



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: April 16, 2009

RE: Beemsterboer Slag Corporation / 089-27146-00537

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

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

Beemsterboer Slag Corporation
a contractor of ArcelorMittal Indiana Harbor, LLC
3001 Dickey Road, Station 001
East Chicago, Indiana 46312

(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 provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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.

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 2-7 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.

| | |
|--|--|
| Operation Permit No.: T089-27146-00537 | |
| Issued by:  Donald F. Robin, P.E., Section Chief Permits Branch Office of Air Quality | Issuance Date: April 16, 2009 Expiration Date: April 16, 2014 |

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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 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary sinter plant pre-blending operation.

| | |
|------------------------------|---|
| Source Address: | 3001 Dickey Road, Station 001, East Chicago, Indiana 46312 |
| Mailing Address: | 3411 Sheffield Avenue, Hammond, Indiana 46327 |
| General Source Phone Number: | 219-931-7462 |
| SIC Code: | 1422 |
| County Location: | Lake |
| Source Location Status: | Nonattainment for 8-hour ozone standard Nonattainment for PM _{2.5} standard Attainment for all other criteria pollutants |
| Source Status: | Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Major Source, under Nonattainment NSR Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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

- (a) One conveyor feeder, approved for construction in 2009, identified as CF-008, with a maximum capacity of 375 tons per hour;
- (b) One conveyor shuttle, approved for construction in 2009, identified as CS-021, with a maximum capacity of 375 tons per hour;
- (c) One conveyor stacker, approved for construction in 2009, identified as CS-046, with a maximum capacity of 375 tons per hour;
- (d) One screen, approved for construction in 2009, identified as SP-027, with a maximum capacity of 375 tons per hour;
- (e) One conveyor shuttle, approved for construction in 2009, identified as CS-035, with a maximum capacity of 375 tons per hour; and
- (f) One diesel generator, approved for construction in 2009, identified as GS-024, with a maximum capacity of 180 kW.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

- (a) This permit, T089-27146-00537, 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, including any permit shield provided in 326 IAC 2-7-15, 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 2-7-7] [IC 13-17-12]

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 2-7-5(5)]

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 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(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 the "responsible official" as defined by 326 IAC 2-7-1(34). 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 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (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 the "responsible official" 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) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (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 April 15 of each year to:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (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 2-7-5(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 the "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.11 Emergency Provisions [326 IAC 2-7-16]

- (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.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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, and Northwest Regional Office 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: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

- (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
MC 61-53 IGCN 1003
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 2-7-5(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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 2-7-4(c)(9) 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 2-7 and any other applicable rules.
- (g) 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

- (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
- (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

- (a) All terms and conditions of permits established prior to T089-27146-00537 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(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
MC 61-53 IGCN 1003
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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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 2-7-9(a)(3)]
- (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 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

- (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 2-7-4. 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 the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

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

- (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 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 Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) 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 preconstruction approval required by 326 IAC 2-7-10.5 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
MC 61-53 IGCN 1003
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 2-7-20(b),(c), or (e). 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 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(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 2-7-20(c).

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(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 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) 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.21 Source Modification Requirement [326 IAC 2-7-10.5]

- (a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.
- (b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2 and/or 326 IAC 2-3.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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 Part 70 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 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 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 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.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [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) Except as provided in 326 IAC 2-7-19(e), 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.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 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 twenty percent (20%) 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.2 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.3 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.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%) on a three (3) minute average. This includes material transfer to the initial hopper of a material processing facility as defined in 326 IAC 6.8-10-2 or material transfer for transportation within or outside the source property including, but not limited to, the transfer of sinter blend for use at the sinter plant from the following:

- (1) Storage pile to a front end loader;
 - (2) Front end loader to a truck; and
 - (3) Truck to the initial processing point.
- (e) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:
- (1) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.
 - (2) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).
- (f) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (g) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (h) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (i) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (j) Fugitive particulate matter from the material processing facilities shall not exceed ten percent (10%) opacity.
- (k) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (l) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

C.6 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. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 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
MC 61-52 IGCN 1003
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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 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
MC 61-53 IGCN 1003
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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(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 or ninety (90) days of initial start-up, whichever is later. 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
MC 61-53 IGCN 1003
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 the "responsible official" as defined by 326 IAC 2-7-1(34).

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.11 Continuous Compliance Plan [326 IAC 6.8-8]

- (a) Pursuant to 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 6.8-8-7 or applicable procedures in the CCP.
- (b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, if required, to IDEM, OAQ within thirty (30) days of the update.
- (c) Pursuant to 326 IAC 6.8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP, if required, is a violation of 326 IAC 6.8.

C.12 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.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(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 2-7-5] [326 IAC 2-7-6]

C.14 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, MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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.15 Risk Management Plan [326 IAC 2-7-5(12)] [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.16 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (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; and/or
- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (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 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 the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
 - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The emission statement 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.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]
[326 IAC 2-3]

- (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 or ninety (90) days of initial start-up, whichever is later.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain the following records:
- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
- (i) Baseline actual emissions;

- (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

- (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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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
MC 61-53 IGCN 1003
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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
 - (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

- (h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

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 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One conveyor feeder, approved for construction in 2009, identified as CF-008, with a maximum capacity of 375 tons per hour;
- (b) One conveyor shuttle, approved for construction in 2009, identified as CS-021, with a maximum capacity of 375 tons per hour;
- (c) One conveyor stacker, approved for construction in 2009, identified as CS-046, with a maximum capacity of 375 tons per hour;
- (d) One screen, approved for construction in 2009, identified as SP-027, with a maximum capacity of 375 tons per hour;
- (e) One conveyor shuttle, approved for construction in 2009, identified as CS-035, with a maximum capacity of 375 tons per hour; and
- (f) One diesel generator, approved for construction in 2009, identified as GS-024, with a maximum capacity of 180 kW.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD and Nonattainment NSR Minor Limit [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR):

- (a) The total amount of aggregate processed shall not exceed 845,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limitation will ensure that the potential to emit from this modification is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM₁₀ per year, and less than ten (10) tons of PM_{2.5} per year. Therefore, the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) are rendered not applicable.

D.1.2 Particulate Matter Less Than 10 Microns in Diameter (PM₁₀) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), the following emission units shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf) of particulate matter less than ten (10) microns in diameter (PM₁₀):

Storage Piles, Truck Loading & Unloading, Transporting (Road Emissions), Conveyor Feeder (CF-008), Conveyor Shuttle (CS-021), Conveyor Stacker (CS-046), Screen (SP-027), Conveyor Shuttle (CS-035), and Generator (GS-024).

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its emission control devices.

Compliance Determination Requirements

D.1.4 Particulate Control [326 IAC 2-2]

In order to ensure compliance with Conditions D.1.1 and D.1.2, the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the PM, PM₁₀ and PM_{2.5} emissions from the screen and the conveyors. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Conditions D.1.1 and D.1.2. If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the metallurgical material to ensure it has a moisture content greater than 1.5 percent of the process stream by weight. The Permittee shall submit to IDEM, OAQ the method for moisture content analysis for approval.

D.1.5 Particulate Matter (PM) [326 IAC 6.8-10] [326 IAC 2-2]

Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter), compliance with the opacity limits specified in Condition C.5 shall be achieved by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan (FDCP) (included as Attachment A of this permit). If it is determined that the control procedures specified in the FDCP do not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may request that the FDCP be revised and submitted for approval.

Opacity from the activities shall be determined as follows:

- (a) **Paved Roads and Parking Lots**
The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:
 - (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.
 - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.
- (b) **Unpaved Roads and Parking**
The fugitive particulate emissions from unpaved roads shall be controlled by the implementation of a work program and work practice under the fugitive dust control plan.
- (c) **Batch Transfer**
The average instantaneous opacity shall consist of the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume.
- (d) **Continuous Transfer**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9. The opacity readings shall be taken at least four (4) feet from the point of origin.

- (e) **Wind Erosion from Storage Piles**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. The limitations may not apply during periods when application of fugitive particulate control measures are either ineffective or unreasonable due to sustained very high wind speeds. During such periods, the company must continue to implement all reasonable fugitive particulate control measures and maintain records documenting the application of measures and the basis for a claim that meeting the opacity limitation was not reasonable given prevailing wind conditions.
- (f) **Wind Erosion from Exposed Areas**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.
- (g) **Material Transported by Truck or Rail**
Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the in plant transportation requirement.
- (h) **Material Transported by Front End Loader or Skip Hoist**
Compliance with this limitation shall be determined by the average of three (3) opacity readings taken at five (5) second intervals. The three (3) opacity readings shall be taken as follows:
 - (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.
 - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet from the plume approximately and at right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.
- (i) **Material Processing Limitations**
Compliance with all opacity limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 9. Compliance with all visible emissions limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 22. Compliance with all particulate matter limitations from material processing equipments shall be determined using 40 CFR 60, Appendix A, Method 5 or 17.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

D.1.6 Visible Emissions Notations

- (a) Visible emissions notations of the screen and the conveyor transfer points shall be performed once per day during normal daylight operations. A trained employee will 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 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.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.7 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records at the plant of the aggregate input monthly.
- (b) To document compliance with Condition D.1.4, the Permittee shall maintain records of the chemical analysis of the metallurgical material, as needed.
- (c) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the screen and the conveyor transfer points once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (d) Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter):

The source shall keep the following documentation to show compliance with each of its control measures and control practices:
 - (1) A map or diagram showing the location of all emission sources controlled, including the location, identification, length, and width of roadways.
 - (2) For each application of water or chemical solution to roadways, the following shall be recorded:
 - (A) The name and location of the roadway controlled;
 - (B) Application rate;
 - (C) Time of each application;
 - (D) Width of each application;
 - (E) Identification of each method of application;
 - (F) Total quantity of water or chemical used for each application;

- (G) For each application of chemical solution, the concentration and identity of the chemical; and
- (H) The material data safety sheets for each chemical.
- (3) For application of physical or chemical control agents not covered by 326 IAC 6.8-10-1, the following:
 - (A) The name of the agent;
 - (B) Location of application;
 - (C) Application rate;
 - (D) Total quantity of agent used;
 - (E) If diluted, percent of concentration; and
 - (F) The material data safety sheets for each chemical.
- (4) A log recording incidents when control measures were not used and a statement of explanation.
- (5) Copies of all records required by this section shall be submitted to the department within twenty (20) working days of a written request by the department.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.8 Reporting Requirements

- (a) Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter), a quarterly report shall be submitted, stating the following:
 - (1) The dates any required control measures were not implemented.
 - (2) A listing of those control measures.
 - (3) The reasons that the control measures were not implemented.
 - (4) Any corrective action taken.
- (b) A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
- (c) These reports shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. The reports submitted by the Permittee do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Beemsterboer Slag Corporation
Source Address: 3001 Dickey Road, Station 001, East Chicago, Indiana 46312
Mailing Address: 3411 Sheffield Avenue, Hammond, Indiana 46327
Part 70 Permit No.: T089-27146-00537

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:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Beemsterboer Slag Corporation
Source Address: 3001 Dickey Road, Station 001, East Chicago, Indiana 46312
Mailing Address: 3411 Sheffield Avenue, Hammond, Indiana 46327
Part 70 Permit No.: T089-27146-00537

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 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), 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 |
| 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

Part 70 Quarterly Report

Source Name: Beemsterboer Slag Corporation
Source Address: 3001 Dickey Road, Station 001, East Chicago, Indiana 46312
Mailing Address: 3411 Sheffield Avenue, Hammond, Indiana 46327
Part 70 Permit No.: T089-27146-00537
Facility: Sinter Plant Pre-Blending Operation
Parameter: processed aggregate input
Limit: less than 845,000 tons per 12 consecutive month period with compliance demonstrated at the end of each month

QUARTER :

YEAR:

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|---------|------------|--------------------|---------------------|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 PART 70 OPERATING PERMIT
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Beemsterboer Slag Corporation
 Source Address: 3001 Dickey Road, Station 001, East Chicago, Indiana 46312
 Mailing Address: 3411 Sheffield Avenue, Hammond, Indiana 46327
 Part 70 Permit No.: T089-27146-00537

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

Interim Fugitive Dust Control Plan

Beemsterboer Material Handling and Processing Operations

For Sinter Plant at ArcelorMittal Indiana Harbor LLC.
3001 Dickey Road
East Chicago, Indiana 46312

Version 6/25/08

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INTRODUCTION

This plan has been developed at the request of ArcelorMittal Indiana Harbor LLC's Environmental Department. This plan is designed to outline Beemsterboer's control and monitoring measures for fugitive dust.

Beemsterboer will review and update the plan as necessary and a final version of this plan will be submitted as part of their pending Part 70 Permit application and permit conditions, if required.

Beemsterboer will conduct pre-blending of raw materials for ArcelorMittal's Sinter operation. The pre-blending operation will be located approximately 0.5 miles west of the Sinter Plant. Beemsterboer is also consolidating pre-blending operations from other vendors which will also require blending the remaining inventories from the previous vendor operations.

Raw materials will be screened and processed through the plant by tonnage into layers and spread by PLC controlled telescoping conveyor. Each material will be weighed by a conveyor belt scale as it passes through the plant.

ROADS

Beemsterboer will be using plant roads which are covered under ArcelorMittal's fugitive dust plan requirements. However, for any roads that are not under control of ArcelorMittal's and are within the Beemsterboer operating areas, Beemsterboer will implement the following control measures:

- 1) Adhere to the plant speed limit of 20 mph on all paved roads and 10 mph on unpaved roads.
- 2) Roadways will be watered, or dust suppressant materials will be applied, when necessary to control dust during dry periods. A map identifying Beemsterboer operating areas are provided in Appendix 1.
- 3) Beemsterboer will conduct and document daily visible emission notations of the main plant (ArcelorMittal's) haul road used by Beemsterboer (while in operation). If excessive dust is observed, Beemsterboer will call ArcelorMittal personnel to schedule additional watering of the roadway (this will be documented on the daily VE notation sheet).

Beemsterboer will delay implementation of watering/dust suppression when:

- 1) There has been a sufficient amount of rain in the preceding 24-hour period to not warrant control measures (typically 0.1 inches or more).
- 2) When cold weather temperatures prevent watering/dust suppression activities.
- 3) There is snow covering the application areas.
- 4) It is raining or snowing at the time of the scheduled treatment.

MATERIAL HANDLING AND PROCESSING OPERATIONS

Beemsterboer will implement the following control measures for material handling and processing operations:

- 1) The drop distance from which materials are discharged will be kept to a minimum and no higher than 3 feet above the receiving pile or drop location. This is achieved with PLC control conveyors.
- 2) Where practicable and when available, water will be sprayed on the surface of the material being transferred during loading or unloading when necessary.
- 3) Some operations (such as screening) may not be conducive to water application. If high wind conditions are causing excessive dust from these operations, these operations may be suspended or reduced until wind conditions subside.
- 4) Beemsterboer will conduct daily visible emission notations of each material handling and processing operation (while in operation).

Beemsterboer will delay implementation of watering/dust suppression when:

- 1) When the materials contain sufficient moisture.
- 2) There has been a sufficient amount of rain in the preceding 24-hour period to not warrant control measures (typically 0.1 inches or more).
- 3) When cold weather temperatures prevent watering/dust suppression activities.
- 4) There is snow covering the areas of application.
- 5) It is raining or snowing at the time of the scheduled treatment.

RECORDS

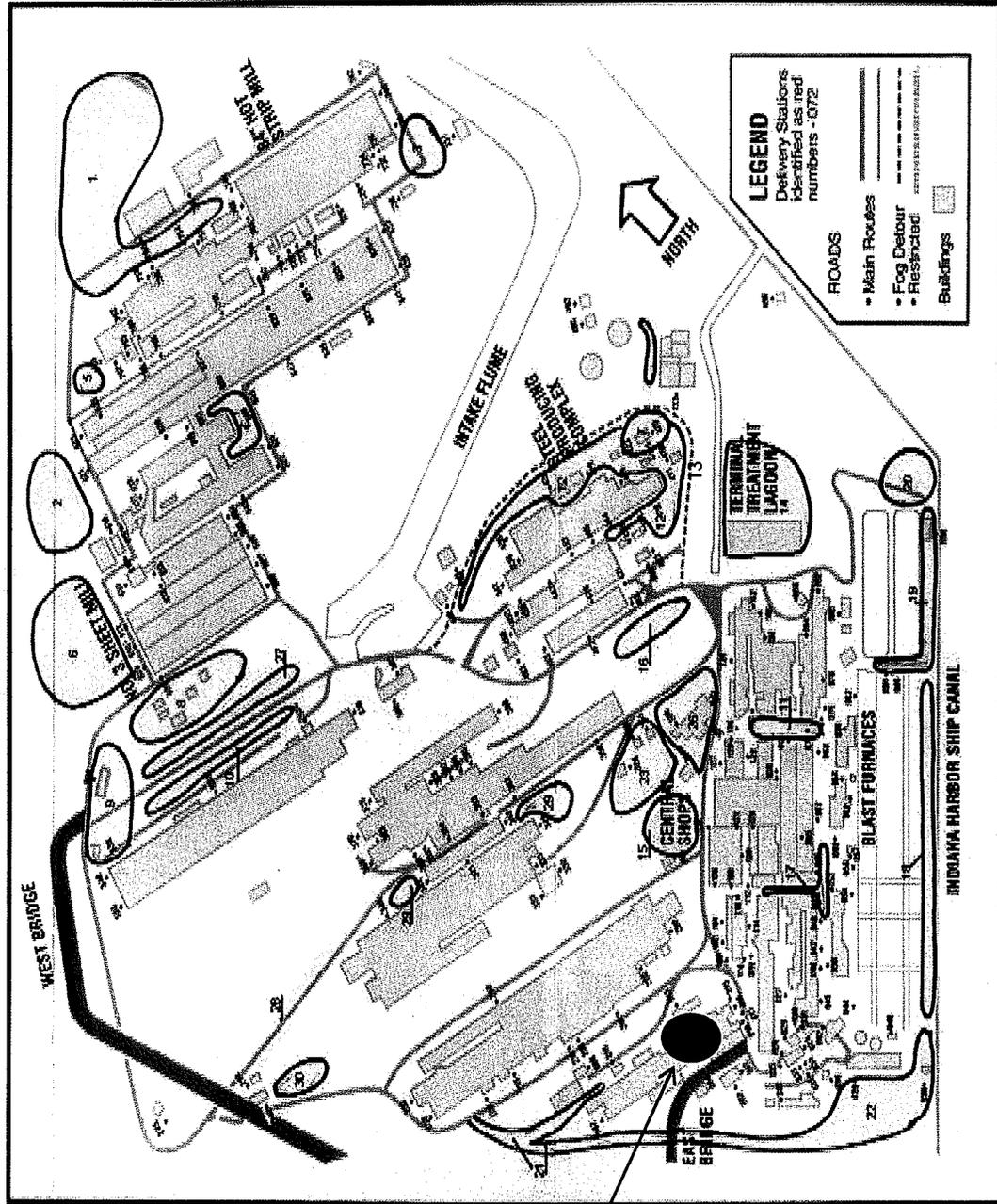
The following information will be kept on site and available for inspection upon request:

- 1) This plan.
- 2) Records of daily visible emission notations.
- 3) Records of water/dust suppressant applications, when called for by Beemsterboer operators.
- 4) A log recording incidents when control measures were not used, explanation and corrective actions.

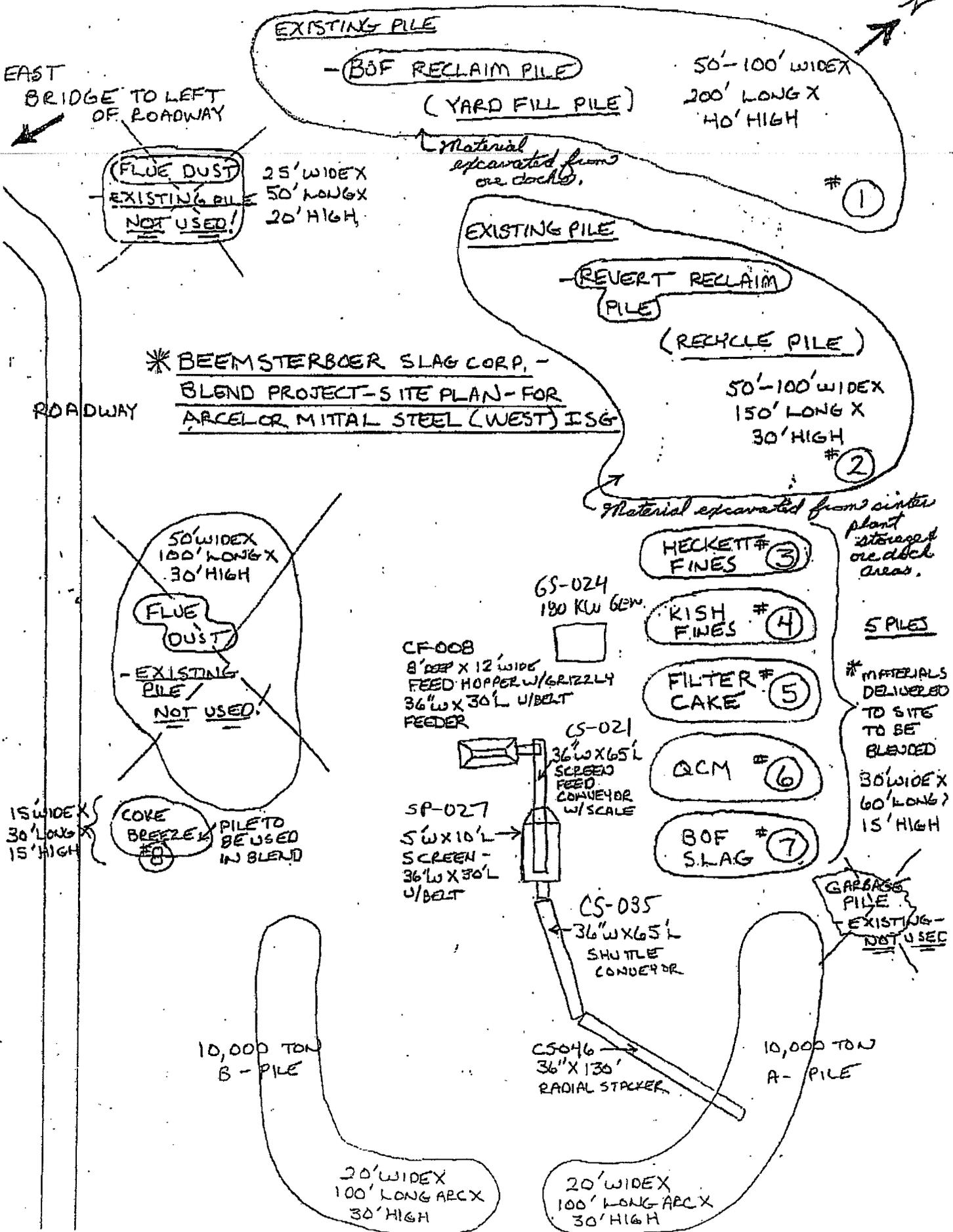
APPENDIX 1 – SITE MAPS

**Beemsterboer Operation at
Indiana Harbor Works**

Fugitive Dust Plan



**Beemsterboer
Operation**



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

Addendum to the Technical Support Document (ATSD) for a
Part 70 Significant Source Modification
And
Part 70 Operating Permit

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| Source Background and Description |
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|-------------------------|---|
| Source Name: | Beemsterboer Slag Corporation |
| Source Location: | 3001 Dickey Road, Station 001, East Chicago, Indiana 46312 |
| County: | Lake |
| SIC Code: | 1422 |
| Permit Reviewer: | John Haney |

On February 16, 2009, the Office of Air Quality (OAQ) had a notice published in The Times, Munster, Indiana, and on February 18, 2009, in The Gary Post Tribune, Munster, Indiana, stating that Beemsterboer Slag Corporation had applied for a significant source modification and operating permit for the addition of a sinter plant pre-blending operation to ArcelorMittal Indiana Harbor, LLC (Plant ID 089-00318). The notice also stated that the OAQ proposed to issue a significant source modification and operating permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

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| Comments and Responses |
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On March 18, 2009, Charmagne Ackerman from U.S. Environmental Protection Agency - Region 5 submitted comments to IDEM, OAQ on the draft significant source modification and operating permit.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

U.S. EPA - Region 5 is concerned that the PM limit of 24.89 TPY is very close to the major modification threshold. Based upon the estimated emission factors, it would be possible that the emission factors underestimated the emissions, and they are actually just above the 25 TPY threshold.

Response to Comment 1:

IDEM, OAQ has conservatively estimated the calculations to maintain emissions below the 25 TPY threshold. First, travel distances from the center of the two storage piles to the screen loading conveyor were used instead of travel distances to the edge of the piles. Second, the loader traveling on the unpaved roads has been calculated as weighted down for both legs of the round-trip to and from the storage piles; actually, the loader will only be full for the first leg of the trip and will be empty on the return leg, thereby reducing its weight and the amount of fugitive emissions to generate from the road.

No changes were made as a result of this comment.

Comment 2:

In the TSD under the heading 326 IAC 6.8-10 (Lake county fugitive Particulate Matter), conditions (a)(9) and (12) of this section list PM₁₀ emission limitation of 0.022 gr/dscf from building vents and material processing stacks, respectively. However, there is no requirement for testing or frequency of opacity readings.

Response to Comment 2:

IDEM, OAQ has verified and determined that the source does not have building vents, material processing stacks, or building enclosures. All opacity requirements specific to building vents, material processing stacks, and building enclosures have been removed from the permit.

The permit has been revised as listed under the Additional Changes section.

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| Additional Changes |
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IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (a) IDEM, OAQ has inadvertently omitted several requirements from 326 IAC 6.8-10-3 that should have been included in Section C.5. The following conditions of 326 IAC 6.8-10-3 have been added to the permit: (3)(B)(ii), (3)(C), and (7)(B). Subsequent conditions in Section C.5 of the permit have been renumbered.

C.5 Fugitive Dust Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) **Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%) on a three (3) minute average. This includes material transfer to the initial hopper of a material processing facility as defined in 326 IAC 6.8-10-2 or material transfer for transportation within or outside the source property including, but not limited to, the transfer of sinter blend for use at the sinter plant from the following:**
 - (1) **Storage pile to a front end loader;**
 - (2) **Front end loader to a truck; and**
 - (3) **Truck to the initial processing point.**
- (e) **Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:**

- (1) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.**
 - (2) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).**
- ~~(d)(f)~~ The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- ~~(e)(g)~~ The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- ~~(f)(h)~~ There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- ~~(g)(i)~~ The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- ~~(h)~~ There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- ~~(i)~~ The PM10 emissions from building vents shall not exceed twenty two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) Fugitive particulate matter from the material processing facilities shall not exceed ten percent (10%) opacity.**
- ~~(j)(k)~~ The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- ~~(k)(l)~~ Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

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| IDEM Contact |
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- (a) Questions regarding this proposed significant source modification and operating permit can be directed to John Haney at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5328 or toll free at 1-800-451-6027 extension 4-5328.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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

Technical Support Document (TSD) for a
Part 70 Significant Source Modification
and
Part 70 Operating Permit

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| Source Description and Location |
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|--------------------------------------|---|
| Source Name: | Beemsterboer Slag Corporation, a contractor of ArcelorMittal Indiana Harbor, LLC |
| Source Location: | 3001 Dickey Road, Station 001, East Chicago, Indiana 46312 |
| County: | Lake |
| SIC Code: | 1422 |
| Significant Source Modification No.: | 089-26983-00537 |
| Part 70 Operating Permit No.: | T089-27146-00537 |
| ArcelorMittal Indiana Harbor, LLC | |
| Part 70 Operating Permit No.: | T089-7099-00318 |
| Permit Reviewer: | John Haney |

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| Source Definition |
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ArcelorMittal Indiana Harbor, LLC is an integrated steel mill consisting of a source with on-site contractors:

- (a) ArcelorMittal Indiana Harbor, LLC (Plant ID 089-00318), the primary operation, is located at 3001 Dickey Road, Station 001, East Chicago, Indiana; and
- (b) Beemsterboer Slag Corporation (Plant ID 089-00537), the on-site contractor (a sinter blending operation), is located at 3001 Dickey Road, Station 001, East Chicago, Indiana.

IDEM has determined that ArcelorMittal Indiana Harbor, LLC and Beemsterboer Slag Corporation are under the common control of ArcelorMittal Indiana Harbor, LLC and therefore will be considered one source, as defined by 326 IAC 2-7-1(22), based on this contractual control. Therefore, the term "source" in the Part 70 documents refers to both ArcelorMittal Indiana Harbor, LLC and Beemsterboer Slag Corporation as one source.

Separate Part 70 Operating permits will be issued to ArcelorMittal Indiana Harbor, LLC and Beemsterboer Slag Corporation solely for administrative purposes. For permitting purposes, ArcelorMittal Indiana Harbor, LLC is assigned Permit No. 089-7099-00318 and Beemsterboer Slag Corporation is assigned Permit No. 089-27146-00537.

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| Existing Approvals |
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There have been no previous approvals issued to Beemsterboer Slag Corporation at this existing Part 70 source.

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| County Attainment Status |
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The source is located in Lake County.

| Pollutant | Designation |
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| SO ₂ | Better than national standards. |
| CO | Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148 th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County. |
| O ₃ | Nonattainment Subpart 2 Moderate effective June 15, 2004, for the 8-hour ozone standard. ¹ |
| PM ₁₀ | Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County. |
| NO ₂ | Cannot be classified or better than national standards. |
| Pb | Not designated. |
| ¹ Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM _{2.5} . | |

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) 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.

(i) 1-hour ozone standard

On December 22, 2006 the United States Court of Appeals, District of Columbia issued a decision which served to partially vacate and remand the U.S. EPA's final rule for implementation of the eight-hour National Ambient Air quality Standard for ozone. *South Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882 (D.C. Cir., December 22, 2006), *rehearing denied* 2007 U.S. App. LEXIS 13748 (D.C. Cir., June 8, 2007). The U.S. EPA has instructed IDEM to issue permits in accordance with its interpretation of the *South Coast* decision as follows: Gary-Lake-Porter County was previously designated as a severe non-attainment area prior to revocation of the one-hour ozone standard, therefore, pursuant to the anti-backsliding provisions of the Clean Air Act, any new or existing source must be subject to the major source applicability cut-offs and offset ratios under the area's previous one-hour standard designation. This means that a source must achieve the Lowest Achievable Emission Rate (LAER) if it exceeds 25 tons per year of VOC emissions and must offset any increase in VOC emissions by a decrease of 1.3 times that amount.

On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NO_x threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.

(ii) 8-hour ozone standard

VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

- (b) PM_{2.5}
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM_{2.5} promulgated on May 8, 2008, and effective on July 15, 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
- (c) Other Criteria Pollutants
Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Since this source is classified as an integrated steel mill, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

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| Description of Proposed Modification |
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The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Beemsterboer Slag Corporation on September 12, 2008, relating to the addition of a sinter plant pre-blending operation to ArcelorMittal Indiana Harbor, LLC (Plant ID 089-00318). The following is a list of the proposed emission units:

- (a) One conveyor feeder, approved for construction in 2009, identified as CF-008, with a maximum capacity of 375 tons per hour;
- (b) One conveyor shuttle, approved for construction in 2009, identified as CS-021, with a maximum capacity of 375 tons per hour;
- (c) One conveyor stacker, approved for construction in 2009, identified as CS-046, with a maximum capacity of 375 tons per hour;

- (d) One screen, approved for construction in 2009, identified as SP-027, with a maximum capacity of 375 tons per hour;
- (e) One conveyor shuttle, approved for construction in 2009, identified as CS-035, with a maximum capacity of 375 tons per hour; and
- (f) One diesel generator, approved for construction in 2009, identified as GS-024, having an engine constructed in 1987, with a maximum capacity of 180 kW.

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| Enforcement Issues |
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There are no pending enforcement actions.

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| Emission Calculations |
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See Appendix A of this Technical Support Document for detailed emission calculations.

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| Permit Level Determination – Part 70 |
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Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission 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, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| PTE Before Controls of the Modification | |
|--|-----------------------------------|
| Pollutant | Potential To Emit (ton/yr) |
| PM | 380.94 |
| PM ₁₀ | 112.42 |
| PM _{2.5} | 35.10 |
| SO ₂ | 2.17 |
| VOC | 2.66 |
| CO | 7.06 |
| NO _x | 32.77 |

This source modification is subject to 326 IAC 2-7-10.5(f)(4) because the potential to emit of particulate matter (PM), particulate matter less than ten microns (PM₁₀), particulate matter less than two-and-a-half microns (PM_{2.5}), and nitrogen oxides (NO_x) is each greater than twenty-five (25) tons per year before control.

Additionally, this modification would normally require a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because the modification would have required significant changes in existing monitoring Part 70 permit terms and conditions. However, ArcelorMittal and Beemsterboer Slag Corporation have requested that this operation receive its own Title V Operating Permit in lieu of a significant permit modification to ArcelorMittal's Operating Permit. An administrative Title V Operating Permit is required because Beemsterboer Slag Corporation is locating at a Title V source. Therefore, pursuant to 326 IAC 2-7, an administrative Title V Operating Permit is being issued.

Permit Level Determination – PSD, Emission Offset, and Nonattainment NSR

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

| Process / Emission Unit | | PM | PM ₁₀ | PM _{2.5} | SO ₂ | VOC | CO | NO _x |
|--|---------------------------|------------|------------------|-------------------|-----------------|------------|------------|-----------------|
| Pre-Blend Operation | Conveyor Feeder (CF-008) | 0.06 | 0.02 | 0.01 | 0 | 0 | 0 | 0 |
| | Conveyor Shuttle (CS-021) | 0.06 | 0.02 | 0.01 | 0 | 0 | 0 | 0 |
| | Conveyor Stacker (CS-046) | 0.06 | 0.02 | 0.01 | 0 | 0 | 0 | 0 |
| | Screen (SP-027) | 0.46 | 0.16 | 0.01 | 0 | 0 | 0 | 0 |
| | Conveyor Shuttle (CS-035) | 0.06 | 0.02 | 0.01 | 0 | 0 | 0 | 0 |
| Storage Pile Wind Erosion | | 1.83 | 0.92 | 0.28 | 0 | 0 | 0 | 0 |
| Storage Pile Aggregate Handling | | 0.68 | 0.32 | 0.10 | 0 | 0 | 0 | 0 |
| Roadway Emissions | | 19.35 | 5.16 | 0.52 | 0 | 0 | 0 | 0 |
| Diesel Generator (GS-024) | | 2.33 | 2.33 | 2.33 | 2.17 | 2.66 | 7.06 | 32.77 |
| Total for Modification | | 24.89 | 8.95 | 3.26 | 2.17 | 2.66 | 7.06 | 32.77 |
| PSD Significant Level | | 25 | 15 | --- | 40 | 40 | 100 | 40 |
| Emission Offset Significant Level | | --- | --- | --- | --- | 25* | --- | 40** |
| Nonattainment NSR Significant Level | | --- | --- | 10 | 40 | --- | --- | --- |

* The December, 1993 rule change to the LAER/Emission Offset requirements lowered the threshold of the level of emissions that trigger review as a major modification for severe nonattainment areas from 40 to 25 tons per year of VOCs and nitrogen oxides (NO_x).

** On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NO_x threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards.

The September 14, 2006 Federal Register proposed ruling for the New Source Review (NSR) program, clarifying for sources and permitting authorities three aspects of the NSR program that pertain to how to determine what emissions increases and decreases to consider in determining major NSR applicability for modified sources. Aggregation groups together multiple, related physical or operational changes into a single project. These activities should be aggregated for the purposes of the NSR applicability determination only in cases where there is a substantial relationship among the activities, either from a technical or an economic standpoint. This modification does not require aggregating multiple emission increases and/or decreases as the sinter plant has not undergone any modifications in the prior three years.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

This modification to an existing major stationary source is not major because the emissions increase is less than the Emission Offset and Nonattainment NSR significant levels. Therefore,

pursuant to 326 IAC 2-3 and 326 IAC 2-1.1-5, the Emission Offset and Nonattainment NSR requirements do not apply.

Since this source is considered a major PSD and Nonattainment NSR source and the unrestricted potential to emit of this modification is greater than twenty-five (25) tons of PM per year, fifteen (15) tons of PM₁₀ per year, and ten (10) tons of PM_{2.5} per year, this source has elected to limit the potential to emit of this modification as follows:

- (a) The aggregate input to the sinter plant pre-blending operation, approved for construction in 2009, shall be less than 845,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the facility Fugitive Dust Control Plan.

Compliance with these emission limits will ensure that the potential to emit from this modification is less than twenty-five (25) tons of PM per year, fifteen (15) tons of PM₁₀ per year, and ten (10) tons of PM_{2.5} per year and therefore will render the requirements of 326 IAC 2-2 and 326 IAC 2-1.1-5 not applicable.

VOC De Minimis Determination

- (1) Effective November 15, 1990, Lake County is classified as a severe nonattainment area for ozone.
- (2) Since ArcelorMittal Indiana Harbor, LLC is located in Lake County, the proposed modification must be evaluated to determine if it is a minor modification in terms of 326 IAC 2-3 by determining if the VOC emissions increase is de minimis. [326 IAC 2-3-1(z)]
- (3) De minimis means a VOC increase that does not exceed twenty-five (25) tons per year when the net emissions increases from the proposed modification are aggregated with all other net emissions increases from the source over a five (5) consecutive calendar year period prior to, and including, the year of the modification. [326 IAC 2-3-1(q)]
- (4) The total emissions increases from this project are 2.66 tons per year or 14.6 pounds per day. Pursuant to 326 IAC 2-1.1-3(h)(2)(D), the VOC de minimis determination is not necessary because the VOC emissions increase from this project is less than fifteen (15) pounds per day.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

NSPS:

- (a) This source is not subject to the requirements of the New Source Performance Standard for Metallic Mineral Processing Plants (40 CFR 60.380, Subpart LL) because the operations are not producing metallic mineral concentrates from ore. None of this slag crushing and/or screening operation is performed in a mine or pit.
- (b) This source is not subject to the requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60.670, Subpart OOO) because the slag material being crushed does not meet the definition of a nonmetallic mineral pursuant to 40 CFR 60.671.
- (c) The diesel generator (GS046) is not subject to the requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII) because the generator's compression ignition (CI) internal

combustion engine (ICE) was constructed in 1987, prior to the applicability date of July 7, 2005.

NESHAP:

- (d) The diesel generator (GS046) is not subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) because it is an existing compression ignition (CI) stationary RICE with a site rating of less than 500 brake HP; therefore, pursuant to 40 CFR 63.6590(b)(3) and 40 CFR 63.6595(a)(1), no initial notification is necessary, and it does not have to comply with the applicable emission limitations and operating limitations.

CAM:

- (e) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
 - (2) is subject to an emission limitation or standard for that pollutant; and
 - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

Control devices are not used for any unit in this modification. Therefore, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification.

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| State Rule Applicability Determination |
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The following state rules are applicable to the source due to the modification:

326 IAC 1-5-2 (Emergency Reduction Plans)

The source is subject to 326 IAC 1-5-2.

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source is subject to 326 IAC 1-6-3.

326 IAC 2-1.1-5 (Nonattainment New Source Review)

The source is taking limits to make this a minor modification under 326 IAC 2-1.1-5. Nonattainment New Source Review (NSR) applicability is discussed in greater detail under the Permit Level Determination – PSD, Emission Offset, and Nonattainment NSR section.

326 IAC 2-2 (PSD)

The source is taking limits to make this a minor modification under 326 IAC 2-2. PSD applicability is discussed in greater detail under the Permit Level Determination – PSD, Emission Offset, and Nonattainment NSR section.

326 IAC 2-3 (Emission Offset)

The source is taking limits to make this a minor modification under 326 IAC 2-3. Emission Offset applicability is discussed in greater detail under the Permit Level Determination – PSD, Emission Offset, and Nonattainment NSR section.

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

Pursuant to 326 IAC 2-4.1-1(b)(2), the requirements of 326 IAC 2-4.1-1 do not apply to a major source specifically regulated, or exempt from regulation, by a standard issued pursuant to Section 112(d), 112(h), or 112(j) of the CAA.

This specific sinter plant pre-blending operation will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs.

326 IAC 2-6 (Emission Reporting)

Since this source is located in Lake County and has a potential to emit NO_x greater than or equal to twenty-five (25) tons per year, an emission statement covering the previous calendar year must be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 4-1 (Open Burning)

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.

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 twenty percent (20%) 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 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

This modification is not subject to the requirements of 326 IAC 6-3 because the facility is subject to the requirements of 326 IAC 6.8-1-2 (Lake County: PM₁₀ Emission Requirements). Pursuant to the applicability requirements (326 IAC 6-3-1(c)), if any limitation established by this rule is inconsistent with applicable limitations contained in 326 IAC 6.8-1 (Lake County: PM₁₀ Emission Requirements), 326 IAC 12 (New Source Performance Standards), or 326 IAC 20 (Hazardous Air Pollutants), then the limitations contained in 326 IAC 6.8-1, 326 IAC 12, or 326 IAC 20 prevail.

326 IAC 6-4 (Fugitive Dust Emissions)

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).

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

This modification is not subject to the requirements of 326 IAC 6-5 because the facility is located in Lake County and is subject to the requirements of 326 IAC 6.8-8 (Lake County: Continuous Compliance Plan).

326 IAC 6.8-1-2 (Lake County: PM₁₀ Emission Requirements)

Pursuant to 326 IAC 6.8-1-2(a), the following emission units shall not exceed 0.03 gr/dscf of particulate matter less than ten microns in diameter (PM₁₀):

Storage Piles, Truck Loading & Unloading, Transporting (Road Emissions), Conveyor Feeder (CF-008), Conveyor Shuttle (CS-021), Conveyor Stacker (CS-046), Screen (SP-027), Conveyor Shuttle (CS-035), and Generator (GS-024).

326 IAC 6.8-8 (Lake County: Continuous Compliance Plan)

Pursuant to 326 IAC 6.8-8-1(18)(C), the Permittee shall submit to IDEM, and maintain at the source, a copy of the Continuous Compliance Plan. The Permittee shall perform the inspections, monitoring, and record keeping requirements as specified in 326 IAC 6.8-8-7. The Permittee shall update the CCP (as needed), retain a copy on site, and make the updated CCP available for inspection as specified in 326 IAC 6.8-8-8.

326 IAC 6.8-10 (Lake County Fugitive Particulate Matter)

- (a) Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter), the particulate matter emissions from source wide activities shall meet the following requirements:
- (1) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
 - (2) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
 - (3) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
 - (4) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
 - (5) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
 - (6) There shall be a zero (0) percent frequency of visible emission observations of a material during the in plant transportation of material by truck or rail at any time.
 - (7) The opacity of fugitive particulate emissions from the in plant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
 - (8) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
 - (9) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
 - (10) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
 - (11) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.
 - (12) PM₁₀ emissions from each material processing stack shall not exceed 0.022 grains per dry standard cubic foot and ten percent (10%) opacity.
 - (13) Fugitive particulate matter from the material processing facilities shall not exceed ten percent (10%) opacity.
 - (14) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:
 - (A) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.
 - (B) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).

Material processing facilities include crushers, screens, grinders, mixers, dryers, belt conveyors, bucket elevators, bagging operations, storage bins, and truck or railroad car loading stations.

- (b) The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)

Generator GS-024 has a potential to emit less than twenty-five (25) tons per year of sulfur dioxide. Therefore, 326 IAC 7-1.1-1 does not apply.

326 IAC 8-1-6 (BACT)

Generator GS-024 has a potential to emit less than twenty-five (25) tons per year of VOC. Therefore, 326 IAC 8-1-6 does not apply.

326 IAC 9 (Carbon Monoxide Emission Limits)

No emission limit has been established for this source type pursuant to 326 IAC 9-1-2. Therefore, 326 IAC 9 does not apply.

326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))

The engine for Generator GS-024 does not meet the definition of a "large NO_x SIP Call engine" pursuant to 326 IAC 10-5-2(4). Therefore, 326 IAC 10-5 does not apply.

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| Compliance Determination and Monitoring Requirements |
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Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements 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.

The Compliance Determination and Monitoring Requirements applicable to this modification are as follows:

(1) Particulate Control

In order to ensure compliance with Conditions D.1.1 and D.1.2, the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the PM, PM₁₀ and PM_{2.5} emissions from the crusher and the conveyors. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Conditions D.1.1 and D.1.2. If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the metallurgical material to ensure it has a moisture content greater than 1.5 percent of the process stream by weight. The Permittee shall submit to IDEM, OAQ the method for moisture content analysis for approval.

- (2) **Particulate Matter (PM)**
Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter), compliance with the opacity limits specified in Condition C.5 shall be achieved by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan (FDCP). If it is determined that the control procedures specified in the FDCP do not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may request that the FDCP be revised and submitted for approval.

Opacity from the activities shall be determined as follows:

- (a) **Paved Roads and Parking Lots**
The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:
- (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.
 - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.
- The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.
- (b) **Unpaved Roads and Parking**
The fugitive particulate emissions from unpaved roads shall be controlled by the implementation of a work program and work practice under the fugitive dust control plan.
- (c) **Batch Transfer**
The average instantaneous opacity shall consist of the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume.
- (d) **Continuous Transfer**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9. The opacity readings shall be taken at least four (4) feet from the point of origin.
- (e) **Wind Erosion from Storage Piles**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. The limitations may not apply during periods when applications of fugitive particulate control measures are either ineffective or unreasonable due to sustained very high wind speeds. During such periods, the company must continue to implement all reasonable fugitive particulate control measures and maintain records documenting the application of measures and the basis for a claim that meeting the opacity limitation was not reasonable given prevailing wind conditions.

- (f) Wind Erosion from Exposed Areas
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.
- (g) Material Transported by Truck or Rail
Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the in plant transportation requirement.
- (h) Material Transported by Front End Loader or Skip Hoist
Compliance with this limitation shall be determined by the average of three (3) opacity readings taken at five (5) second intervals. The three (3) opacity readings shall be taken as follows:
 - (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.
 - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet from the plume approximately and at right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

- (i) Material Processing Limitations
Compliance with all opacity limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 9. Compliance with all visible emissions limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 22. Compliance with all particulate matter limitations from material processing equipments shall be determined using 40 CFR 60, Appendix A, Method 5 or 17.
- (3) Visible Emissions Notations
- (a) Visible emissions notations of the slag crushing and sizing operations listed in Section D.1 shall be performed once per day during normal daylight operations. A trained employee will 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 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.

(4) Recordkeeping Requirements

- (a) The aggregate input to the sinter plant pre-blending operation, approved for construction in 2009, shall be less than 845,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

These determination and monitoring conditions are necessary because fugitive dust must be properly controlled to ensure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-1.1-5 (Nonattainment NSR), 326 IAC 6-4 (Fugitive Dust Emissions), 326 IAC 6.8 (Particulate Matter Limitations for Lake County), and 326 IAC 2-7 (Part 70).

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| Conclusion and Recommendation |
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The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-26983-00537 and Part 70 Operating Permit No. T089-27146-00537. The staff recommends to the Commissioner that this Part 70 Significant Source Modification and Part 70 Operating Permit be approved.

Appendix A: Emission Calculations

Company Name: Beemsterboer Slag Corporation
Address City IN Zip: 3001 Dickey Road, East Chicago, IN 46312
Significant Source Modification: 089-26983-00537
Title V Operating Permit: 089-27146-00537
Reviewer: John Haney
Date: 1/5/2009

Limited Throughput: 845000 **tons per year**

| Uncontrolled Potential Emissions (tons/year) | | | | | | | |
|---|--------|--------|-------|------|-------|------|------|
| Year | PM | PM10 | PM2.5 | SOX | NOX | VOC | CO |
| 2009 | 380.94 | 112.42 | 35.10 | 2.17 | 32.77 | 2.66 | 7.06 |

| Controlled Limited Emissions (tons/year) | | | | | | | |
|---|-------|------|-------|------|-------|------|------|
| Year | PM | PM10 | PM2.5 | SOX | NOX | VOC | CO |
| 2009 | 24.89 | 8.95 | 3.26 | 2.17 | 32.77 | 2.66 | 7.06 |

| Year: | 2009 | Limited Throughput | 845000 | tons | | | | | | | | | |
|-------------------------------------|--------|--------------------|----------------|-----------------|-----------------|----------------|-------------|----------------------------------|--|--|--|--|--|
| Potential Emissions (PM) | | | | | | | | | | | | | |
| Conveyor Feeder | CF-008 | 375 ton/hr x | 0.0030 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 4.93 tons/yr | 1.13 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Conveyor Shuttle | CS-021 | 375 ton/hr x | 0.0030 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 4.93 tons/yr | 1.13 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Conveyor Stacker | CS-046 | 375 ton/hr x | 0.0030 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 4.93 tons/yr | 1.13 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Screen | SP-027 | 375 ton/hr x | 0.0250 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 41.06 tons/yr | 9.38 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Conveyor Shuttle | CS-035 | 375 ton/hr x | 0.0030 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 4.93 tons/yr | 1.13 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Storage | | | | | ** see below ** | 14.25 tons/yr | 3.25 lb/hr | Air Pollution Engineering Manual | | | | | |
| Aggregate Handling | | | | | ** see below ** | 2.63 tons/yr | 0.60 lb/hr | AP-42 Ch. 13.2.4 (11/06) | | | | | |
| Unpaved Roads | | | | | ** see below ** | 300.95 tons/yr | 68.71 lb/hr | AP-42 Ch. 13.2.2 (11/06) | | | | | |
| Generator(s) | | | | | ** see below ** | 2.33 tons/yr | 0.53 lb/hr | AP-42 Ch. 3.3.4 (10/96) | | | | | |
| Total PM emissions before controls: | | | | | | 380.94 | tons/yr | | | | | | |
| Limited Emissions (PM) | | | | | | | | | | | | | |
| Conveyor Feeder | CF-008 | 96 ton/hr x | 0.00014 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.06 tons/yr | 0.01 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Conveyor Shuttle | CS-021 | 96 ton/hr x | 0.00014 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.06 tons/yr | 0.01 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Conveyor Stacker | CS-046 | 96 ton/hr x | 0.00014 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.06 tons/yr | 0.01 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Screen | SP-027 | 48 ton/hr x | 0.0022 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.46 tons/yr | 0.11 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Conveyor Shuttle | CS-035 | 96 ton/hr x | 0.00014 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.06 tons/yr | 0.01 lb/hr | AP-42 Ch. 11.19.2 (8/04) | | | | | |
| Storage | | | | | ** see below ** | 1.83 tons/yr | 0.42 lb/hr | Air Pollution Engineering Manual | | | | | |
| Aggregate Handling | | | | | ** see below ** | 0.68 tons/yr | 0.15 lb/hr | AP-42 Ch. 13.2.4 (11/06) | | | | | |
| Unpaved Roads | | | | | ** see below ** | 19.35 tons/yr | 4.42 lb/hr | AP-42 Ch. 13.2.2 (11/06) | | | | | |
| Generator(s) | | | | | ** see below ** | 2.33 tons/yr | 0.53 lb/hr | AP-42 Ch. 3.3.4 (10/96) | | | | | |
| Total PM emissions after controls: | | | | | | 24.89 | tons/yr | | | | | | |

Storage

Storage emissions, which result from wind erosion (Air Pollution Engineering Manual; p 136; Eqn. 5; AWMA; 1992):

Pile capacity (PC) = 375 ton/hr x 8760 hr/yr = 3285000 tons
 Limited pile capacity (LPC) = 422500 tons (limited pile capacity is processed twice to equal limited throughput)
 Pile density (PD) = 40 cu-ft/ton
 Pile height (PH) = 30 ft

Emission Factor Ef = $k * [1.7 * (s/1.5)^{(365-p)/235} * (f/15)]$ = 0.78 lb/acre/day PM
 where k = 1.0 particle size multiplier: PM30(PM)=1.0, PM10=0.5, PM2.5=0.2
 s = 0.7 % silt content of material
 p = 135 days of rain greater than or equal to 0.01 inches
 f = 15 % of wind greater than or equal to 12 mph

Potential PTE PM = Emission Factor Ef * PC * PD / (2000 lbs/ton) / (43560 sqft/acre) / PH * (365 days/year) = 14.25 TPY PM
 Limited PTE PM = Emission Factor Ef * LPC * PD / (2000 lbs/ton) / (43560 sqft/acre) / PH * (365 days/year) = 1.83 TPY PM

Aggregate Handling

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

Emission Factor Ef = $k * (0.0032) * (U/5)^{1.3} / (M/2)^{1.4}$ = 0.001603 lb PM/ton
 where k = 0.74 particle size multiplier: PM30(PM)=0.74, PM10=0.35, PM2.5=0.11
 U = 13.4 mean wind speed, mph
 M = 6.6 % material moisture content

Potential PTE PM = total throughput * Emission Factor Ef (PM) / (2000 lbs/ton) = 2.63 tons/yr
 Limited PTE PM = limited throughput * Emission Factor Ef (PM) / (2000 lbs/ton) = 0.68 tons/yr

Unpaved Roads

The following calculations determine the amount of emissions created by loose dry surface dust on unpaved roads (AP-42, Sec. 13.2.2, eq. 1a and eq. 2):

Mileage: 0.171 miles from individual piles into screen, onto conveyor to make Pile "A"
 0.114 miles from Pile "A" onto conveyor (not screened) to make Pile "B"

3285000 tons/year ÷ 10.0 tons/roundtrip * 0.285 miles/roundtrip = 93623 potential miles per year
 422500 tons/year ÷ 10.0 tons/roundtrip * 0.285 miles/roundtrip = 12041 limited miles per year

Emission Factor Ef = $k * [(s/12)^a] * [(W/3)^b] * [(365-P)/365]$ = 6.43 lb PM/mile
 where k = 4.9 particle size multiplier: TSP(PM)=4.9, PM10=1.5, PM2.5=0.15
 s = 6 mean % silt content of unpaved roads
 a = 0.7 constant: TSP(PM)=0.7, PM10=0.9, PM2.5=0.9
 W = 45.0 tons average vehicle weight
 b = 0.45 constant: TSP(PM)=0.45, PM10=0.45, PM2.5=0.45
 P = 135 days of rain greater than or equal to 0.01 inches

Potential PTE PM = potential miles per year * emission factor Ef (PM) / 2000 lb/ton = 300.95 TPY PM
 Limited PTE PM = limited miles per year * emission factor Ef (PM) / 2000 lb/ton = 38.71 TPY PM
 Controlled Limited PTE PM = limited miles per year * emission factor Ef (PM) / 2000 lb/ton * (1-50%) = 19.35 TPY PM

Generator(s)

The following calculations determine the amount of emissions created by generator usage (AP-42, Table 3.3-1, 10/96):

Generator: GS024 180 kW

A. Emissions calculated based on heat input capacity (MMBtu/hr)
 Capacity (MMBtu/hr) 1.69

| | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
|----------------------------|------|-------|--------|------|-------|------|------|
| Emission Factor (lb/MMBtu) | 0.31 | 0.31 | 0.31 | 0.29 | 4.41 | 0.4 | 0.95 |
| Emissions (tons/year) | 2.29 | 2.29 | 2.29 | 2.15 | 32.64 | 2.66 | 7.03 |

B. Emissions calculated based on output rating (hp)
 Capacity (hp) 241.4
 Throughput (hp-hr/yr) 2114489
 Diesel Usage (gal/yr) 108040

| | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
|----------------------------|--------|-------|--------|--------|--------|-------|--------|
| Emission Factor (lb/hp-hr) | 0.0022 | ##### | ##### | 0.0021 | 0.0310 | ##### | 0.0067 |
| Emissions (tons/year) | 2.33 | 2.33 | 2.33 | 2.17 | 32.77 | 2.66 | 7.06 |

Methodology

Use a conversion factor of 7,000 Btu per hp-hr to convert from horsepower to Btu/hr, unless the source gives you a source-specific brake-specific fuel consumption. (AP-42, Footnote a, Table 3.3-1)

Emissions (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Throughput (hp-hr/yr) = hp * 8760 hr/yr

Emissions (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 and PM2.5 emission factors.

No information was given regarding which method was used to determine the factor or the fraction of PM10/PM2.5 which is condensable.

| Year: | 2009 | Limited Throughput | 845000 | tons | | | | | |
|---------------------------------------|--------|--------------------|-----------------|-----------------|--------------|----------------|-------------|----------------------------------|--|
| Potential Emissions (PM10) | | | | | | | | | |
| Conveyor Feeder | CF-008 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-021 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Stacker | CS-046 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Screen | SP-027 | 375 ton/hr x | 0.0087 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 14.29 tons/yr | 3.26 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-035 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Storage | | | | | | 7.12 tons/yr | 1.63 lb/hr | Air Pollution Engineering Manual | |
| Aggregate Handling | | | ** see below ** | | | 1.25 tons/yr | 0.28 lb/hr | AP-42 Ch. 13.2.4 (11/06) | |
| Unpaved Roads | | | ** see below ** | | | 80.20 tons/yr | 18.31 lb/hr | AP-42 Ch. 13.2.2 (11/06) | |
| Generator(s) | | | ** see below ** | | | 2.33 tons/yr | 0.53 lb/hr | AP-42 Ch. 3.3.4 (10/96) | |
| Total PM10 emissions before controls: | | | | | | 112.42 tons/yr | | | |
| Limited Emissions (PM10) | | | | | | | | | |
| Conveyor Feeder | CF-008 | 96 ton/hr x | 4.60E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.02 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-021 | 96 ton/hr x | 4.60E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.02 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Stacker | CS-046 | 96 ton/hr x | 4.60E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.02 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Screen | SP-027 | 48 ton/hr x | 0.00074 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.16 tons/yr | 0.04 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-035 | 96 ton/hr x | 4.60E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.02 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Storage | | | ** see below ** | | | 0.92 tons/yr | 0.21 lb/hr | Air Pollution Engineering Manual | |
| Aggregate Handling | | | ** see below ** | | | 0.32 tons/yr | 0.07 lb/hr | AP-42 Ch. 13.2.4 (11/06) | |
| Unpaved Roads | | | ** see below ** | | | 5.16 tons/yr | 1.18 lb/hr | AP-42 Ch. 13.2.2 (11/06) | |
| Generator(s) | | | ** see below ** | | | 2.33 tons/yr | 0.53 lb/hr | AP-42 Ch. 3.3.4 (10/96) | |
| Total PM10 emissions after controls: | | | | | | 8.95 tons/yr | | | |

Storage

Storage emissions, which result from wind erosion (Air Pollution Engineering Manual; p 136; Eqn. 5; AWMA; 1992):

Pile capacity (PC) = 375 ton/hr x 8760 hr/yr = 3285000 tons
 Limited pile capacity (LPC) = 422500 tons (limited pile capacity is processed twice to equal limited throughput)
 Pile density (PD) = 40 cu-ft/ton
 Pile height (PH) = 30 ft

Emission Factor Ef = $k \cdot [1.7 \cdot (s/1.5)^{(365-p)/235} \cdot (f/15)]$ = 0.39 lb/acre/day PM10
 where k = 0.5 particle size multiplier: PM30(PM)=1.0, PM10=0.5, PM2.5=0.2
 s = 0.7 % silt content of material
 p = 135 days of rain greater than or equal to 0.01 inches
 f = 15 % of wind greater than or equal to 12 mph

Potential PTE PM10 = Emission Factor Ef * PC * PD / (2000 lbs/ton) / (43560 sqft/acre) / PH * (365 days/year) = 7.12 TPY PM10
 Limited PTE PM10 = Emission Factor Ef * LPC * PD / (2000 lbs/ton) / (43560 sqft/acre) / PH * (365 days/year) = 0.92 TPY PM10

Aggregate Handling

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

Emission Factor Ef = $k \cdot (0.0032) \cdot (U/5)^{1.3} \cdot (M/2)^{1.4}$ = 0.000758 lb PM10/ton
 where k = 0.35 particle size multiplier: PM30(PM)=0.74, PM10=0.35, PM2.5=0.11
 U = 13.4 mean wind speed, mph
 M = 6.6 % material moisture content

Potential PTE PM10 = total throughput * Emission Factor Ef (PM) / (2000 lbs/ton) = 1.25 tons/yr
 Limited PTE PM10 = limited throughput * Emission Factor Ef (PM) / (2000 lbs/ton) = 0.32 tons/yr

Unpaved Roads

The following calculations determine the amount of emissions created by loose dry surface dust on unpaved roads (AP-42, Sec. 13.2.2, eq. 1a and eq. 2):

Mileage: 0.171 miles from individual piles into screen, onto conveyor to make Pile "A"
 0.114 miles from Pile "A" onto conveyor (not screened) to make Pile "B"

3285000 tons/year ÷ 10.0 tons/roundtrip * 0.285 miles/roundtrip = 93623 potential miles per year
 422500 tons/year ÷ 10.0 tons/roundtrip * 0.285 miles/roundtrip = 12041 limited miles per year

Emission Factor Ef = $k \cdot [(s/12)^a] \cdot [(W/3)^b] \cdot [(365-P)/365]$ = 1.71 lb PM10/mile
 where k = 1.5 particle size multiplier: TSP(PM)=4.9, PM10=1.5, PM2.5=0.15
 s = 6 mean % silt content of unpaved roads
 a = 0.9 constant: TSP(PM)=0.7, PM10=0.9, PM2.5=0.9
 W = 45.0 tons average vehicle weight
 b = 0.45 constant: TSP(PM)=0.45, PM10=0.45, PM2.5=0.45
 P = 135 days of rain greater than or equal to 0.01 inches

Potential PTE PM = potential miles per year * emission factor Ef (PM) / 2000 lb/ton = 80.20 TPY PM10
 Limited PTE PM = limited miles per year * emission factor Ef (PM) / 2000 lb/ton = 10.32 TPY PM10
 Controlled Limited PTE PM = limited miles per year * emission factor Ef (PM) / 2000 lb/ton * (1-50%) = 5.16 TPY PM10

Generator(s)

The following calculations determine the amount of emissions created by generator usage (AP-42, Table 3.3-1, 10/96):

Generator: GS024 180 kW

A. Emissions calculated based on heat input capacity (MMBtu/hr)
 Potential Capacity (MMBtu/hr) 1.69

| | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
|-------------------------------|------|-------|--------|------|-------|------|------|
| Emission Factor in lb/MMBtu | 0.31 | 0.31 | 0.31 | 0.29 | 4.41 | 0.4 | 0.95 |
| Potential Emission in tons/yr | 2.29 | 2.29 | 2.29 | 2.15 | 32.64 | 2.66 | 7.03 |

B. Emissions calculated based on output rating (hp)
 Potential Capacity (hp) 241.4
 Potential Throughput (hp-hr/yr) 2114489
 Potential Diesel Usage (gal/yr) 108040

| | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
|-------------------------------|--------|-------|--------|--------|--------|-------|--------|
| Emission Factor in lb/hp-hr | 0.0022 | ##### | ##### | 0.0021 | 0.0310 | ##### | 0.0067 |
| Potential Emission in tons/yr | 2.33 | 2.33 | 2.33 | 2.17 | 32.77 | 2.66 | 7.06 |

Methodology

Use a conversion factor of 7,000 Btu per hp-hr to convert from horsepower to Btu/hr, unless the source gives you a source-specific brake-specific fuel consumption. (AP-42, Footnote a, Table 3.3-1)

Emissions (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Throughput (hp-hr/yr) = hp * 8760 hr/yr

Emissions (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 and PM2.5 emission factors.

No information was given regarding which method was used to determine the factor or the fraction of PM10/PM2.5 which is condensable.

| Year: | 2009 | Limited Throughput | 845000 | tons | | | | | |
|--|--------|--------------------|-----------------|-----------------|--------------|---------------|------------|----------------------------------|--|
| Potential Emissions (PM2.5) | | | | | | | | | |
| Conveyor Feeder | CF-008 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-021 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Stackler | CS-046 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Screen | SP-027 | 375 ton/hr x | 0.0087 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 14.29 tons/yr | 3.26 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-035 | 375 ton/hr x | 0.0011 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 1.81 tons/yr | 0.41 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Storage | | | | ** see below ** | | 2.85 tons/yr | 0.65 lb/hr | Air Pollution Engineering Manual | |
| Aggregate Handling | | | | ** see below ** | | 0.39 tons/yr | 0.09 lb/hr | AP-42 Ch. 13.2.4 (11/06) | |
| Unpaved Roads | | | | ** see below ** | | 8.02 tons/yr | 1.83 lb/hr | AP-42 Ch. 13.2.2 (11/06) | |
| Generator(s) | | | | ** see below ** | | 2.33 tons/yr | 0.53 lb/hr | AP-42 Ch. 3.3.4 (10/96) | |
| Total PM2.5 emissions before controls: | | | | | | 35.10 | tons/yr | | |
| Limited Emissions (PM2.5) | | | | | | | | | |
| Conveyor Feeder | CF-008 | 96 ton/hr x | 1.30E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.01 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-021 | 96 ton/hr x | 1.30E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.01 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Stackler | CS-046 | 96 ton/hr x | 1.30E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.01 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Screen | SP-027 | 48 ton/hr x | 0.00005 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.01 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Conveyor Shuttle | CS-035 | 96 ton/hr x | 1.30E-05 lb/ton | / 2000 lb/ton x | 8760 hr/yr = | 0.01 tons/yr | 0.00 lb/hr | AP-42 Ch. 11.19.2 (8/04) | |
| Storage | | | | ** see below ** | | 0.28 tons/yr | 0.07 lb/hr | Air Pollution Engineering Manual | |
| Aggregate Handling | | | | ** see below ** | | 0.10 tons/yr | 0.02 lb/hr | AP-42 Ch. 13.2.4 (11/06) | |
| Unpaved Roads | | | | ** see below ** | | 0.52 tons/yr | 0.12 lb/hr | AP-42 Ch. 13.2.2 (11/06) | |
| Generator(s) | | | | ** see below ** | | 2.33 tons/yr | 0.53 lb/hr | AP-42 Ch. 3.3.4 (10/96) | |
| Total PM2.5 emissions after controls: | | | | | | 3.26 | tons/yr | | |

Storage

Storage emissions, which result from wind erosion (Air Pollution Engineering Manual; p 136; Eqn. 5; AWMA; 1992):

Pile capacity (PC) = 375 ton/hr x 8760 hr/yr = 3285000 tons
 Limited pile capacity (LPC) = 422500 tons (limited pile capacity is processed twice to equal limited throughput)
 Pile density (PD) = 40 cu-ft/ton
 Pile height (PH) = 30 ft

Emission Factor Ef = k * [1.7*(s/1.5)^(365-p)/235^(f/15)] = 0.16 lb/acre/day PM2.5
 where k = 0.2 particle size multiplier: PM30(PM)=1.0, PM10=0.5, PM2.5=0.2
 s = 0.7 % silt content of material
 p = 135 days of rain greater than or equal to 0.01 inches
 f = 15 % of wind greater than or equal to 12 mph

Potential PTE PM2.5 = Emission Factor Ef * PC * PD / (2000 lbs/ton) / (43560 sqft/acre) / PH * (365 days/year) = 2.85 TPY PM2.5
 Limited PTE PM2.5 = Emission Factor Ef * LPC * PD / (2000 lbs/ton) / (43560 sqft/acre) / PH * (365 days/year) = 0.28 TPY PM2.5

Aggregate Handling

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

Emission Factor Ef = k*(0.0032) * (U/5)^1.3 / (M/2)^1.4 = 0.000238 lb PM2.5/ton
 where k = 0.11 particle size multiplier: PM30(PM)=0.74, PM10=0.35, PM2.5=0.11
 U = 13.4 mean wind speed, mph
 M = 6.6 % material moisture content

Potential PTE PM2.5 = total throughput * Emission Factor Ef (PM) / (2000 lbs/ton) = 0.39 tons/yr
 Limited PTE PM2.5 = limited throughput * Emission Factor Ef (PM) / (2000 lbs/ton) = 0.10 tons/yr

Unpaved Roads

The following calculations determine the amount of emissions created by loose dry surface dust on unpaved roads (AP-42, Sec. 13.2.2, eq. 1a and eq. 2):

Mileage: 0.171 miles from individual piles into screen, onto conveyor to make Pile "A"
 0.114 miles from Pile "A" onto conveyor (not screened) to make Pile "B"

3285000 tons/year ÷ 10.0 tons/roundtrip * 0.285 miles/roundtrip = 93623 potential miles per year
 422500 tons/year ÷ 10.0 tons/roundtrip * 0.285 miles/roundtrip = 12041 limited miles per year

Emission Factor Ef = k*[s/12]^a * [(W/3)^b] / [(365-P)/365] = 0.17 lb PM2.5/mile
 where k = 0.15 particle size multiplier: TSP(PM)=4.9, PM10=1.5, PM2.5=0.15
 s = 6 mean % silt content of unpaved roads
 a = 0.9 constant: TSP(PM)=0.7, PM10=0.9, PM2.5=0.9
 W = 45.0 tons average vehicle weight
 b = 0.45 constant: TSP(PM)=0.45, PM10=0.45, PM2.5=0.45
 P = 135 days of rain greater than or equal to 0.01 inches

Potential PTE PM2.5 = potential miles per year * emission factor Ef (PM) / 2000 lb/ton = 8.02 TPY PM2.5
 Limited PTE PM2.5 = limited miles per year * emission factor Ef (PM) / 2000 lb/ton = 1.03 TPY PM2.5
 Controlled Limited PTE PM2.5 = limited miles per year * emission factor Ef (PM) / 2000 lb/ton * (1-50%) = 0.52 TPY PM10

Generator(s)

The following calculations determine the amount of emissions created by generator usage (AP-42, Table 3.3-1, 10/96):

Generator: GS024 180 kW

A. Emissions calculated based on heat input capacity (MMBtu/hr)
 Potential Capacity (MMBtu/hr) 1.69

| | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
|-------------------------------|------|-------|--------|------|-------|------|------|
| Emission Factor in lb/MMBtu | 0.31 | 0.31 | 0.31 | 0.29 | 4.41 | 0.4 | 0.95 |
| Potential Emission in tons/yr | 2.29 | 2.29 | 2.29 | 2.15 | 32.64 | 2.66 | 7.03 |

B. Emissions calculated based on output rating (hp)
 Potential Capacity (hp) 241.4
 Potential Throughput (hp-hr/yr) 2114489
 Potential Diesel Usage (gal/yr) 108040

| | PM* | PM10* | PM2.5* | SO2 | NOx | VOC | CO |
|-------------------------------|--------|-------|--------|--------|--------|-------|--------|
| Emission Factor in lb/hp-hr | 0.0022 | ##### | ##### | 0.0021 | 0.0310 | ##### | 0.0067 |
| Potential Emission in tons/yr | 2.33 | 2.33 | 2.33 | 2.17 | 32.77 | 2.66 | 7.06 |

Methodology

Use a conversion factor of 7,000 Btu per hp-hr to convert from horsepower to Btu/hr, unless the source gives you a source-specific brake-specific fuel consumption. (AP-42, Footnote a, Table 3.3-1)

Emissions (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Throughput (hp-hr/yr) = hp * 8760 hr/yr

Emissions (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 and PM2.5 emission factors.

No information was given regarding which method was used to determine the factor or the fraction of PM10/PM2.5 which is condensable.