applicable, since VOC less than 15 lbs/day

Compliance with 326 IAC 6-3-2:

Allowable Emissions, E = 4.10 * P^{0.67} (for weight rates up to 60,000 lb/hr)

where E = emissions in lbs/hr

P = process weight in tons/hr

P = 40000 lbs/hr

= 20.0 tons/hr

Allowable PM Emissions, E = 30.51 lbs/hr

= 732.3 lbs/day

= 133.6 tons/yr

The use of a baghouse ensures compliance with the limit above.

METHODOLOGY

MDI = methylene diphenyl diisocyanate (HAP and VOC)

*(EIIIP, 2005): Methods for Estimating Air Emissions from Paint, Ink, and Other Coating Manufacturing Facilities, Document Series Volume II, Chapter 8, February 2005, Final Report. Prepared for the Point Sources Committee, Emission Inventory Improvement Program. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. Research Triangle Park, North Carolina. This document can be found at the following website:

http://www.epa.gov/ttn/chiep/techreport/volume02/ii08_feb2005.pdf

**Information provided by source

Potential Emissions of MDI (tons/yr) = Potential Emissions (lbs/year) * (1 ton/2000 lbs)

PTE of PM/PM10 (lbs/hr) = Maximum Usage (lb/hr) * (Weight % Solids) * (1-Transfer efficiency)

PTE of PM/PM10 (tons/yr) = PTE of PM/PM10 (lbs/hr) * (24 hrs/day) * (365 days/yr) * (1 ton/2000 lbs)

Controlled PTE = Uncontrolled PTE * (1 - Control Efficiency)

Actual MDI Emissions (per hood) (lbs/day) calculated using Equation 8.4-23 above and the actual hours of operation per day.

Total Actual MDI Emissions (lbs/day) = Actual MDI Emissions (lbs/day per hood) * number of hoods

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved and Paved Roads

Company Name: Gerdau Ameristeel - Muncie Coating
Address City IN Zip: 1610 S. Macedonia Ave, Muncie, IN 47302
Permit Number: 035-21872
Pit ID: 035-00076
Reviewer: Nathan C. Bell
Date: March 15, 2005

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 (12/2003).

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) |
|-------------------------------|----------------------------|---|----------------------------------|-----------------------------------|---------------------------------------|--------------------------------------|------------------------------------|-----------------------------------|
| Personal Car/Truck | 12 | 1 | 12 | 3 | 36 | 250 | 0.047 | 0.6 |
| Worksite Car/Truck | 0 | 0 | 0 | 3 | 0 | 250 | 0.047 | 0.0 |
| Semitrailer Truck (rebar in) | 5 | 1 | 5 | 15 | 75 | 400 | 0.076 | 0.4 |
| Semitrailer Truck (rebar out) | 0.5 | 1 | 0.5 | 10 | 5 | 300 | 0.057 | 0.0 |
| Total | | | 17.5 | | 116 | | | 1.0 |

Average Vehicle Weight Per Trip = $\frac{116}{17.5}$ = 2.3 tons/trip
 Average Miles Per Trip = $\frac{1.0}{17.5}$ = 0.06 miles/trip

Maximum Vehicle Mile Traveled (VMT) Per Year
 17.5 trip/day x 0.056 mile/trip x 2 (round trips) x 365 day/yr = 712.0 miles per year

$E_f = k \left[\frac{s}{12} \right]^a \left[\frac{W}{3} \right]^b$ (Equation 1a from AP-42 13.2.2)

| | PM10 | PM30 or TSP | |
|-------------------|------|-------------|--|
| where k = | 1.5 | 4.9 | lb/mi = particle size multiplier (AP-42 Table 13.2.2-2) |
| s = | 5.1 | 5.1 | % = mean percent silt content of typical unpaved roads from AP-42 Table 13.2.2-3 |
| a = | 0.9 | 0.7 | = constant (AP-42 Table 13.2.2-2) |
| W = | 2.3 | 2.3 | tons = average vehicle weight (provided by source) |
| b = | 0.45 | 0.45 | = constant (AP-42 Table 13.2.2-2) |
| E _f = | 0.62 | 2.41 | lb/mile |
| Unmitigated PTE = | 0.22 | 0.86 | tons/yr |

Taking natural mitigation due to precipitation into consideration, $E_{ext} = E_f \left[\frac{365-p}{365} \right]$
 where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

| | PM10 | PM30 or TSP | |
|-----------------|------|-------------|---------|
| Mitigated PTE = | 0.15 | 0.56 | tons/yr |

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 (12/2003).

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) |
|-------------------------------|----------------------------|---|----------------------------------|-----------------------------------|---------------------------------------|--------------------------------------|------------------------------------|-----------------------------------|
| Personal Car/Truck | 22 | 1 | 22 | 3 | 66 | 300 | 0.057 | 1.3 |
| Worksite Car/Truck | 0 | 0 | 0 | 3 | 0 | 300 | 0.057 | 0.0 |
| Semitrailer Truck (rebar in) | 0 | 0 | 0 | 40 | 0 | 400 | 0.076 | 0.0 |
| Semitrailer Truck (rebar out) | 5 | 1 | 5 | 12 | 60 | 250 | 0.047 | 0.2 |
| Total | | | 27 | | 126 | | | 1.5 |

Average Vehicle Weight Per Trip = $\frac{126}{27}$ = 4.7 tons/trip
 Average Miles Per Trip = $\frac{1.5}{27}$ = 0.06 miles/trip

Maximum Vehicle Mile Traveled (VMT) Per Year
 27 trip/day x 0.06 mile/trip x 2 (round trip) x 365 day/yr = 1085.3 miles per year

$E_f = \left[k \left(\frac{sL}{2} \right)^{0.65} \left(\frac{W}{3} \right)^{1.5} - C \right]$ (Equation 1 from AP-42 13.2.1)

| | PM10 | PM30 or TSP | |
|-------------------|---------|-------------|--|
| where k = | 0.016 | 0.082 | lb/mi = particle size multiplier (AP-42 Table 13.2.1-1) |
| W = | 4.7 | 4.7 | tons = average vehicle weight (provided by source) |
| C = | 0.00047 | 0.00047 | lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-3) |
| sL = | 1.4 | 1.4 | g/m ² = Ubiquitous Silt Loading Values of typical paved roads (averaged for whole year) |
| sL (baseline) = | 0.6 | 12 | g/m ² for 12 months (see AP-42 Table 13.2.1-3) |
| sL (winter) = | 2.4 | 4 | g/m ² for 4 months (see AP-42 Table 13.2.1-3) |
| E _f = | 0.02 | 0.13 | lb/mile |
| Unmitigated PTE = | 0.01 | 0.07 | tons/yr |

Taking natural mitigation due to precipitation into consideration, $E_{ext} = E_f \left[\frac{365-p}{365} \right]$
 where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)

| | PM10 | PM30 or TSP | |
|-----------------|---------|-------------|---------|
| Mitigated PTE = | 8.6E-03 | 0.04 | tons/yr |

Total Fugitive Dust Emissions for Unpaved and Paved Roads

| | PM10 | PM30 or TSP | |
|-------------------------|------|-------------|---------|
| Total Unmitigated PTE = | 0.23 | 0.93 | tons/yr |
| Total Mitigated PTE = | 0.15 | 0.61 | tons/yr |