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

TO: Interested Parties / Applicant

DATE: November 8, 2012

RE: South Shore Slag LLC / 089-31980-00133

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Dave Oram
South Shore Slag LLC
General Manager
3411 Sheffield Ave.
Hammond, IN 46327-1004

November 8, 2012

Re: 089-31980-00133
Significant Source Modification to
Part 70 No.: T089-29698-00133

Dear Mr. Oram:

South Shore Slag LLC was issued a Part 70 Administrative Operating Permit Renewal on March 17, 2011 for a stationary slag crushing, screening and conveying operation. A letter requesting changes to this permit was received on June 4, 2012. Pursuant to 326 IAC 2-7-10.5, the Vitrafine Plant described as below is approved for construction at the source.

Vitrafine Plant, consisting of the following equipment, approved in 2012 for construction:

(a) Outdoor equipment (fugitive emissions)
- (i) Loading Feed Hopper, capacity: 90 tph
- (ii) Feed Hopper, capacity: 90 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor, capacity: 90 tph

(b) Dryer, capacity: 90 tph, using natural gas for combustion, with 50 MMbtu/hr of heat input capacity, controlled by Dryer Baghouse.

(c) Indoor equipment, controlled by Cage Mill Baghouse
- (i) Conveyor, capacity: 90 tph
- (ii) Bucket Elevator 1, capacity: 75 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor (to Bucket Elevator 2), capacity: 90 tph
- (v) Bucket Elevator 2, capacity: 90 tph
- (vi) Cage Mill (Fines Crusher) , capacity: 90 tph
- (vii) Cage Mill Output Screw Conveyor, capacity: 90 tph
- (viii) Bucket Elevator 3, capacity: 90 tph
- (ix) Fines Screen 1 capacity: 75 tph
- (x) Fines Screen 2, capacity: 75 tph
- (xi) Screen Output 1 Screw A, capacity: 75 tph
- (xii) Screen Output 1 Screw B, capacity: 75 tph
- (xiii) Screen Output 2 Screw, capacity: 15 tph
- (xiv) Screen Output 2 Conveyor, capacity: 15 tph
- (xv) Rare Earth Magnet 1, capacity: 90,tph
- (xvi) Rare Earth Magnet 2, capacity: 90 tph
- (xvii) Conveyor (to Loadout Bins), capacity: 75 tph
- (xviii) BH to Loadout Bin Screw 1, capacity: 1 tph
- (xix) BH to Loadout Bin Screw 2, capacity: 1 tph

(d) Indoor Equipment (fugitive emissions)
- (i) FE Hopper Box (scrap), capacity: 10 tph

(e) Load out Bins, controlled by dust collectors
- (i) Bin 1, capacity: 75 tph
- (ii) Bin 2, capacity: 75 tph
- (iii) Bin 3, capacity: 75 tph
- (iv) Bin 4, capacity: 90 tph

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

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

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Mehul Sura, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Mehul Sura or extension (3-6868), or dial (317) 233-6868.

Sincerely,

Chrystal Wagner, Section Chief
Permits Branch
Office of Air Quality

Attachments:
Updated Permit
Technical Support Document
PTE Calculations

mns

cc: File – Lake County
Lake County Health Department
Compliance and Enforcement Managers

Susan Grenzebach
ST Environmental, LLC
209 S. Calumet, Suite 5
Chesterton, IN 46034

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Significant Source Modification
OFFICE OF AIR QUALITY

South Shore Slag LLC
1 North Buchanan
Gary, Indiana 46402

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

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.

Significant Source Modification No. 089-31980-00133	
Issued by: Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 8, 2012

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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.4 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 slag crushing, screening and conveying operation.

Source Address:	1 North Buchanan, Gary, Indiana 46402
General Source Phone Number:	219-881-6544
SIC Code:	3295
County Location:	Lake
Source Location Status:	Nonattainment for PM 2.5 Attainment or unclassifiable for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Nonattainment NSR Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

US Steel - Gary Works is an integrated steel mill that consists of a main mill and an on-site contractor:

(a) US Steel - Gary Works, 089-00121, the primary operation, is located at, One North Broadway, Gary, IN 46402; and

(b) South Shore Slag LLC, 089-00133, an on-site contractor, is located at One North Broadway, Gary, IN 46402

Separate Part 70 permits have been issued to US Steel - Gary Works (Permit No. 089-7663-00121) and South Shore Slag LLC (Permit No. 089-7719-00133) solely for administrative purposes.

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

South Shore Slag LLC consists of the following:

Slag crushing, screening and conveying Plant

One (1) slag crushing, screening and conveying plant constructed in 1998, with a capacity of 650 tons of slag per hour, consisting of:

(a) Two (2) grizzly/feeders, identified as 1 and 2, each with a maximum capacity of 325 tons of slag per hour, with emissions controlled by water sprays.

(b) Two (2) screen feeders, identified as 3 and 4, each with a maximum capacity of 300 tons of slag per hour, with emissions controlled by water sprays.

(c) Four (4) three deck screens, identified as TDS-1, TDS-2, TDS-3 and TDS-4, with a maximum capacity of 577, 577,300 and 300 tons of slag per hour, respectively, with emissions controlled by water sprays.

(d) One (1) single deck screen, identified as SDS-1, with a maximum capacity of 119 tons of slag per hour, with emissions controlled by water sprays.

(e) One (1) single deck screen, identified as SDS-2, with a maximum capacity of 126 tons of slag per hour, with emissions controlled by water sprays

(f) One (1) primary crusher (standard cone crusher), identified as PC-1, with a maximum capacity of 294 tons of slag per hour, with emissions controlled by water sprays.

(g) One (1) secondary crusher (short head crusher), identified as SC-1, with a maximum capacity of 209 tons of slag per hour, with emissions controlled by water sprays.

(h) Four (4) stackers, identified as S-1, S-2, S-3 and S-4, with a maximum capacity of 328, 225, 136 and 119 tons of slag per hour, respectively, with emissions controlled by water sprays.

(i) One (1) conveyor, identified as C-1, with a maximum capacity of 650 tons of slag per hour, with emissions controlled by water sprays.

(j) One (1) conveyor, identified as C-2, with a maximum capacity of 1,154 tons of slag per hour, with emissions controlled by water sprays.

(k) Two (2) conveyors, identified as C-3 and C-4, each with a maximum capacity of 300 tons of slag per hour, with emissions controlled by water sprays.

(l) Three (3) conveyors, identified as C-5, C-6 and C-7, with a maximum capacity of 51, 209 and 294 tons of slag per hour, respectively, with emissions controlled by water sprays.

(m) Three (3) conveyors, identified as C-8, C-9 and C-10, with a maximum capacity of 504, 600 and 600 tons of slag per hour, respectively, with emissions controlled by water sprays.

(n) Two (2) conveyors, identified as C-11 and C-1, each with a maximum capacity of 60 tons of slag per hour, with emissions controlled by water sprays.

(o) Eight (8) conveyors, identified as C-13, C-14, C-15, C-16, C-18, A, B and C, with a maximum capacity of 136, 225, 119, 120, 225, 131, 224 and 16 tons of slag per hour, respectively, with emissions controlled by water sprays.

(p) Two (2) truck loading bins, installed in 1998, each with a maximum capacity of 650 tons per hour, using wet suppression for particulate matter control.

Crushing, screening and conveying mobile equipment, approved for construction in 2009 through SSM 089-28293-00133, each with a throughput capacity of 300 tons per hour:

(a) Three (3) feeders

(b) Three (3) Tertiary Crushing operations

(c) Nine (9) conveyors

(d) Six (6) shuttle conveyors

(e) Two (2) magnet conveyors

(f) One (1) plug mill

(g) Five (5) screens

(h) Unpaved road

Diesel Generators

Eight (8) diesel generators, with a rated horse power of 250, 150, 175, 200, 275, 480, 450, and 300, respectively, approved for installation in 2009.

Vitrafine Plant, consisting of the following equipment, approved in 2012 for Construction:

(a) Outdoor equipment (fugitive emissions)
- (i) Loading Feed Hopper, capacity: 90 tph
- (ii) Feed Hopper, capacity: 90 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor, capacity: 90 tph

(b) Dryer, capacity: 90 tph, using natural gas for combustion, with 50 MMbtu/hr of heat input capacity, controlled by Dryer Baghouse.

(c) Indoor equipment, controlled by Cage Mill Baghouse
- (i) Conveyor, capacity: 90 tph
- (ii) Bucket Elevator 1, capacity: 75 tph
- (iii) Feeder, capacity: 90, tph
- (iv) Conveyor (to Bucket Elevator 2), capacity: 90 tph
- (v) Bucket Elevator 2, capacity: 90 tph
- (vi) Cage Mill (Fines Crusher) , capacity: 90 tph
- (vii) Cage Mill Output Screw Conveyor, capacity: 90 tph
- (viii) Bucket Elevator 3, capacity: 90 tph
- (ix) Fines Screen 1 capacity: 75 tph
- (x) Fines Screen 2, capacity: 75 tph
- (xi) Screen Output 1 Screw A, capacity: 75 tph
- (xii) Screen Output 1 Screw B, capacity: 75 tph
- (xiii) Screen Output 2 Screw, capacity: 15 tph
- (xiv) Screen Output 2 Conveyor, capacity: 15 tph
- (xv) Rare Earth Magnet 1, capacity: 90,tph
- (xvi) Rare Earth Magnet 2, capacity: 90 tph
- (xvii) Conveyor (to Loadout Bins), capacity: 75 tph
- (xviii) BH to Loadout Bin Screw 1, capacity: 1 tph
- (xix) BH to Loadout Bin Screw 2, capacity: 1 tph

(d) Indoor Equipment (fugitive emissions)
- (i) FE Hopper Box (scrap), capacity: 10 tph

(e) Load out Bins, controlled by dust collectors
- (i) Bin 1, capacity: 75 tph
- (ii) Bin 2, capacity: 75 tph
- (iii) Bin 3, capacity: 75 tph
- (iv) Bin 4, capacity: 90 tph

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

[326 IAC 2-7-5(15)]

South Shore Slag LLC also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21), that have applicable requirements.

(a) Two (2) metal inert gas (MIG) welding stations, identified as MIGW-1 and MIGW-2, each with a maximum wire consumption of 7 pounds per hour, used for maintenance purposes only; [326 IAC 6.8]

(b) Six (6) stick welding stations, identified as SW-1 through SW-6, each with a maximum electrode usage of 7 pounds per hour, used for maintenance only; [326 IAC 6.8]

(c) One (1) cold cleaner operation used for maintenance purposes only. [326 IAC 8-3-2][326 IAC 8-3-5] [326 IAC 8-3-8]

(1) One (1) parts washer, identified as unit 3, with a maximum capacity of 0.1 gallon evaporation rate per day; and

(2) One (1) parts washer, identified as unit 4, with a maximum capacity of 0.1 gallon evaporation rate per day.

A.5 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, T089-29698-00133, 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. 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][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) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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, or 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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)(8) 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.

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 T089-29698-00133 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 permit, all previous registrations and permits are superseded by this 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 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.16 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

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

(1) Submitted at least 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, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.18 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 or notice 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.19 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) or (c) 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
Permit Administration and Support Section, 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)(1) and (c)(1). 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) and (c)(1).

(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 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.22 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.23 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. In the event that the source is a sub-contractor and is combined with a larger Part 70 source, the larger Part 70 source may pay the Permittees' annual fees as part of the larger source billing and subject to the fee cap of the larger source. If, however, the larger Part 70 source does not pay its annual Part 70 permit fee, IDEM, OAQ will assess a separate fee in accordance with 326 IAC 2-7-19(c) to be paid by the Permittee. 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.24 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 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

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

C.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 Particulate Matter Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (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 opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(d) 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) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(f) 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) 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) Material processing facilities shall include the following:

(1) 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.

(2) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(3) The PM_{10} stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.

(5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).

(i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(j) Material transfer limits shall be as follows:

(1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(2) 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%), three (3) minute average.

(3) 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).

(k) 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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 that meets the requirements of 326 IAC 2-7-6(1) by a "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) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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)][40 CFR 64][326 IAC 3-8]

(a) Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.

(b) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(c) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 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.12 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than ninety (90) days after the date of issuance of this permit.

The ERP does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.13 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.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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. 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). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or 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.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.15 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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.16 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]

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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 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. Support information includes the following:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(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 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), 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.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(c) 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) 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.

(e) 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 (oo) and/or 326 IAC 2-3-1 (jj)) 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 (ww) and/or 326 IAC 2-3-1 (pp), 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).

(f) The report for project at an existing emissions unit shall be submitted no later than 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 wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

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

(g) 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.19 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 applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]:

One (1) stationary slag crushing, screening and conveying plant, identified as Plant No. 1, with a capacity of 650 tons of slag per hour.

(a) Two (2) grizzly/feeders, identified as 1 and 2, each with a maximum capacity of 325 tons of slag per hour with emissions controlled by water sprays.

(b) Two (2) screen feeders, identified as 3 and 4, each with a maximum capacity of 300 tons of slag per hour with emissions controlled by water sprays.

(c) Four (4) three deck screens, identified as TDS-1, TDS-2, TDS-3 and TDS-4, with a maximum capacity of 577, 577,300 and 300 tons of slag per hour, respectively with emissions controlled by water sprays.

(d) One (1) single deck screen, identified as SDS-1, with a maximum capacity of 119 tons of slag per hour, with emissions controlled by water sprays.

(e) One (1) single deck screen, identified as SDS-2, with a maximum capacity of 126 tons of slag per hour, with emissions controlled by water sprays.

(f) One (1) primary crusher (standard cone crusher), identified as PC-1, with a maximum capacity of 294 tons of slag per hour, with emissions controlled by water sprays.

(g) One (1) secondary crusher (short head crusher), identified as SC-1, with a maximum capacity of 209 tons of slag per hour, with emissions controlled by water sprays.

(h) Four (4) stackers, identified as S-1, S-2, S-3 and S-4, with a maximum capacity of 328, 225, 136 and 119 tons of slag per hour, respectively, with emissions controlled by water sprays.

(i) One (1) conveyor, identified as C-1, with a maximum capacity of 650 tons of slag per hour, with emissions controlled by water sprays.

(j) One (1) conveyor, identified as C-2, with a maximum capacity of 1,154 tons of slag per hour, with emissions controlled by water sprays.

(k) Two (2) conveyors, identified as C-3 and C-4, each with a maximum capacity of 300 tons of slag per hour, with emissions controlled by water sprays.

(l) Three (3) conveyors, identified as C-5, C-6 and C-7, with a maximum capacity of 51, 209 and 294 tons of slag per hour, respectively, with emissions controlled by water sprays.

(m) Three (3) conveyors, identified as C-8, C-9 and C-10, with a maximum capacity of 504, 600 and 600 tons of slag per hour, respectively, with emissions controlled by water sprays.

(n) Two (2) conveyors, identified as C-11 and C-1, each with a maximum capacity of 60 tons of slag per hour, with emissions controlled by water sprays.

(o) Eight (8) conveyors, identified as C-13, C-14, C-15, C-16, C-18, A, B and C, with a maximum capacity of 136, 225, 119, 120, 225, 131, 224 and 16 tons of slag per hour, respectively, with emissions controlled by water sprays.

(p) Fugitive emissions from unpaved roads controlled by dust suppression, either material loading and unloading and storage piles controlled by water sprays.

(q) Two (2) truck loading bins, installed in 1998, each with a maximum capacity of 650 tons per hour, using wet suppression for particulate matter control.

Crushing, screening and conveying mobile equipment, approved for construction in 2009 through SSM 089-28293-00133, each with a throughput capacity of 300 tons per hour:

(a) Three (3) feeders

(b) Three (3) Tertiary Crushing operations

(c) Nine (9) conveyors

(d) Six (6) shuttle conveyors

(e) Two (2) magnet conveyors

(f) One (1) plug mill

(g) Five (5) screens

(h) Unpaved road

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

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

D.1.1 Particulate Emission Offset Minor Limitation [326 IAC 2-2][326 IAC 2-1.1-5]

Pursuant to the CP 089-9113-00133, issued January 26, 1998, the input of slag to the stationary crushing, screening and conveying plant, identified as Plant No. 1, shall not exceed 3,300,000 tons per 12 consecutive month period with compliance determined at the end of each month. The emissions of PM and PM10 shall not exceed the following:

Equipment	PM (lb/ton)	PM10 (lb/ton)
Feeders, Conveyors, Magnets	1.4E-04	4.6E-05
Crushers and Pugmill	0.0012	0.00054
Screens	0.0022	0.00074
Transfer Points	0.003	0.0011

This processing limitation is equivalent to PM and PM_{10} emissions of 5.0 and 2.3 pounds per hour, respectively. Compliance with the above limits shall limit the PM and PM10 PTE to less than 25 and less than 15 tons per year, rendering Prevention of Significant Deterioration (PSD) requirements under 326 IAC 2-2 not applicable to Plant No. 1.

Compliance with the above limits shall limit the PM2.5 emissions to less than 10 tons per year. Therefore, 326 IAC 2-1.1-5 (Nonattainment New Source Review) requirements do not apply to Plant No. 1.

D.1.2 Particulate Limitation [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to the SSM 089-28293-00133, issued on November 9, 2009, the total input of the materials for single and series of operations at the equipment approved under SSM 089-28293-00133 shall not exceed 795,000 tons per 12 consecutive month period with compliance determined at the end of each month. The emissions of PM, PM10, and PM2.5 shall not exceed the following:

Equipment	PM (lb/ton)	PM10 (lb/ton)	PM2.5 (lb/ton)
Feeders, Conveyors, Magnets	1.4E-04	4.6E-05	1.3E-05
Crushers and Pugmill	0.0012	0.00054	0.0001
Screens	0.0022	0.00074	0.00005

Compliance with the above limits in conjunction with condition D.3.1 shall limit the PM and PM10 PTE of the modification approved under SSM 089-28293-00133 to less than 25 and 15 tons per year, respectively. Therefore, PSD requirements are not applicable to the feeders, conveyors, magnets, crushers, pugmill, and screens permitted in 2009.

Compliance with the above limit in conjunction with condition D.3.1 shall limit the PM2.5 PTE of the modification approved under SSM 089-28293-00133 to less than 10 tons per year. Therefore, 326 IAC 2-1.1-5 (Nonattainment New Source Review) requirements are not applicable to the feeders, conveyors, magnets, crushers, pugmill, and screens permitted in 2009.

D.1.3 Fugitive Dust Emission Limitations [326 IAC 6-4-2][326 IAC 6.8-10-3]

(a) Pursuant to 326 IAC 6-4-2:

(1) The crushing, screening, transferring and conveying operations generating fugitive dust shall be in violation of this rule (326 IAC 6-4) if any of the following criteria are violated:

(A) A source or combination of sources which cause to exist fugitive dust concentrations greater than sixty-seven percent (67%) in excess of ambient upwind concentrations as determined by the following formula:

$$\frac{P = 100 (R) - U)}{U}$$

Where
P = Percentage increase
R = Number of particles of fugitive dust measured at downward receptor site
U = Number of particles of fugitive dust measured at upwind or background site

(B) The fugitive dust is comprised of fifty percent (50%) or more respirable dust, then the percent increase of dust concentration in subdivision (1) of this section shall be modified as follows:

$$PR = (1.5 \pm N) P$$

Where

N = Fraction of fugitive dust that is respirable dust;
PR = allowable percentage increase in dust concentration above background; and
P = no value greater than sixty-seven percent (67%).

(C) The ground level ambient air concentrations exceed fifty (50) micrograms per cubic meter above background concentrations for a sixty (60) minute period.

(D) If fugitive dust is visible crossing the boundary or property line of a source. This subdivision may be refuted by factual data expressed in subdivisions (1), (2) or (3) of this section. 326 IAC 6-4-2(4) is not federally enforceable.

(2) Pursuant to 326 IAC 6-4-6(6) (Exceptions), fugitive dust from a source caused by adverse meteorological conditions will be considered an exception to this rule (326 IAC 6-4) and therefore not in violation.

(b) Pursuant to 326 IAC 6.8-10-3 Lake County Fugitive Particulate Matter Emissions Limitations, fugitive emissions from the crushing, screening, transferring and conveying generating fugitive dust shall comply with the emissions limitations in Section C - Fugitive Dust Emissions.

D.1.4 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 these facilities and all control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.1.5 Fugitive Dust Control

(a) Pursuant to CP 089-9113-00133, issued January 26, 1998, the water spray control for fugitive particulate emissions from the crushing, screening, transferring and conveying operations shall be in operation as needed and weather permitting when the crushing, screening, transferring and conveying operations are being performed.

(b) Pursuant to CP 089-9113-00133, issued January 26, 1998, the dust suppression used as control for the fugitive particulate emissions from the fugitive dust sources shall be applied as often as necessary to control fugitive dust.

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

D.1.6 Visible Emissions Notations

(a) Visible emission notations of the crushing, screening, transferring and conveying operations shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.1.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.1, the Permittee shall maintain records of the slag input.

(b) To document the compliance status with Condition D.1.2, the Permittee shall maintain records of the total input of the materials for single and series of operations at the equipment approved under SSM 089-28293-00133.

(c) To document the compliance status with Condition D.1.6, the Permittee shall maintain records of once per day visible emission notations for the crushing, the screening, the transfer points and conveying operations. 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, 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. The report submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Specifically Regulated insignificant activities include the following:

(a) Two (2) metal inert gas (MIG) welding stations, identified as MIGW-1 and MIGW-2, each with a maximum wire consumption of 7 pounds per hour, used for maintenance purposes only [326 IAC 6.8];

(b) Six (6) stick welding stations, identified as SW-1 through SW-6, each with a maximum electrode usage of 7 pounds per hour, used for maintenance only [326 IAC 6.8];

(c) One (1) cold cleaner operation used for maintenance purposes only.

(1) One (1) parts washer, identified as unit 3, with a maximum capacity of 0.1 gallon evaporation rate per day; and

(2) One (1) parts washer, identified as unit 4, with a maximum capacity of 0.1 gallon evaporation rate per day.

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

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

D.2.1 Fugitive Dust Emission Limitations [326 IAC 6-4-2][326 IAC 6.8-10-3]

(a) Pursuant to 326 IAC 6-4-2:

(1) The metal inert gas (MIG) welding stations, MIGW-1 and MIGW-2 and stick welding stations, SW-1 through SW-6 generating fugitive dust shall be in violation of this rule (326 IAC 6-4) if any of the following criteria are violated:

(A) A source or combination of sources which cause to exist fugitive dust concentrations greater than sixty-seven percent (67%) in excess of ambient upwind concentrations as determined by the following formula:

$$P = \frac{100 (R - U)}{U}$$

Where
P = Percentage increase
R = Number of particles of fugitive dust measured at downward receptor site
U = Number of particles of fugitive dust measured at upwind or background site

(B) The fugitive dust is comprised of fifty percent (50%) or more respirable dust, then the percent increase of dust concentration in subdivision (1) of this section shall be modified as follows:

$$PR = (1.5 \pm N) P$$

Where
N = Fraction of fugitive dust that is respirable dust;
PR = allowable percentage increase in dust concentration above background; and
P = no value greater than sixty-seven percent (67%).

(C) The ground level ambient air concentrations exceed fifty (50) micrograms per cubic meter above background concentrations for a sixty (60) minute period.

(D) If fugitive dust is visible crossing the boundary or property line of a source. This subdivision may be refuted by factual data expressed in subdivisions (1), (2) or (3) of this section. 326 IAC 6-4-2(4) is not federally enforceable.

(2) Pursuant to 326 IAC 6-4-6(6) (Exceptions), fugitive dust from a source caused by adverse meteorological conditions will be considered an exception to this rule (326 IAC 6-4) and therefore not in violation.

(b) Pursuant to 326 IAC 6.8-10-3 Lake County Fugitive Particulate Matter Emissions Limitations, fugitive emissions from the metal inert gas (MIG) welding stations, MIGW-1 and MIGW-2 and stick welding stations, SW-1 through SW-6 generating fugitive dust shall comply with the emissions limitations in Section C - Fugitive Dust Emissions.

D.2.2 Volatile Organic Compounds (VOC) 326 IAC 8-3-2 (Cold Cleaner Operations),

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaner degreaser operation without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{O}C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-8] (Material Requirements for Cold Cleaning Degreasers)

Pursuant to 326 IAC 8-3-8 (Material requirements for cold cleaning degreasers), the users, providers, and manufacturers of solvents for use in cold cleaning degreasers in Lake County, except for solvents intended to be used to clean electronic components shall do the following:

(a) On and after November 1, 1999, no person shall operate a cold cleaning degreaser with a solvent vapor pressure that exceeds two (2) millimeters of mercury (thirty-eight thousandths (0.038) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(b) On and after May 1, 2001, no person shall operate a cold cleaning degreaser with a solvent vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(c) On and after November 1, 1999, all persons subject to the requirements of 326 IAC 8-3-8(c)(1)(B) and (c)(2)(B) shall maintain each of the following records for each purchase:

(1) The name and address of the solvent supplier.

(2) The date of purchase.

(3) The type of solvent.

(4) The volume of each unit of solvent.

(5) The total volume of the solvent.

(6) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(d) All records required by 326 IAC 8-3-8(d) shall be retained on-site for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]:

Diesel Generators
Eight (8) diesel generators, with a rated horse power of 250, 150, 175, 200, 275, 480, 450, and 300, respectively, approved for installation in 2009.

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

D.3.1 Fuel Usage Limitation [326 IAC 2-2] [326 IAC 2-1.1-5] [326 IAC 2-3]

Pursuant to SSM 089-28293-00133, the total diesel fuel usage at eight (8) diesel generators shall not exceed 116,986 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit in conjunction with condition D.1.2 shall limit the PM and PM10 PTE of the modification approved under SSM 089-28293-00133 to less than 25 and 15 tons per year, respectively. Therefore, PSD requirements are not applicable to the eight (8) generators.

Compliance with the above limit shall limit the NOx PTE of the modification approved under SSM 089-28293-00133 to less than 40 tons per year. Therefore, PSD requirements are not applicable to the eight (8) generators.

Compliance with the above limit in conjunction with condition D.1.2 shall limit the PM2.5 PTE of the modification approved under SSM 089-28293-00133 to less than 10 tons per year. Therefore, 326 IAC 2-1.1-5 (Nonattainment New Source Review) requirements are not applicable to the eight (8) generators.

Compliance with the above limit shall limit the VOC PTE of the modification approved under SSM 089-28293-00133 to less than 25 tons per year. Therefore, Emission Offset requirements are not applicable to the eight (8) generators.

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

D.3.2 Record Keeping Requirements

To document compliance with Condition D.3.1, the Permittee shall maintain the total diesel fuel usage at eight (8) diesel generators.

D.3.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, 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. The report submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]:

Vitrafine Plant, consisting of the following equipment, approved in 2012 for Construction:

(a) Fugitive emissions
- (i) Loading Feed Hopper, capacity: 90 tph
- (ii) Feed Hopper, capacity: 90 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor, capacity: 90 tph

(b) Dryer, capacity: 90 tph, using natural gas for combustion, with 50 MMbtu/hr of heat input capacity, controlled by Dryer Baghouse.

(c) Indoor equipment, controlled by Cage Mill Baghouse
- (i) Conveyor, capacity: 90 tph
- (ii) Bucket Elevator 1, capacity: 75 tph
- (iii) Feeder, capacity: 90, tph
- (iv) Conveyor (to Bucket Elevator 2), capacity: 90 tph
- (v) Bucket Elevator 2, capacity: 90 tph
- (vi) Cage Mill (Fines Crusher) , capacity: 90 tph
- (vii) Cage Mill Output Screw Conveyor, capacity: 90 tph
- (viii) Bucket Elevator 3, capacity: 90 tph
- (ix) Fines Screen 1 capacity: 75 tph
- (x) Fines Screen 2, capacity: 75 tph
- (xi) Screen Output 1 Screw A, capacity: 75 tph
- (xii) Screen Output 1 Screw B, capacity: 75 tph
- (xiii) Screen Output 2 Screw, capacity: 15 tph
- (xiv) Screen Output 2 Conveyor, capacity: 15 tph
- (xv) Rare Earth Magnet 1, capacity: 90,tph
- (xvi) Rare Earth Magnet 2, capacity: 90 tph
- (xvii) Conveyor (to Loadout Bins), capacity: 75 tph
- (xviii) BH to Loadout Bin Screw 1, capacity: 1 tph
- (xix) BH to Loadout Bin Screw 2, capacity: 1 tph

(d) Indoor Equipment (fugitive emissions)
- (i) FE Hopper Box (scrap), capacity: 10 tph

(e) Load out Bins, controlled by dust collectors
- (i) Bin 1, capacity: 75 tph
- (ii) Bin 2, capacity: 75 tph
- (iii) Bin 3, capacity: 75 tph
- (iv) Bin 4, capacity: 90 tph

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

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

D.4.1 PSD Minor and Nonattainment New Source Review Limit [326 IAC 2-2]

PM, PM10 and PM2.5 emission shall be limited as follows:

(a) Outdoor equipment (fugitive emissions)

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
(i) Loading Feed Hopper, capacity: 90 tph	0.017	0.006	0.006
(ii) Feed Hopper, capacity: 90 tph	0.017	0.006	0.006
(iii) Feeder, capacity: 90 tph	0.017	0.006	0.006
(iv) Conveyor, capacity: 90 tph	0.017	0.006	0.006

(b) Dryer

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Dryer	2.97	2.07	2.07

(c) The total input of the materials at Vitrafine Plant shall not exceed 495,000 tons per 12 consecutive month period with compliance determined at the end of each month.

(d) Indoor equipment, controlled by Cage Mill Baghouse

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Conveyor to Bucket Elevator 1	0.0027	0.0010	0.0010
Bucket Elevator 1	0.0027	0.0010	0.0010
Feeder	0.0027	0.0010	0.0010
Conveyor to Bucket Elevator 2	0.0027	0.0010	0.0010
Bucket Elevator 2	0.0027	0.0010	0.0010
Cage Mill (Fines Crusher)	0.0351	0.0135	0.0135
Cage Mill Output Screw Conveyor	0.0027	0.0010	0.0010
Bucket Elevator 3	0.0027	0.0010	0.0010
Rare Earth Magnet 1	0.0027	0.0010	0.0010
Rare Earth Magnet 2	0.0027	0.0010	0.0010
Fines Screen 1	0.225	0.0540	0.0540
Fines Screen 2	0.225	0.0540	0.0540
Screen Output 1 Screw A	0.00225	0.0008	0.0008
Screen Output 1 Screw B	0.00225	0.0008	0.0008
Screen Output 2 Screw	0.00045	0.0002	0.0002
Screen Output 2 Conveyor	0.00045	0.0002	0.0002
Conveyor to Loadout Bins	0.00225	0.0008	0.0008
BH to Loadout Bin Screw 1	0.00045	0.0002	0.0002
BH to Loadout Bin Screw 2	0.00045	0.0002	0.0002

(e) Load out Bins

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Bin 1	0.548	0.353	0.12
Bin 2	0.548	0.353	0.12
Bin 3	0.548	0.353	0.12
Bin 4	0.657	0.42	0.12

Compliance with these limits, in conjunction with the fugitive particulate emissions approved under SSM 089-31980-00133 will limit the PM, PM10 and PM2.5 emissions from the modification approved under SSM 089-31980-00133 to less than 25, 15 and 10 tons per year, respectively. Therefore, the modification approved under SSM 089-31980-00133 is not a major modification under 326 IAC 2-2.

D.4.2 Particulate [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a) (Particulate emission limitations), particulate emissions from the emission units listed in Conditions 4.1(b), (d) and (e) shall not exceed 0.03 grains per dry standard cubic foot (dscf).

D.4.3 Fugitive Dust Emission Limitations [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 Lake County Fugitive Particulate Matter Emissions Limitations, the following operations shall comply with the emissions limitations in Section C - Fugitive Dust Emissions:

(a) Fugitive emissions
- (i) Loading Feed Hopper, capacity: 90 tph
- (ii) Feed Hopper, capacity: 90 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor, capacity: 90 tph

(d) Indoor Equipment (fugitive emissions)
- (i) FE Hopper Box (scrap), capacity: 10 tph

D.4.4 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 these facilities and all control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.4.5 Particulate Matter Control

In order to demonstrate the compliance with Conditions D.4.1 and D.4.2:

(a) The Dryer Baghouse shall be in operation and control emissions at all times that the dryer is in operation.

(b) The Cage Mill Baghouse shall be in operation and control emissions at all times that one or more emission unit listed in Condition D.4.1(d) is in operation.

(c) The Dust collectors equipped on Bins 1, 2, 3 and 4 shall be in operation and control emissions at all times that the associated bin to these Dust collectors is in operation.

D.4.6 Particulate Matter Control

In order to ensure compliance with Condition D.4.1(a), the Permittee shall use wet suppression to control emissions of PM, PM_{10}, and $PM_{2.5}$ from the from the equipment listed in Condition D.4.1(a) as necessary to ensure that the material processed has a moisture content not less than seven (7) percent. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.4.1(a). If weather conditions preclude the use of wet suppression, the Permittee shall perform analysis to ensure a moisture content equal to or greater than fifteen tenths (1.5) percent.

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

D.4.7 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) The Permittee shall record the pressure drop across the dust collectors (used in conjunction with Bins 1, 2, 3 and 4), Dryer baghouse (used in conjunction with the Dryer) and Cage Mill Baghouse (used in conjunction with the emission units listed in Condition D.4.1(c)) at least once per day when one or more of the associated emission unit to these controls is in operation. When for any one reading, the pressure drop across these control devices is outside the normal range of 1.0 and 6 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for the Dryer and Bins 1, 2, 3 and 4.

D.4.8 Broken or Failed Bag Detection

(a) For a single compartment baghouse/dust collector controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.4.9 Visible Emissions Notations

(a) Visible emission notations of the emission units described in this section shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.4.9 Record Keeping Requirements

(a) To document the compliance status with D.4.7, the Permittee shall maintain a daily record of the pressure drop across the baghouses and dust collectors. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.4.8, the Permittee shall maintain records of once per day visible emission notations for the emission units described in this section. 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).

(c) To document the compliance status with Condition D.4.1(c), the Permittee shall maintain records of the total input of the materials at Vitrafine Plant.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.1(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, 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. The report submitted by the Permittee does 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
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: South Shore Slag LLC
Source Address: 1 North Buchanan, Gary, Indiana 46402
Part 70 Permit No.: T089-29698-00133

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 AND ENFORCEMENT 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: South Shore Slag LLC
Source Address: 1 North Buchanan, Gary, Indiana 46402
Part 70 Permit No.: T089-29698-00133

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: _____

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

Part 70 Quarterly Report

Source Name: South Shore Slag LLC
Source Address: 1 North Buchanan, Gary, Indiana 46402
Part 70 Permit No.: T089-29698-00133
Facility: Slag crushing, screening and conveying plant
Parameter: granule process rate
Limit: 3,300,000 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: _____

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

Part 70 Quarterly Report

Source Name:	South Shore Slag LLC
Source Address:	1 North Buchanan, Gary, Indiana 46402
Part 70 Permit No.:	T089-29698-00133
Facility:	Material processing equipment, approved for construction through SSM 089-28293-00133
Parameter:	the total input of the materials for single and series of operations at the equipment approved under SSM 089-28293-00133
Limit:	795,000 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: _____

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

Part 70 Quarterly Report

Source Name: South Shore Slag LLC
Source Address: 1 North Buchanan, Gary, Indiana 46402
Part 70 Permit No.: T089-29698-00133
Facility: Eight (8) diesel generators
Parameter: total diesel fuel usage
Limit: 116,986 gallons 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: _____

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

Part 70 Quarterly Report

Source Name: South Shore Slag LLC
Source Address: One North Buchanan, Gary, Indiana 46402
Part 70 Permit No.: T089-29698-00133
Facility: Vitrafine Plant
Parameter: the total input of the materials at Vitrafine Plant
Limit: 495,000 tons per twelve consecutive month period

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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: South Shore Slag LLC
Source Address: 1 North Buchanan, Gary, Indiana 46402
Part 70 Permit No.: T089-29698-00133

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, 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".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ 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: _____

South Shore SLAG, LLC

Gary Works
100% Recycled Aggregate

ONE NORTH BUCHANAN STREET
GARY, INDIANA

FUGITIVE DUST CONTROL PLAN
326 IAC 6.8-10-4
Lake County

REVISION 2
July 11, 2012

Prepared by:
ST Environmental LLC
209 S Calumet Road, Suite 5
Chesterton, IN 46304
(219) 728-6312

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Appendix C Processing Equipment Lists

Introduction and Facility Description [326 IAC 6.8-10-4(3)(A)(B)&(C)]

This Fugitive Dust Control Plan (FDCP) is written in accordance with 326 IAC 6.8-10-4. This source is located in Lake County, Indiana. South Shore Slag LLC (South Shore), a subsidiary of Beemsterboer Slag Corp, owns and operates slag and material processing operations located within the US Steel (USS) Gary Works facility in Gary, Indiana. USS Gary Works is a fully integrated steelmaking and finishing facility. Even though the two facilities are considered to be one source due to contractual control, South Shore operates under its own Part 70 permit. The operating manager of this facility is responsible for the execution of this plan.

Roadways and Parking Lots-Slag Plant Processing [326 IAC 6.8-10-4(3)(D)(i)]

All roadways that are under control of the South Shore facility are approximately 30 feet wide with varying lengths. Appendix A figures (onsite copy only) show the approximate location and designation of each roadway. Trucks and front-end loaders are utilized for transportation of materials throughout the facility. Employee passenger vehicles and passenger trucks will be parked at the facility in makeshift unpaved parking areas. Refer to the facility's Part 70 Permit for fugitive dust roadway calculations.

Roadways and Parking Lots-Other Material Processing [326 IAC 6.8-10-4(3)(D)(i)]

All roadways in these various material processing areas are owned and operated by US Steel, and therefore, under their FDCP. Material processing does not take place with the leased property boundary of the South Shore slag plant. South Shore is not responsible for the roadways in the Gary Works plant. Only dozers are used for very short distances in these areas as needed, therefore, no South Shore material hauling trucks are used while processing materials within Gary Works. Refer to the facility's Part 70 Permit for fugitive dust roadway calculations.

Storage Piles-Slag Plant Processing [326 IAC 6.8-10-4(3)(D)(ii)]

Feed materials are brought to the South Shore site as needed and are stored in various locations onsite and will move within a general area throughout the year. Product materials are stored in various locations on the facility site and product pile locations will move within a general area throughout the year. Appendix A figures (onsite copy only) show the general locations of these storage areas. Front-end loaders and stacking conveyors are used to load onto and load out of the storage piles. The moisture content of all materials stored on site is on average 0.92% moisture or greater in accordance with AP-42 13.2.4-1 and greatly depends on atmospheric precipitation throughout the year. South Shore has a limited production throughput as stated in their Part 70 Permit.

Storage Piles-Other Material Processing [326 IAC 6.8-10-4(3)(D)(ii)]

Feed stock and products for other material processing are stored at the various processing locations in Gary Works which are owned and operated by US Steel. South Shore is not responsible for the management of these areas. Refer to the US Steel Part 70 Permit requirements for FDCP.

Plant Processing Description [326 IAC 6.8-10-4(3)(D)(iii)]

The Main Plant No.1 processes slag and other materials through a crusher and then through a series of screens for sizing using various conveyors and stackers. Water sprays or watering trucks are utilized, as needed, in the plant which provides 75-90% control efficiency. The new Vitrafine Plant only has a few pieces of equipment that are fugitive sources at the feed end of the process which includes loader feeding, one vibrating feeder and one conveyor. As with the Main Plant, water sprays or watering trucks are utilized, as needed, in the plant which provides 75-90% control efficiency. See Appendix C for equipment lists.

Portable Material Processing Description [326 IAC 6.8-10-4(3)(D)(iii)]

US Steel periodically requests various materials to be processed by South Shore in US Steel processing areas not controlled by South Shore Slag. These materials may be processed through crushers and screens using various conveyors and/or stackers based on the needs of US Steel. Some applications may not include crushing or screening but simply stacking using various conveyors and stackers. Water sprays or watering trucks are utilized, as needed, at these locations which provide 75-90% control efficiency. US Steel provides water and flusher trucks for their designated roadways. See Appendix C for equipment lists.

Control Measures and Practices [326 IAC 6.8-10-4(3)(E)&(F)]

Control measures utilized to control dust have limited application in fugitive sources. This section details measures to be used in the facility to control fugitive emissions. Since water application will be the control measure utilized, application will be suspended based on weather events as follows:

- during periods of precipitation
- when temperatures are at or below freezing
- when ice or snow cover is present.

If chemical application is utilized at some future date, the same weather restrictions will apply. The phrase "weather permitting" used in the following paragraphs herein designates the suspension of control application during the weather events listed above. Additionally, daily visible emission notations will be conducted to monitor fugitive emissions.

A-I. Plant-Roadways and Processing Yards

Dust on unpaved roads will be controlled by applications of water (an acceptable chemical compound may be used in the future) during operating hours, weather permitting. There are no paved roadways in this facility. Applications of dust control material will be done as often as necessary to meet applicable limits.

A-II. Plant-Process Operations

To help minimize dust emissions, the drop distance at each conveyor transfer point in the plant will be set at the minimum distance in which the equipment can operate effectively. Water application will be utilized, when needed and weather permitting, at strategic locations throughout the plant to control dust emissions. During water application, caution must be taken to avoid saturating the material which results in blinding the screens or crushers.

A-III. Plant-Storage Piles

To reduce potential dust emissions, stockpiling will be performed at minimum drop distances, to the extent practicable. Product storage piles are watered on an as needed basis during operating hours, weather permitting.

A-IV. Plant-Loading and Transfer; Trucks and Front-End Loaders

Trucks and/or feeders will be loaded in a manner to reduce or prevent materials from blowing or otherwise escaping. This may be accomplished by loading the vehicle and/or feeder with the center of gravity for the load at a safe distance below the top of the sideboard. Drop heights for front-end loader buckets will be held within a few feet above the sideboard of the truck and/or feeder during loading.

B-I. Portable Material Processing-Roadways and Processing Yard

All roadways in these various material processing areas are owned and operated by US Steel, and therefore, under their FDCP. Material processing does not take place with the leased property boundary of the South Shore slag plant. South Shore is not responsible for the roadways in the Gary Works plant. Only dozers are used for very short distances in these areas as needed, therefore, no South Shore material hauling trucks are used while processing materials within Gary Works. However, while in the

area South Shore may opt to utilize water application when needed and weather permitting, at strategic locations to control dust emissions.

B-II. Portable Material Processing-Operations

To help minimize dust emissions, the drop distance at each conveyor transfer point in the plant will be set at the minimum distance in which the equipment can operate effectively. Water application will be utilized, when needed and weather permitting, at strategic locations throughout the plant to control dust emissions. During water application, caution must be taken to avoid saturating the material which results in blinding the screens or crushers.

B-III. Portable Material Processing-Storage Piles

Feed and product storage piles are under the control of US Steel Gary Works. However, while stacking South Shore may utilize water application when needed and weather permitting, at strategic locations to control dust emissions.

B-IV. Portable Material Processing-Loading and Tranfer; Trucks and Front-End Loaders

Trucks and/or feeders will be loaded in a manner to reduce or prevent materials from blowing or otherwise escaping. This may be accomplished by loading the vehicle and/or feeder with the center of gravity for the load at a safe distance below the top of the sideboard. Drop heights for front-end loader buckets will be held within a few feet above the sideboard of the truck and/or feeder during loading. (Hauling trucks are not used by South Shore for material processing. They are under the control of US Steel.)

Schedule of Compliance [326 IAC 6.8-10-4(3)(G)]

South Shore has already implemented the provisions of this control plan. This plan will be revised if any significant process changes occur that would affect the control measures and practices for these facilities. Any revision to this plan requires an administrative amendment to the Part 70 Permit.

Documentation, Record Keeping and Reporting [326 IAC 6.8-10-4(4)]

Records will be maintained to document control measures and activities in accordance with 326 IAC 6-5-5 (b). These records may be kept as part of the facility's daily maintenance logs. These records include:

- documentation of water applications (roadways applied, time, width, method, quantity of water applied);
- documentation of chemical applications, if any (roadways applied, time, rate of application, concentration, volume of chemical applied, MSDS), and;
- incidents where control plan was not followed and explanation.

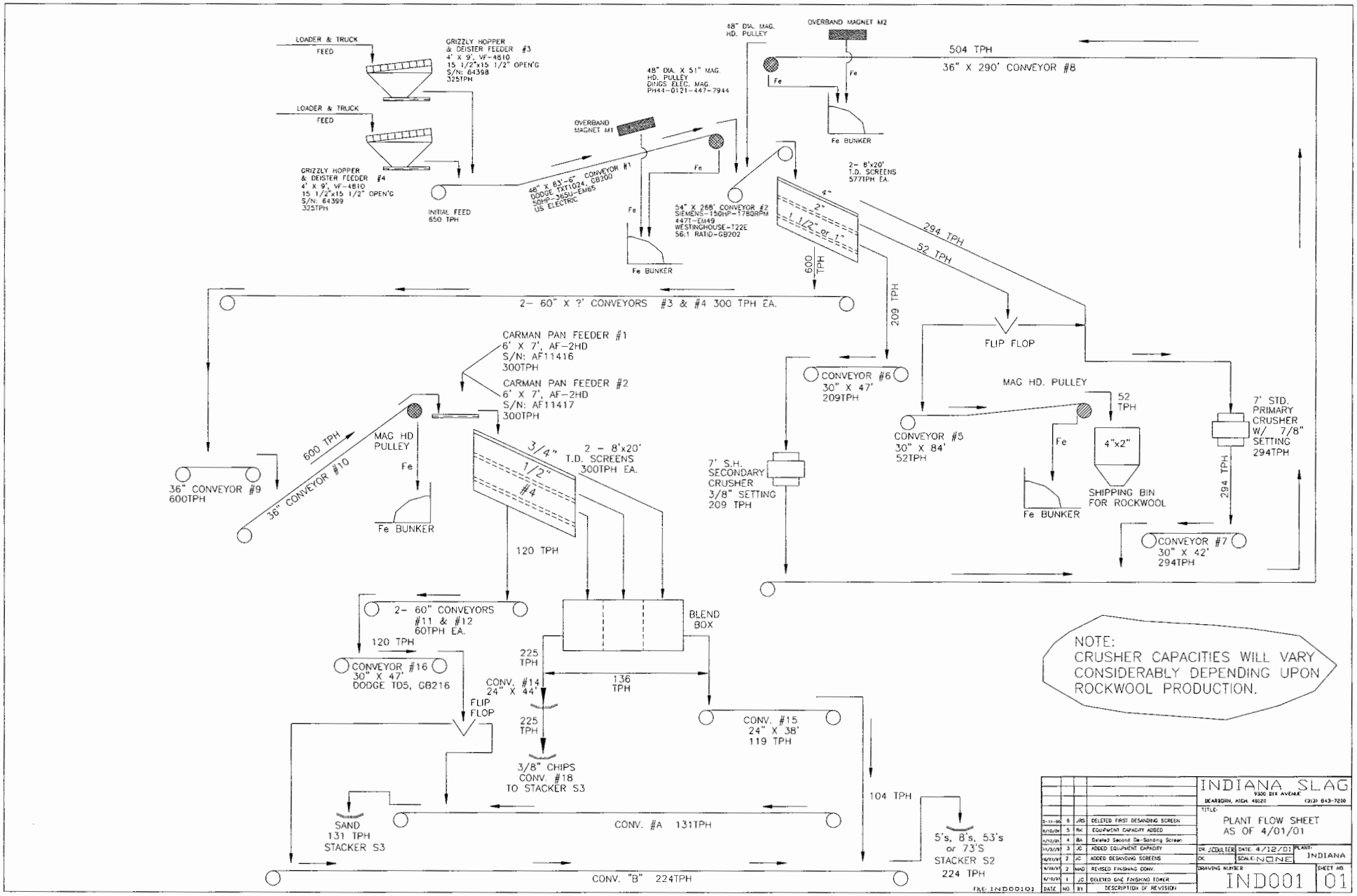
These records will be available upon the request of the commissioner and shall be retained for five (5) years.

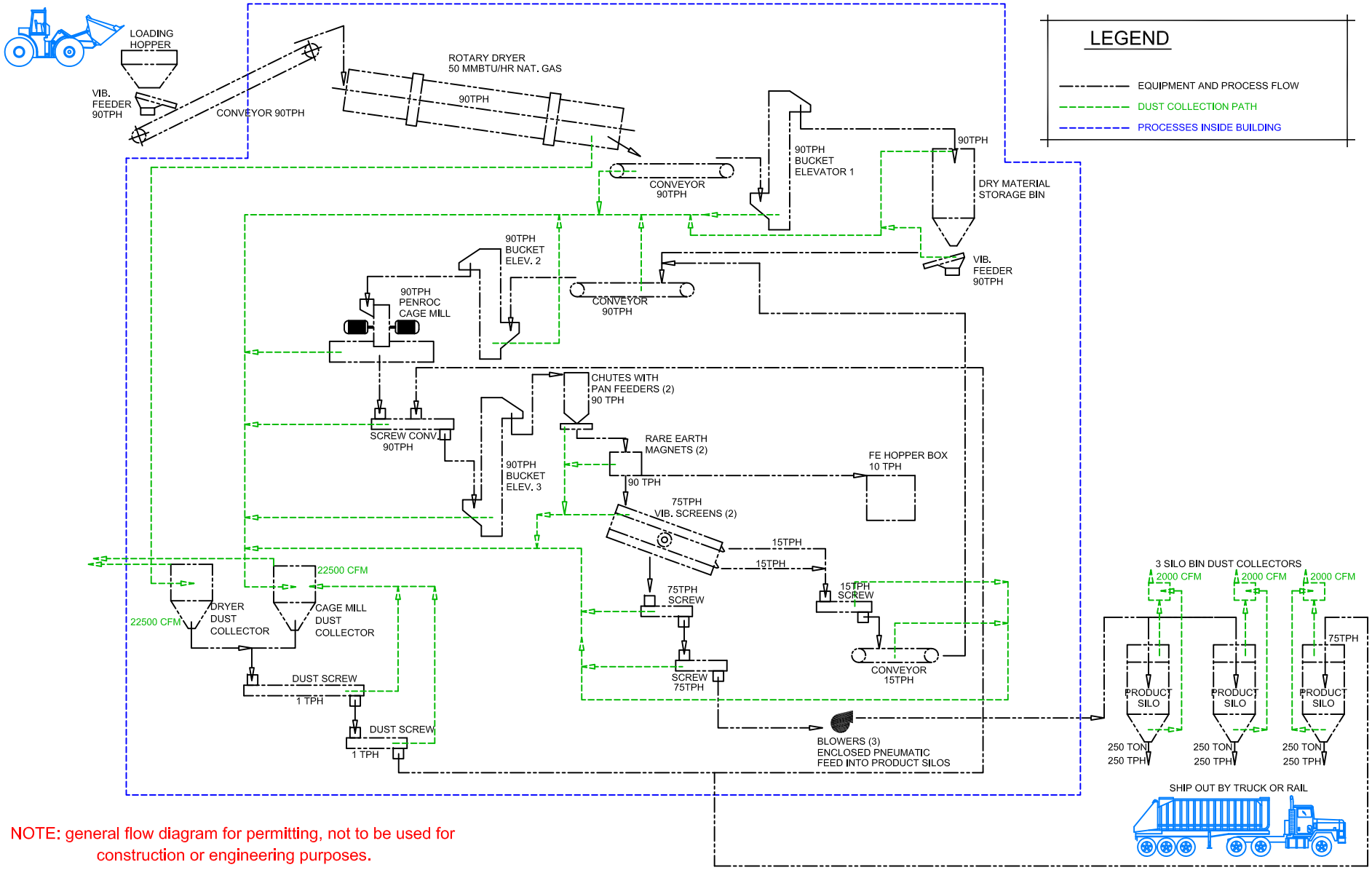
A quarterly report shall be submitted in accordance with 326 IAC 6.8-10-4(4)(G) which includes:

- dates any required control measures were not implemented;
- listing of these control measures;
- reasons that control measures were not implemented, and;
- any corrective actions taken.

APPENDIX A

SITE MAPS


LOADER & TRUCK
FEED
GRIZZLY HOPPER
& DEISTER FEEDER #3
4' X 9', VF-4810
15 1/2"x15 1/2" OPEN'G
S/N: 64398
325TPH
LOADER & TRUCK
FEED
GRIZZLY HOPPER
& DEISTER FEEDER #4
4' X 9', VF-4810
15 1/2"x15 1/2" OPEN'G
S/N: 64399
325TPH
INITIAL FEED
650 TPH
46" X 83'-6" CONVEYOR #1
DODGE 24XT024, GB200
50HP-365U-EM65
US ELECTRIC
OVERBAND
MAGNET M1
Fe
Fe BUNKER
48" DIA. X 51" MAG.
HD. PULLEY
DINGS ELEC. MAG.
PH44-0121-447-7944
54" X 258' CONVEYOR #2
SIEMENS-150HP-1780RPM
4471-EM49
WESTINGHOUSE-T22E
56:1 RATIO-GB202
48" DIA. MAG.
HD. PULLEY
OVERBAND MAGNET M2
504 TPH
36" X 290' CONVEYOR #8
Fe BUNKER
2- 8'x20'
T.D. SCREENS
577TPH EA.
4"
2"
1 1/2" or 1"
600 TPH
294 TPH
52 TPH
209 TPH
2- 60" X ?' CONVEYORS #3 & #4 300 TPH EA.
FLIP FLOP
CARMAN PAN FEEDER #1
6' X 7', AF-2HD
S/N: AF11416
300TPH
CARMAN PAN FEEDER #2
6' X 7', AF-2HD
S/N: AF11417
300TPH
CONVEYOR #6
30" X 47'
209TPH
MAG HD. PULLEY
52
TPH
CONVEYOR #5
30" X 84'
52TPH
7' STD.
PRIMARY
CRUSHER
W/ 7/8"
SETTING
294TPH
600 TPH
36" CONVEYOR #10
MAG HD
PULLEY
Fe
36" CONVEYOR #9
600TPH
Fe BUNKER
3/4"
1/2"
#4
2 - 8'x20'
T.D. SCREENS
300TPH EA.
7' S.H.
SECONDARY
CRUSHER
3/8" SETTING
209 TPH
4"x2"
SHIPPING BIN
FOR ROCKWOOL
Fe BUNKER
294 TPH
CONVEYOR #7
30" X 42'
294TPH
120 TPH
2- 60" CONVEYORS
#11 & #12
60TPH EA.
BLEND
BOX
120 TPH
CONVEYOR #16
30" X 47'
DODGE TD5, GB216
225
TPH
136
TPH
CONV. #14
24" X 44'
FLIP
FLOP
225
TPH
CONV. #15
24" X 38'
119 TPH
3/8" CHIPS
CONV. #18
TO STACKER S3
104 TPH
SAND
131 TPH
STACKER S3
CONV. #A 131TPH
5's, 8's, 53's
or 73'S
STACKER S2
224 TPH
CONV. "B" 224TPH
NOTE:
CRUSHER CAPACITIES WILL VARY
CONSIDERABLY DEPENDING UPON
ROCKWOOL PRODUCTION.
FILE: IND00101
INDIANA SLAG
9300 BIX AVENUE
DEARBORN, MICH. 48120
(313) 843-7200
TITLE:
PLANT FLOW SHEET
AS OF 4/01/01
DR. JCOULTER
DATE: 4/12/01
PLANT: INDIANA
CK.
SCALE: NONE
DRAWING NUMBER
IND001
SHEET NO.
01
DATE | NO. | BY | DESCRIPTION OF REVISION
5-11-00 | 5 | JRS | DELETED FIRST DESANDING SCREEN
8/15/01 | 5 | RK | EQUIPMENT CAPACITY ADDED
4/12/01 | 4 | BA | Deleted Second De-Sanding Screen
11/3/97 | 3 | JC | ADDED EQUIPMENT CAPACITY
10/31/97 | 2 | JC | ADDED DESANDING SCREENS
9/29/97 | 2 | MAD | REVISED FINISHING CONV.
8/10/97 | 1 | JC | DELETED GNE FINISHING TOWER



NOTE: general flow diagram for permitting, not to be used for construction or engineering purposes.

General Process Flow Diagram South Shore Slag Vitrafine Process Significant Permit Modification	ST Environmental LLC	209 S Calumet Rd, Ste 5 Chesterton, IN 46304 Phone: (219) 728-6312 Fax: (855) 728-6312	DRAWN: Original - Michigan Limestone Drwg#031904 Modified - ST Env LLC for permit mod CHECKED: Operations PROJECT: South Shore Slag	SCALE: NA FILENAME: Vitrafine Flow Diagram	DATE: 05/29/2012

APPENDIX B

SAMPLE FUGITIVE DUST CONTROL LOG

South Shore Slag
Roadways and Piles
Fugitive Dust Control Documentation Log

Fill in data for each road dust control application event (as multiple application events may occur in a day).

Date: _____

Weather Conditions (check all that apply): ☐ Temperature ≥ 32°F ☐ Rainfall ≥ 0.1 inches ☐ Ice and/or Snow Cover Present

Application may be suspended if any of these weather events are present. However, this documentation must be retained.

	Roads	**Piles**
Application Rate(s)		
Time(s) of each application		
Width(s) of each application		
Type of application	Water Suppression	Water Suppression
Quantity(s) of each application		
If chemical used, concentration of each application		

SAMPLE ONLY-SEE PLANT MGMT FOR LATEST VERSION

APPENDIX C

PROCESSING EQUIPMENT LISTS

APPENDIX C - PROCESSING EQUIPMENT LISTS
SOUTH SHORE SLAG LLC

Main Plant No. 1 Processing Equipment

Equipment List	Max Capacity (tph)
2 grizzly feeders	325 ea
2 screen feeders	300 ea
1 triple deck screen	577
1 triple deck screen	577
1 triple deck screen	300
1 triple deck screen	300
1 single deck screen	119
1 single deck screen	126
1 primary crusher	294
1 secondary crusher	209
1 stacker	328
1 stacker	225
1 stacker	136
1 stacker	119
1 conveyor	650
1 conveyor	1154
2 conveyors	300 ea
1 conveyor	51
1 conveyor	209
1 conveyor	294
1 conveyor	504
2 conveyors	600 ea
2 conveyors	60 ea
2 conveyors	225 ea
1 conveyor	136
1 conveyor	119
1 conveyor	120
1 conveyor	131
1 conveyor	224
1 conveyor	16
2 truck loading bins	650

Vitrafine Plant - Non-Point Source Equipment

Equipment List	Max Capacity (tph)
1 loading hopper	90
1 vibratory feeder	90
1 feed end conveyor	90

Portable Material Processing Equipment List

Equipment List	Max Capacity (tph)
One Feeder, 300 tph or less	300
One Feeder, 300 tph or less	300
One Feeder, 300 tph or less	300
One Crusher, 300 tph or less	300
One Crusher, 300 tph or less	300
One Crusher, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Conveyor, 300 tph or less	300
One Shuttle Conveyor, 300 tph c	300
One Shuttle Conveyor, 300 tph c	300
One Shuttle Conveyor, 300 tph c	300
One Shuttle Conveyor, 300 tph c	300
One Shuttle Conveyor, 300 tph c	300
One Shuttle Conveyor, 300 tph c	300
One Magnet, 300 tph or less	300
One Magnet, 300 tph or less	300
One Pug Mill, 300 tph or less	300
One Screen, 300 tph or less	300
One Screen, 300 tph or less	300
One Screen, 300 tph or less	300
One Screen, 300 tph or less	300
One Screen, 300 tph or less	300

Generator List	Max Capacity (hp)
One Generator, 250 Hp or less	250
One Generator, 150 Hp or less	150
One Generator, 175 Hp or less	175
One Generator, 200 Hp or less	200
One Generator, 275 Hp or less	275
One Generator, 480 Hp or less	480
One Generator, 450 Hp or less	450
One Generator, 300 Hp or less	300

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	South Shore Slag LLC
Source Location:	One North Buchanan, Gary, Indiana 46402
County:	Lake
SIC Code:	3295
Permit Renewal No.:	T089-29698-00133
Permit Renewal Issuance Date:	March 17, 2011
Significant Source Modification No.:	089-31980-00133
Significant Permit Modification No.:	089-31982-00133
Permit Reviewer:	Mehul Sura

Public Notice Information

On September 14, 2012, the Office of Air Quality (OAQ) had a notice published in the *Post Tribune,* Merrillville, Indiana and *Tribune*, Munster, Indiana stating that OAQ had received an application from South Shore Slag LLC located at One North Buchanan, Gary, Indiana 46402 for significant source and significant permit modifications of its Part 70 Operating Permit issued on March 17, 2011. The notice also stated that OAQ proposed to issue these significant source and significant permit modifications and provided information on how the public could review the proposed modifications 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 these modifications should be issued as proposed.

On September 27, 2012, Mrs. Susan Grenzebach from ST Environmental LLC, an environmental consultant for South Shore Slag LLC, submitted comments on the proposed modifications which are listed below. The comments are followed by IDEM response. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**.

Comment 1

Condition B.23
South Shore Slag LLC requests clarification in Condition B.23 regarding fees paid by host facilities and the exemption that applies to onsite contractors once the maximum annual emission fees are paid, as follows:

B.23 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. In the event that the source is a sub-contractor and is combined with a larger Part 70 source, the larger Part 70 source may pay the Permittees' annual fees as part of the larger source billing and subject to the fee cap of the larger source. If, however, the larger Part 70 source does not pay its annual Part 70 permit fee, IDEM, OAQ will assess a separate fee in accordance with 326 IAC 2-7-19(c) to be paid by the Permittee. 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.

Response 1

Condition B.23 is revised as follows:

B.23 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.~~
The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. In the event that the source is a sub-contractor and is combined with a larger Part 70 source, the larger Part 70 source may pay the Permittees' annual fees as part of the larger source billing and subject to the fee cap of the larger source. If, however, the larger Part 70 source does not pay its annual Part 70 permit fee, IDEM, OAQ will assess a separate fee in accordance with 326 IAC 2-7-19(c) to be paid by the Permittee. 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.

Comment 2

Condition D.4.1(c) and TSD emission calculations
Upon review of the calculations in the TSD, we find errors in the calculations for wind erosion and pile drop operations. The throughputs for these operations should match that of the entire facility throughput limit. We are providing corrected calculations attached. We adjusted the moisture content for pile operations to 1.5% and adjusted the control efficiency for watering roadways to 75% in addition to correcting the throughput entries that were in error. We believe the throughput limitation should be closer to 600,000 tons per year.

We disagree with use of 50% control for roadways and believe it has no technical basis without consideration of speed control. We have provided enough information to support 75% control for regular watering of unpaved roadways. The emission inventory report form (identified 'Emissions Inventory Help Sheet for Vehicle Travel on Unpaved Roads') of Maricopa County in Arizona supports 70% control for watering unpaved roads in an average humidity climate that is much lower than NW Indiana. IDEM has accepted as much as 85-90% control efficiency in past permit applications (see Permit# 127- 29719-00026, 089-27217-00538, 127-27246-00116). We are attaching some of the data used for Maricopa County in the attached documents. This shows speed control alone provides 44% control and watering alone provides 55% control, however, both efficiencies have to be combined, not one used without the other. Maricopa County uses 70% for industrial unpaved roads which considers both watering and speed control, citing AP-42 13.2.2 documents as their basis. We believe 75% for NW Indiana climate is appropriate. We would like for IDEM to provide their basis otherwise.

Response 2

The material throughputs for storage pile operations have been changed to 495,000 tons per twelve consecutive month period. The moisture content for the pile operations has been changed to 1.5%. No change has been made to the unpaved roads and storage pile fugitive particulate emission control efficiency and the reasons are described in paragraph (a) and (b) below. TSD emission calculations have been revised to reflect corrected throughput for the storage pile operations and the moisture content for the storage pile material. The revised calculation is attached with this ATSD as Attachment of A of this ATSD.

(a) The emission inventory report form of Maricopa County in Arizona references that 70% wet suppression efficiency is used when roadways are watered every day and minimum 1.5% surface moisture is maintained on the roadways. The source disagrees to include daily watering and 1.5% minimum moisture content requirement in the permit.

(b) Figure 13.2.2-2 in AP 42 13.2.2 presents a bilinear relationship between the instantaneous control efficiency due to watering and the resulting increase in surface moisture. This figure shows that more than 50% instantaneous control efficiency could be achieved. The methodology to establish this bilinear relationship is described in AP 42 13.2.2. The watering program should be designed based on this bilinear relationship. This watering program should be then included in the permit. The source has not provided such watering program for review to IDEM.

Comment 3

Condition D.4.6
Condition D.4.6 states a moisture limit of 7%. EPA studies supporting control efficiencies of 90% for moistures at 1.5% or higher. Limiting the source to 7% is well beyond 1.5% minimum required to retain 90% control efficiency as demonstrated in the EPA studies in the AP-42 background document. The control efficiency was directly correlated to meeting the minimum moisture of 1.5%. Any moisture above 1.5% equates to 90% control efficiency to which the permit application was based upon. We believe IDEM has gone beyond its legal requirements by placing 7% moisture limit on the facility without any technical basis. The moisture limit should be 1.5% or higher, not 7%.

Further, the permit states that the method for moisture content analysis must be approved by IDEM. It is not clear what mechanism this approval to take place under. We are aware of other facilities that have not received any written "approval" from IDEM on their moisture analysis methods. IDEM should state the particular methods that will or will not be accepted and provide technical reasons why. There are only a few methods commonly used in this industry: ASTM standard method and/or portable hand-held moisture meters. We would like the ability to continue using any of the methods commonly used. This language should be changed to read, "the facility may use any ASTM type standard method and/or portable hand-held moisture meters."

Response 3

Condition D.4.6 is revised as follows:

D.4.6 Particulate Matter Control

In order to ensure compliance with Condition D.4.1(a), the Permittee shall use wet suppression to control emissions of PM, PM_{10}, and $PM_{2.5}$ from the from the equipment listed in Condition D.4.1(a) as necessary to ensure that the material processed has a moisture content not less than seven (7) percent. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.4.1(a). If weather conditions preclude the use of wet suppression, the Permittee shall perform analysis to ensure a moisture content equal to or greater than ~~seven (7)~~ **one and five-tenths (1.5)** percent. ~~The method for the moisture content analysis shall be approved by IDEM, OAQ.~~

On December 23, 2011, Mr. Peter C. Julovich, an Air Quality Control Manager for Environmental Affairs/Green Urbanism Department, Gary, Indiana, submitted a comment on the proposed modification which is listed below.

Comment 1

Please inform if the existing diesel generators are from East Chicago facility and relocated to Gary.

Response 1

The existing generators were reviewed under Significant Source Modification 089-28293-00133, issued on November 9, 2009. The source has not requested any modification to these generators;

therefore, these generators have not been reviewed under this proposed modification. No changes have been made due to this comment.

Comment 2

Please include equivalent MMBTU/Hr for the existing diesel generators.

Response 2

The existing generators are specified based on their rated horse power. Adding MMBTU/Hr specifications for these generators would be redundant. No changes have been made due to this comment.

Comment 3

Please replace the words 'commissioner' with 'regulatory agency representative' in Fugitive dust control plan. Usually the inspector has the responsibility to confirm the plan for implementation.

Response 3

No reference to the words 'regulatory agency representative' have been found in 326 IAC 6.8-10 rule. Therefore, no changes have been made due to this comment.

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.:089-31980-00133
Significant Permit Modification No.:089-31982-00133
Reviewer: Mehul Sura
Date: 10/15/2012

Hours of Operation **5500** **495,000** limited throughput

				Uncontrolled Emission Factor					Uncontrolled Emission			Controlled Emission		
Unit	**Maximum Throughput (tons/hr)**	**Maximum Throughput (tons/year)**	**Source of Uncontrolled Emission Factor**	**PM (lb/tn)**	**PM_{10} (lb/tn)**	**$PM_{2.5}$ (lb/tn)**	**Control Method**	**Control Efficiency**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
Vitrafine Process Feed End (Outside of Bldg)														
Loading Feed Hopper	90	495,000	AP 42 Table 11.19.2-2	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.0272
Feed Hopper	90	495,000	AP 42 Table 11.19.2-3	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.0272
Feeder	90	495,000	AP 42 Table 11.19.2-4	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.0272
Conveyor to Dryer	90	495,000	AP 42 Table 11.19.2-5	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.0272
Dryer	90	495,000	AP 42 Table 11.1-3.	28	6.5	6.5000	Dryer Baghouse	99.0%	6930.000	1608.750	1608.750	9.950	6.930	6.93*
Conveyor to Bucket Elevator 1	90	495,000	AP 42 Table 11.19.2-2	0.003	0.0011	0.0011	Cage Mill Baghouse	99.0%	0.743	0.272	0.272	0.007	0.003	0.0027
Bucket Elevator 1	90	495,000	AP 42 Table 11.19.2-3	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Feeder	90	495,000	AP 42 Table 1.4-3	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Conveyor to Bucket Elevator 2	90	495,000	AP 42 Table 1.4-4	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Bucket Elevator 2	90	495,000	AP 42 Table 1.4-5	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Cage Mill (Fines Crusher)	90	495,000	AP 42 Table 11.19.2-2	0.039	0.015	0.0150			9.653	3.713	3.713	0.097	0.037	0.0371
Cage Mill Output Screw Conveyor	90	495,000	AP 42 Table 11.19.2-2	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Bucket Elevator 3	90	495,000	AP 42 Table 11.19.2-3	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Rare Earth Magnet 1	90	495,000	AP 42 Table 11.19.2-4	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Rare Earth Magnet 2	90	495,000	AP 42 Table 11.19.2-5	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Fines Screen 1	75	412,500	AP 42 Table 11.19.2-6	0.3	0.072	0.0720			61.875	14.850	14.850	0.619	0.149	0.1485
Fines Screen 2	75	412,500	AP 42 Table 11.19.2-7	0.3	0.072	0.0720			61.875	14.850	14.850	0.619	0.149	0.1485
Screen Output 1 Screw A	75	412,500	AP 42 Table 11.19.2-8	0.003	0.0011	0.0011			0.619	0.227	0.227	0.006	0.002	0.0023
Screen Output 1 Screw B	75	412,500	AP 42 Table 11.19.2-9	0.003	0.0011	0.0011			0.619	0.227	0.227	0.006	0.002	0.0023
Screen Output 2 Screw	15	82,500	AP 42 Table 11.19.2-10	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
Screen Output 2 Conveyor	15	82,500	AP 42 Table 11.19.2-11	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
Conveyor to Loadout Bins	75	412,500	AP 42 Table 11.19.2-12	0.003	0.0011	0.0011			0.619	0.227	0.227	0.006	0.002	0.0023
BH to Loadout Bin Screw 1	15	82,500	AP 42 Table 11.19.2-13	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
BH to Loadout Bin Screw 2	15	82,500	AP 42 Table 11.19.2-14	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
FE Hopper Box (scrap)	10	55,000	AP 42 Table 11.19.2-15	0.003	0.0011	0.0011	None	0%	0.083	0.030	0.030	0.083	0.0003	0.0003
Bin 1 loading	75	412,500	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 1	99.0%	150.563	96.94	96.938	1.506	0.969	0.4*
Bin 2 loading	75	412,500	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 2	99.0%	150.563	96.94	96.938	1.506	0.969	0.4*
Bin 3 loading	75	412,500	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 3	99.0%	150.563	96.94	96.938	1.506	0.969	0.4*
Bin 4 loading	90	495,000	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 4	99.0%	180.675	116.33	116.325	1.807	1.163	0.4*
								Total	7,707.9	2,053.7	2,053.7	18.1	11.5	9.5

Methodology
All conveyors and screws are enclosed.
Uncontrolled Emissions (tpy) = Capacity (tpy) * Uncontrolled Emission Factor (lb/ton) * 8760 (hrs/yr) / 2000 (lb/ton)
Controlled Emissions (tpy) = Uncontrolled Emissions (tpy) * (1-(Controlled efficiency/100))
Except for Dryer and Bins 1, 2 and 3, it is assumed that controlled PM2.5 emissions are equal to controlled PM10 emissions.
* Controlled particulate emissions for the Dryer and controlled PM2.5 emissions for the Bins 1, 2 and 3 are determined as below.

					Controlled Emission Factor				Controlled Emission			Controlled Emission		
Unit	**Maximum Throughput (tons/hr)**	**Limited Hours of Operation (hrs/yr0**	**Limited Throughput (tons/year)**	**Source of Controlled Emission Factor**	**Controlled Emission Factor PM (lb/tn)**	**Controlled Emission Factor PM_{10} (lb/tn)**	**Controlled Emission Factor $PM_{2.5}$ (lb/tn)**	**Control Method**	**PM (lb/hr)**	**PM_{10} (lb/hr)**	**$PM_{2.5}$ (lb/hr)**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
Dryer	90	5,500	495,000	AP 42 Table 11.1-3.	0.033	0.023	0.023	Dryer Baghouse	2.97	2.07	2.07	8.17	5.69	5.69

Methodology
Controlled Emissions (tpy) = Controlled Emission Factor (lb/ton) * Limited Hours of Operation (hrs/yr) / 2000 (lb/ton)
For Dryer it is assumed that PM2.5 emissions are equal to PM10 emissions. Controlled particulate emissions for the Dryer are determined as below.
The particulate emissions factor for the dryer includes process and natural gas combustion emission.

Unit	**Maximum Throughput (tons/hr)**	**Limited Hours of Operation (hrs/yr0**	**Limited Throughput (tons/year)**	**Source of Controlled Emission Factor**	**Controlled Emission Factor $PM_{2.5}$ (lb/hr)**	**Control Method**	**$PM_{2.5}$ (tpy)**
Bin 1 loading	75	5,500	412,500	Emission factor provided by the source	0.12	Loadout Dust Collector 1	0.33
Bin 2 loading	75	5,500	412,500		0.12	Loadout Dust Collector 2	0.33
Bin 3 loading	75	5,500	412,500		0.12	Loadout Dust Collector 2	0.33
Bin 4 loading	90	5,500	495,000		0.12	Loadout Dust Collector 3	0.33

Methodology
Controlled Emissions (tpy) = Controlled Emission Factor (lb/ton) * Limited Hours of Operation (hrs/yr) / 2000 (lb/ton)

Appendix ATSD: Emissions Calculations
Dryer Natural Gas Combustion

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 10/15/2012

	Heat Input Capacity	HHV	Potential Throughput
Unit	MMBtu/hr	mmBtu	MMCF/yr
		mmscf	
Dryer	50		
	50.0	1000	438.0

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.416	1.66	1.7	0.1314	21.9	1.205	18.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPs Emissions

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.599E-04	2.628E-04	1.643E-02	3.942E-01	7.446E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.095E-04	2.409E-04	3.066E-04	8.322E-05	4.599E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 3 for Greenhouse Gas calculations.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	26,280	0.5	0.5
Summed Potential Emissions in tons/yr	26,281		
CO2e Total in tons/yr	26,440		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential

Appendix ATSD: Emissions Calculations
Wind Erosion Calculations

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 10/15/2012

ALL ROADS INSIDE THE PLANT ARE UNPAVED

Vehicle	Production (tons/yr)	Product Weight (tons/RT)	Round Trips/yr	Avg miles per round trip	VMT/yr
Front-end loaders	495,000	10	49,500	0.04	1,980

Vehicle	Mean Weight (W) (tons)	PM Emission Factor[2] (lb/VMT)	PM2.5 Emission Factor[2] (lb/VMT)	PM10 Emission Factor[2] (lb/VMT)	VMT/yr	UNCONTROLLED EMISSIONS PM Emissions (TPY)	UNCONTROLLED EMISSIONS PM10 Emissions (TPY)	UNCONTROLLED EMISSIONS PM2.5 Emissions (TPY)	CONTROLLED EMISSIONS PM Emissions (TPY)	CONTROLLED EMISSIONS PM10 Emissions (TPY)	CONTROLLED EMISSIONS PM2.5 Emissions (TPY)
Front-end loaders	31	7.38	0.19	1.88	1,980	7.31	1.86	0.00069	3.6530	0.9310	0.00034
						7.31	**1.86**	**0.00**	**3.65**	**0.93**	**0.00**

50% control efficiency

*Based on a control efficiency in the AP-42 from the periodic application of water and/or other dust suppressants and speed controls (15 mph).

Reference AP-42, 13.2.2, 11/2006
E = k(s/12)^a x (W/3)^b)

Variable	PM10 Value	Units
k (lb/VMT)	1.5	Table 13.2.2-2
a	0.9	Table 13.2.2-2
b	0.45	Table 13.2.2-2
W	see above	tons
M	-	% (default)
s	4.8	% (Table 13.2.2-1)(iron/steel mills)

Variable	PM Value	Units
k (lb/VMT)	4.9	Table 13.2.2-2
a	0.7	Table 13.2.2-2
b	0.45	Table 13.2.2-2
W	see above	tons
M	-	% (default)
s	4.8	% (Table 13.2.2-1)(iron/steel mills)

Variable	PM2.5 Value	Units
k (lb/VMT)	0.15	Table 13.2.2-2
a	0.9	Table 13.2.2-2
b	0.45	Table 13.2.2-2
W	see above	tons
M	-	% (default)
s	4.8	% (Table 13.2.2-1)(iron/steel mills)

Appendix ATSD: Emissions Calculations
Wind Erosion Calculations

Company Name:	South Shore Slag LLC
Address, City, IN, Zip:	One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.:	089-31980-00133
Significant Permit Modification No.:	089-31982-00133
Reviewer:	Mehul Sura
Date:	10/15/2012

Potential to Emit - From Storage Pile Operations
From AP-42 13.2.4, Aggregate Handling and Storage Piles, 11/2006

Emissions from slag storage piles can be described by the following empirical equation:

$$E = k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}$$

Where:
E = emission factor (lb/tn)
k = particle size multiplier (dimensionless)
U = mean wind speed, miles per hour
M = material moisture content (%)

k =	PM	0.74
	PM10	0.35
	PM2.5	0.11

U =	13.4

mean wind speed, (mph) [source=rredc.nrel.gov/wind/pubs/atlas/maps/chap1/2-06m.html

The mean moisture content was estimated as the average moisture content based on onsite test data.

M =	1.50

%, site specific moisture data

E = Emission Factors (lb/ton)

PM	PM10	PM2.5
0.0127606	0.0060354	0.001897

Production: 495,000 tons - op hours are limited
Control Eff: 50%

3.16	**Uncontrolled PM (tons)**
1.49	**Uncontrolled PM10 (tons)**
0.47	**Uncontrolled PM2.5 (tons)**
1.58	**Controlled PM (tons)**
0.75	**Controlled PM10 (tons)**
0.235	**Controlled PM2.5 (tons)**

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The small area at the base of each pile where daily activity can occur is negligible and does not need to be calculated.
(see sample calculation, AP-42 12.2.5-9, Step 2)
Disturbance via topping off of piles by stackers creates the fresh surface by which these calculations represent.
N = 365, assuming pile disturbances are once per day, conservative (plant does not operate daily)
The following equations are used to calculate wind erosion emission factors and velocity friction:

AP-42, 13.2.5, Date 11/2006
PTE Wind Erosion from Storage Piles (Storage)

Eqn 2:

$$EF = K \sum_{i=1}^{N} P_i$$

EF = emission factor (g/m^2)
k = particle size multiplier
N = number of disturbances
P_i = erosion potential corresponding to obs or prob fastest mile of wind for the ith period between disturbances, g/m^2

k =	1	particle size multiplier for PM
k =	0.5	particle size multiplier for PM10
k =	0.075	particle size multiplier for PM2.5

u* = friction velocity (m/s)
u*t = threshold friction velocity (m/s)
u*t = 1.33 m/s, using AP-42 value, Table 13.2.5-2 for Scoria (roadbed material)

Eqn 3:

$$P = 58(u^* - u_t^*)^2 + 25(u^* - u_t^*)$$

P = 0 for u* ≤ u*$_t$

u^+10 = fastest mile of reference anemometer ht, 10, for period between disturbances (m/s)
u^+ = fastest mile of reference anemometer ht, z, for period between disturbances (m/s)
0.005 = assumed roughnes height (m)

Eqn 5:

$$u_{10}^+ = u^+ \frac{\ln(10 / 0.005)}{\ln(z / 0.005)}$$

(Note: anemometer height not available for O'Hare weather station, assume 7 meters)
$u^+10 = 1.05\ u^+$

u^+s = surface wind speed distribution (m/s)

Eqn 6:

$U^+_s = u_{s/Ur}$

u^+10 = fastest mile of reference anemometer ht, 10, for period between disturbances (m/s)
u_s = surface wind speed (m/s)
u_r = approach wind speed (m/s)

Eqn 7: u^*=0.10 u^+ s

u* = friction velocity (m/s)

Wind Erosion Calculations

CALCULATE AREAS OF A TYPICAL PILE, BROKEN INTO SUB-AREAS

Calculate estimated average area of each storage pile:
oblong piles, not conical, see B2, AP-42 Figure 13.2.5-2
calculate as a rectangular box shape for surface area, conservatively
4 sides and 1 top

Area top = length x width
Area each side = length x height

Area top =	648	m^2
Area four sides =	720	m^2
Total Surface Area of Each Pile =	1368	m^2
length (m):	36	typical size of piles at slag plant, based on pile inventories at Levy ECL 2006.
width (m):	18	typical size of piles at slag plant, based on pile inventories at Levy ECL 2006.
height (m):	5	typical size of piles at slag plant, based on pile inventories at Levy ECL 2006.

Using B2 Type Pile, see Figure 13.2.5-2, AP-42

Pile Subarea	u_s/u_r	% of Surface Area	Area (m$_2$)
1	0.2	3%	41
2	0.2	28%	383
3	0.6	29%	397
4	0.6	22%	301
5	0.9	15%	205
6	1.1	3%	41
		Total Area:	1368

(see integrated wind erosion calculation spreadsheet, next Page)

CALCULATE ESTIMATED NUMBER OF PILES BASED ON MAXIMUM CAPACITY OF FEED END OF THE SEPARATION PLANT

Maximum throughput is equal to maximum amount of slag in storage piles, whether raw material or product material.

Operating hours limit =	5,500	
Maximum throughput =	90	tph
	495,000	tpy - throughput is limited
Bulk Density of Slag =	1,762	kg/m3
Volume of the calculated pile above =	12,960	m^3
Weight of slag per pile =	22,835,520	kg of slag per pile
	25,171	tons of slag per pile
Estimated number of piles =	20	piles based on max plant equipment capacity

CALCULATE TOTAL EMISSIONS

Total emissions from one pile:	0.09	tons PM	(see integrated wind erosion calculation spreadsheet, next page)
	0.05	tons PM_{10}	
	0.01	tons $PM_{2.5}$	
Emissions for all potential piles:	1.80	tons PM	uncontrolled
	0.90	tons PM_{10}	uncontrolled
	0.13	tons $PM_{2.5}$	uncontrolled
	50%	estimated control efficiency, wet suppression	
	0.90	tons PM	controlled
	0.45	tons PM_{10}	controlled
	0.07	tons $PM_{2.5}$	controlled

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PTE Wind Erosion from Storage Piles (Storage)

INTEGRATED WIND EROSION CALCULATION OF ONE PILI

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{PM}/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

P_{i-6} = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u'	u*10	u's (m/s) = (u$_s$/u$_t$) u*10					u* (m/s) = 0.10 u*s					Pile Subarea 1			Pile Subarea 2			Pile Subarea 3			Pile Subarea 4			Pile Subarea 5							Pile Subarea 6						
Period	mph	m/s	m/s	u$_s$/u$_t$: 0.2	u$_s$/u$_t$: 0.6	u$_s$/u$_t$: 0.9	u$_s$/u$_t$: 1.1	u$_s$/u$_t$: 0.2	u$_s$/u$_t$: 0.6	u$_s$/u$_t$: 0.9	u$_s$/u$_t$: 1.1	P_i		EF_{ALL}	P_a		EF_{ALL}	P_a		EF_{ALL}	P_a		EF_{ALL}	P_a	EF_{PM}	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$	P_a	EF_{PM}	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$
1/1/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/2/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/3/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/4/2010	17	7.182	7.680	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/5/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/6/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/7/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/8/2010	23	10.282	10.796	2.159	6.478	9.716	11.876	0.216	0.648	0.972	1.188	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/9/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/10/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/11/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/12/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/13/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/14/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/15/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/16/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/17/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/18/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/19/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/20/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/21/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/22/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/23/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/24/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/25/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	3E-05	2E-05	2E-06
1/26/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/27/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/28/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/29/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/30/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/31/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/1/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/2/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/3/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/4/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/5/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	3E-05	2E-05	2E-06
2/6/2010	28	12.517	13.143	2.629	7.886	11.829	14.457	0.263	0.789	1.183	1.446	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.712	3.356	0.503	0.0003	0.0002	2E-05
2/7/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/8/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/9/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/10/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/11/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/12/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/13/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/14/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/15/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/16/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/17/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/18/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/19/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/20/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/21/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/22/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0

INTEGRATED WIND EROSION CALCULATION OF ONE PILI

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{PM}/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

P_{i-6} = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u'	u*10	u's (m/s) = (u$_s$/u$_t$) u*10					u* (m/s) = 0.10 u*s					Pile Subarea 1			Pile Subarea 2			Pile Subarea 3			Pile Subarea 4			Pile Subarea 5							Pile Subarea 6						
Period	mph	m/s	m/s	u$_s$/u$_t$: 0.2	u$_s$/u$_t$: 0.6	u$_s$/u$_t$: 0.9	u$_s$/u$_t$: 1.1	u$_s$/u$_t$: 0.2	u$_s$/u$_t$: 0.6	u$_s$/u$_t$: 0.9	u$_s$/u$_t$: 1.1	P_i		EF_{ALL}	P_a		EF_{ALL}	P_a		EF_{ALL}	P_a		EF_{ALL}	P_a	EF_{PM}	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$	P_a	EF_{PM}	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$
2/23/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/24/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/25/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/26/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/27/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/28/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/1/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/2/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/3/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/4/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/5/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/6/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/7/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/8/2010	8	3.576	3.755	0.751	2.253	3.380	4.131	0.075	0.225	0.338	0.413	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/9/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/10/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/11/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845

Appendix ATSD: Emissions Calculations
Wind Erosion Calculations

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 10/15/2012

INTEGRATED WIND EROSION CALCULATION OF ONE PILE

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{Tot}/EF_{TSP}/EF_{PM10}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

P_{1-6} = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u^*	u^*-TO	u^*-k (mm) = u_t/u_t u^*-TO					u^* (mm) = 0.10 u^*-k					Pile Subarea 1			Pile Subarea 2					Pile Subarea 3					Pile Subarea 4					Pile Subarea 5								Pile Subarea 6					
Period	mph	mph	mph	u_t/u_t 0.2	u_t/u_t 0.4	u_t/u_t 0.6	u_t/u_t 1.1	u_t/u_t 0.2	u_t/u_t 0.4	u_t/u_t 0.6	u_t/u_t 1.1	P_i	EF_{Tot}	EF_{TSP}	P_i	EF_{Tot}	EF_{TSP}	P_i	EF_{Tot}	EF_{TSP}	P_i	EF_{Tot}	EF_{TSP}	P_i	EF_{Tot}	EF_{TSP}	P_i	EF_{Tot}	EF_{TSP}	EF_{PM10}	PM	PM_{10}	$PM_{2.5}$	P_i	EF_{Tot}	EF_{TSP}	EF_{PM10}	PM	PM_{10}	$PM_{2.5}$
4/30/2010	31	13.858	14.551	2.910	5.731	13.096	16.008	0.291	0.873	1.310	1.601	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	15.7	15.696	7.848	1.177	0.000710087	0.000355043	0.325645-05
5/1/2010	20	8.941	9.388	1.877	3.833	8.449	10.327	0.188	0.563	0.845	1.033	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/2/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/3/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/4/2010	28	12.507	13.140	2.628	7.880	11.823	14.457	0.263	0.789	1.183	1.446	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.712	3.356	0.503	0.000303653	0.000151826	0.277386-05
5/5/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/6/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/7/2010	32	14.305	15.021	3.004	9.012	13.518	16.523	0.300	0.901	1.352	1.652	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	1.3	1.267	0.634	0.095	0.000289854	0.000143321	2.14982E-05	18.7	18.691	9.346	1.402	0.000845583	0.000422783	6.341736-05
5/8/2010	30	13.411	14.082	2.816	8.449	12.674	15.490	0.282	0.845	1.267	1.549	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	12.7	12.702	6.351	0.953	0.000574656	0.000287304	4.30956-05
5/9/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/10/2010	30	13.411	14.082	2.816	8.449	12.674	15.490	0.282	0.845	1.267	1.549	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	12.7	12.702	6.351	0.953	0.000574656	0.000287304	4.30956-05
5/11/2010	29	12.954	13.612	2.722	8.167	12.251	14.974	0.272	0.817	1.225	1.497	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	9.7	9.707	4.853	0.728	0.00043911	0.000219956	3.293476-05
5/12/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/13/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	1.26962E-05	1.63481E-05	2.45221E-06
5/14/2010	23	10.282	10.796	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/15/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/16/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/17/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/18/2010	30	13.411	14.082	2.816	8.449	12.674	15.490	0.282	0.845	1.267	1.549	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	12.7	12.702	6.351	0.953	0.000574656	0.000287304	4.309566-05
5/19/2010	15	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/20/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/21/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/22/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/23/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/24/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/25/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/26/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/27/2010	20	8.941	9.388	1.877	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/28/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/29/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/30/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/31/2010	31	13.858	14.551	2.910	8.731	13.096	16.008	0.291	0.873	1.310	1.601	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	15.7	15.696	7.848	1.177	0.000710087	0.000355043	0.325645-05
6/1/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/2/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/3/2010	11	4.917	5.163	1.033	3.098	4.647	5.580	0.103	0.310	0.465	0.568	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/4/2010	23	10.282	10.796	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/5/2010	31	13.858	14.551	2.910	8.731	13.096	16.008	0.291	0.873	1.310	1.601	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	15.7	15.696	7.848	1.177	0.000710087	0.000355043	0.325645-05
6/6/2010	26	12.954	13.612	2.722	8.167	12.251	14.974	0.272	0.817	1.225	1.497	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	9.7	9.707	4.853	0.728	0.000439111	0.000219956	3.293476-05
6/7/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/8/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/9/2010	23	10.282	10.796	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/10/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/11/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	1.26962E-05	1.63481E-05	2.45221E-06
6/12/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/13/2010	12	5.364	5.633	1.127	3.380	5.069	6.186	0.113	0.338	0.507	0.620	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/14/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/15/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/16/2010	20	8.941	9.388	1.877	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/17/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/18/2010	46	20.584	21.592	4.318	12.955	19.433	23.751	0.432	1.296	1.943	2.375	0.0	**	0.000	0.0	**	0.000	35.6	35.570	17.785	2.688	0.598045828	0.004022919	0.000603435	60.6	60.617	30.309	4.546	0.002742253	0.001371127	0.000205669
6/19/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/20/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/21/2010	36	16.093	16.898	3.380	10.139	15.208	18.588	0.338	1.014	1.521	1.859	0.0	**	0.000	0.0	**	0.000	11.1	11.069	5.534	0.830	0.002503052	0.001251777	0.000187756	30.7	30.677	15.338	2.300	0.001387475	0.000693737	0.000104005
6/22/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/23/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	1.26962E-05	1.63481E-05	2.45221E-06
6/24/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/25/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/26/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/27/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/28/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/29/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/30/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/1/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/2/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/3/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/4/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	**	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0

INTEGRATED WIND EROSION CALCULATION OF ONE PILE

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts

Appendix ATSD: Emissions Calculations
Wind Erosion Calculations

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 10/15/2012

INTEGRATED WIND EROSION CALCULATION OF ONE PILE

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{Pi}/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

$P_{i,a}$ = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u^*	u^*t0	u^*e (m/s) = u_a/u_t u^*t0					u^* (m/s) = 0.10 u^*e					Pile Subarea 1			Pile Subarea 2			Pile Subarea 3			Pile Subarea 4			Pile Subarea 5						Pile Subarea 6					
Period	mph	m/s		u_a/u_t 0.2	u_a/u_t 0.4	u_a/u_t 0.6	u_a/u_t 1.1	u_a/u_t 0.2	u_a/u_t 0.4	u_a/u_t 0.6	u_a/u_t 1.1	P_i		EF_{Pi}	P_i		EF_{Pi}	P_i		EF_{Pi}	P_i		EF_{Pi}	P_i	EF_{PM}	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$	P_i	EF_{Pi}	EF_{PM}	EF_{PM10}	PM	PM_{10}	$PM_{2.5}$
8/9/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/10/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/11/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/12/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/13/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/14/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/15/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/16/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/17/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/18/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/19/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/20/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/21/2010	32	14.355	15.321	3.064	9.192	13.788	16.523	0.350	0.961	1.352	1.852	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	1.3	1.260	0.634	0.0302886[illegible]	0.00014323[illegible]	2.1466E-05	18.7	18.181	9.346	1.402	0.00084585[illegible]	0.00042250[illegible]	6.3413E-05
8/22/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/23/2010	33	14.752	15.490	3.098	9.294	13.941	17.039	0.310	0.929	1.394	1.704	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	3.7	3.717	1.859	0.279	0.00084997	0.00042432[illegible]	6.3653E-05	21.7	21.688	10.843	1.626	0.00098104[illegible]	0.00049052[illegible]	7.3579E-05
8/24/2010	37	16.540	17.368	3.474	10.421	15.631	19.104	0.347	1.042	1.563	1.910	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	13.5	13.518	6.759	1.014	0.00305778[illegible]	0.00152889[illegible]	0.00022933[illegible]	33.7	33.665	16.832	2.525	0.00152255[illegible]	0.00076147[illegible]	0.00011422[illegible]
8/25/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/26/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/27/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/28/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/29/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/30/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/31/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/2/2010	29	12.994	13.642	2.732	8.197	12.231	14.974	0.272	0.817	1.225	1.497	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.707	4.853	0.728	0.00043913[illegible]	0.00021955[illegible]	3.2934E-05
10/3/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/4/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/5/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/6/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/7/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/8/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/9/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/10/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/11/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/12/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/13/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/14/2010	23	10.282	10.798	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/15/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/16/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/17/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/18/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/19/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/20/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/21/2010	23	10.282	10.798	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/22/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/23/2010	30	13.411	14.082	2.816	8.449	12.674	15.479	0.282	0.845	1.267	1.548	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	12.7	12.702	6.351	1.053	0.00057465[illegible]	0.00028730[illegible]	4.3095E-05
10/24/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/25/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	1.2595E-05	1.6341E-05	2.4521E-05
10/26/2010	38	16.988	17.837	3.567	10.702	16.053	19.621	0.357	1.070	1.605	1.862	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	16.0	15.969	7.984	1.198	0.00361285[illegible]	0.00180604[illegible]	0.00027089[illegible]	36.7	36.659	18.330	2.749	0.00165943[illegible]	0.00082921[illegible]	0.00012438[illegible]
10/27/2010	41	18.329	19.245	3.849	11.547	17.321	21.170	0.385	1.155	1.732	2.117	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	23.3	23.319	11.660	1.749	0.00527469[illegible]	0.00263734[illegible]	0.00039560[illegible]	45.6	45.644	22.822	3.423	0.00206486[illegible]	0.00103243[illegible]	0.00015486[illegible]
10/28/2010	23	10.282	10.798	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/29/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/30/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/31/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/1/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/2/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/3/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/4/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/5/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/6/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/7/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/8/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/9/2010	28	12.517	13.143	2.629	7.886	11.829	14.457	0.263	0.789	1.183	1.446	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.712	3.356	0.503	0.00030363[illegible]	0.00015182[illegible]	2.2773E-05
11/10/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/11/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	1.2595E-05	1.6341E-05	2.4521E-05
11/12/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/13/2010	29	12.994	13.642	2.732	8.197	12.231	14.974	0.272	0.817	1.225	1.497	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.707	4.853	0.728	0.00043913[illegible]	0.00021955[illegible]	3.2934E-05
11/14/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/15/2010	9	4.024	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/16/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/17/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/18/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.

Appendix ATSD: Emissions Calculations
Emission Summary

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 10/15/2012

	PM	PM10	PM2.5
Material Handling Equipment	18.08	11.48	9.50
Unpaved Roads	3.65	0.93	0.00034
Drop Operation at Storage Pile	1.58	0.75	0.23
Wind Erosion from storage pile	0.90	0.45	0.07
Total	24.2	13.6	9.8

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	South Shore Slag LLC
Source Location:	One North Buchanan, Gary, Indiana 46402
County:	Lake
SIC Code:	3295
Permit Renewal No.:	T089-29698-00133
Permit Renewal Issuance Date:	March 17, 2011
Significant Source Modification No.:	089-31980-00133
Significant Permit Modification No.:	089-31982-00133
Permit Reviewer:	Mehul Sura

Source Definition

US Steel - Gary Works is an integrated steel mill that consists of a main mill and an on-site contractor:

(a) US Steel - Gary Works, 089-00121, the primary operation, is located at, One North Broadway, Gary, IN 46402; and

(b) South Shore Slag LLC, 089-00133, the on-site contractor, is located at One North Broadway, Gary, IN 46402.

Separate Part 70 permits have been issued to US Steel - Gary Works with Permit No. 089-7663-00121 and South Shore Slag LLC with Permit No. 089-7719-00133 solely for administrative purposes.

Existing Approvals

The source was issued Part 70 Operating Permit No. 089-29698-00133 on March 17, 2011. The source has since received the following approvals:

Permit Type	Permit Number	Issuance Date
Minor Source Modification	089-31980-00133	January 3, 2012
Minor Permit Modification	089-31014-00133	November 9, 2011

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
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; 148th 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	Attainment effective June 4, 2010. [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.

Pollutant	Designation
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.
[1]The U. S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Lake County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3. **Effective July 20, 2012, U. S. EPA has designated Lake County as nonattainment for the 8-hour ozone standard.** Unclassifiable or attainment effective February 6, 2012, for PM2.5.	

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 77 FR 112 dated June 11, 2012, has designated Lake County as nonattainment for ozone. On August 1, 2012 the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective, August 9, 2012. IDEM, does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against US EPA in the US Court of Appeals for the DC Circuit on July 19, 2012. 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 designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NO_x emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

(b) $PM_{2.5}$
Lake County has been classified as attainment for PM2.5. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct PM2.5 significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
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.

Fugitive Emissions

Since this source is classified as an iron and steel mill plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	**Emissions** (ton/yr)
PM	greater than 100
PM_{10}	greater than 100
$PM_{2.5}$	greater than 100
SO_2	greater than 100
VOC	greater than 100

Pollutant	**Emissions** (ton/yr)
CO	greater than 100
NO_X	greater than 100

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because VOC and NOx, surrogate for ozone (nonattainment regulated pollutant), are emitted at a rate of 100 tons per year or more.

(c) These emissions are based upon T089-7719-00133, issued on June 29, 2009 and T089-7663-00121, issued on August 18, 2006

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	**Potential To Emit** (ton/yr)
single HAP	greater than 10
combined HAPs	greater than 25

This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by South Shore Slag LLC on August 3, 2009, relating to add a new line for processing slag and other material from the various steel mill processes at US Steel - Gary Works. The description of the new line as follows:

Vitrafine Plant, consisting of the following equipment, approved in 2012 for construction:

(a) Outdoor equipment (fugitive emissions)
- (i) Loading Feed Hopper, capacity: 90 tph
- (ii) Feed Hopper, capacity: 90 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor, capacity: 90 tph

(b) Dryer, capacity: 90 tph, using natural gas for combustion, with 50 MMbtu/hr of heat input capacity, controlled by Dryer Baghouse.

(c) Indoor equipment, controlled by Cage Mill Baghouse
- (i) Conveyor, capacity: 90 tph
- (ii) Bucket Elevator 1, capacity: 75 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor (to Bucket Elevator 2), capacity: 90 tph
- (v) Bucket Elevator 2, capacity: 90 tph
- (vi) Cage Mill (Fines Crusher) , capacity: 90 tph
- (vii) Cage Mill Output Screw Conveyor, capacity: 90 tph
- (viii) Bucket Elevator 3, capacity: 90 tph
- (ix) Fines Screen 1 capacity: 75 tph
- (x) Fines Screen 2, capacity: 75 tph
- (xi) Screen Output 1 Screw A, capacity: 75 tph
- (xii) Screen Output 1 Screw B, capacity: 75 tph

(xiii) Screen Output 2 Screw, capacity: 15 tph
(xiv) Screen Output 2 Conveyor, capacity: 15 tph
(xv) Rare Earth Magnet 1, capacity: 90,tph
(xvi) Rare Earth Magnet 2, capacity: 90 tph
(xvii) Conveyor (to Loadout Bins), capacity: 75 tph
(xviii) BH to Loadout Bin Screw 1, capacity: 1 tph
(xix) BH to Loadout Bin Screw 2, capacity: 1 tph

(d) Indoor Equipment (fugitive emissions)
(i) FE Hopper Box (scrap), capacity: 10 tph

(e) Load out Bins, controlled by dust collectors
(i) Bin 1, capacity: 75 tph
(ii) Bin 2, capacity: 75 tph
(iii) Bin 3, capacity: 75 tph
(iv) Bin 4, capacity: 90 tph

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

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

Permit Level Determination – Part 70

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.

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	9,389
PM_{10}	2501.8
$PM_{2.5}$	2501.8
SO_2	0.13
VOC	1.2
CO	18.4
NO_X	21.9
Single HAPs	-
Total HAPs	-

This source modification is subject to 326 IAC 2-7-10.5(f)(4)(A) because the PTE of PM and PM10 are greater than 25 tons per year, each. Additionally, this modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d)(1), because this modification involves adding new limits in the permit.

Permit Level Determination – PSD

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 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**GHGs**
Dryer, controlled by Dryer Baghouse*								
Dryer	8.910	6.210	6.210	0.13	1.2	18.4	21.9	26,440
Indoor equipment, controlled by Cage Mill Baghouse*								
Conveyor to Bucket Elevator 1	0.008	0.003	0.0030	-	-	-	-	-
Bucket Elevator 1	0.008	0.003	0.0030	-	-	-	-	-
Feeder	0.008	0.003	0.0030	-	-	-	-	-
Conveyor to Bucket Elevator 2	0.008	0.003	0.0030	-	-	-	-	-
Bucket Elevator 2	0.008	0.003	0.0030	-	-	-	-	-
Cage Mill (Fines Crusher)	0.105	0.041	0.0405	-	-	-	-	-
Cage Mill Output Screw Conveyor	0.008	0.003	0.0030	-	-	-	-	-
Bucket Elevator 3	0.008	0.003	0.0030	-	-	-	-	-
Rare Earth Magnet 1	0.008	0.003	0.0030	-	-	-	-	-
Rare Earth Magnet 2	0.008	0.003	0.0030	-	-	-	-	-
Fines Screen 1	0.675	0.162	0.1620	-	-	-	-	-
Fines Screen 2	0.675	0.162	0.1620	-	-	-	-	-
Screen Output 1 Screw A	0.007	0.002	0.0025	-	-	-	-	-
Screen Output 1 Screw B	0.007	0.002	0.0025	-	-	-	-	-
Screen Output 2 Screw	0.001	0.000	0.0005	-	-	-	-	-
Screen Output 2 Conveyor	0.001	0.000	0.0005	-	-	-	-	-
Conveyor to Loadout Bins	0.007	0.002	0.0025	-	-	-	-	-
BH to Loadout Bin Screw 1	0.001	0.000	0.0005	-	-	-	-	-
BH to Loadout Bin Screw 2	0.001	0.000	0.0005	-	-	-	-	-
Load out Bins*								
Bin 1	1.643	1.058	0.36	-	-	-	-	-
Bin 2	1.643	1.058	0.36	-	-	-	-	-
Bin 3	1.643	1.058	0.36	-	-	-	-	-
Bin 4	1.971	1.269	0.36	-	-	-	-	-
Fugitive emissions								
Loading Feed Hopper	0.405	0.149	0.149	-	-	-	-	-
Feed Hopper	0.405	0.149	0.149	-	-	-	-	-
Feeder	0.405	0.149	0.149	-	-	-	-	-
Conveyor to Dryer	0.405	0.149	0.149	-	-	-	-	-
FE Hopper Box (scrap)	0.090	0.0003	0.0003	-	-	-	-	-
Unpaved Roads	4.66	1.24	0.00	-	-	-	-	-
Drop Operation at Storage Pile	0.68	0.32	0.10	-	-	-	-	-
Wind Erosion from storage pile	0.22	0.11	0.02	-	-	-	-	-
Total for Modification	24.63	13.32	8.76	**0.13**	**1.2**	**18.4**	**21.9**	**26,440**
PSD Significant Level	**25**	**15**	**10**	**40**	**-**	**100**	**40**	**75,000 CO_2e**
Emission Offset Significant Level	**-**	**-**	**-**	**-**	**40**	**-**	**-**	**-**

* PM, PM10 and PM2.5 PTEs are based on the following PSD Minor limits taken by the source:

(a) Outdoor equipment (fugitive emissions)

Emission Unit	PM	PM_{10}	$PM_{2.5}$
(i) Loading Feed Hopper, capacity: 90 tph	0.017	0.006	0.006

(ii) Feed Hopper, capacity: 90 tph	0.017	0.006	0.006
(iii) Feeder, capacity: 90 tph	0.017	0.006	0.006
(iv) Conveyor, capacity: 90 tph	0.017	0.006	0.006

(b) Dryer

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Dryer	2.97	2.07	2.07

(c) The total input of the materials at Vitrafine Plant shall not exceed 540,000 tons per 12 consecutive month period with compliance determined at the end of each month.

(d) Indoor equipment, controlled by Cage Mill Baghouse

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Conveyor to Bucket Elevator 1	0.0027	0.0010	0.0010
Bucket Elevator 1	0.0027	0.0010	0.0010
Feeder	0.0027	0.0010	0.0010
Conveyor to Bucket Elevator 2	0.0027	0.0010	0.0010
Bucket Elevator 2	0.0027	0.0010	0.0010
Cage Mill (Fines Crusher)	0.0351	0.0135	0.0135
Cage Mill Output Screw Conveyor	0.0027	0.0010	0.0010
Bucket Elevator 3	0.0027	0.0010	0.0010
Rare Earth Magnet 1	0.0027	0.0010	0.0010
Rare Earth Magnet 2	0.0027	0.0010	0.0010
Fines Screen 1	0.225	0.0540	0.0540
Fines Screen 2	0.225	0.0540	0.0540
Screen Output 1 Screw A	0.00225	0.0008	0.0008
Screen Output 1 Screw B	0.00225	0.0008	0.0008
Screen Output 2 Screw	0.00045	0.0002	0.0002
Screen Output 2 Conveyor	0.00045	0.0002	0.0002
Conveyor to Loadout Bins	0.00225	0.0008	0.0008
BH to Loadout Bin Screw 1	0.00045	0.0002	0.0002
BH to Loadout Bin Screw 2	0.00045	0.0002	0.0002

(e) Load out Bins

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Bin 1	0.548	0.353	0.12
Bin 2	0.548	0.353	0.12
Bin 3	0.548	0.353	0.12
Bin 4	0.657	0.42	0.12

Compliance with these limits, in conjunction with the fugitive particulate emissions from FE Hopper Box (scrap) will limit the PM, PM10 and PM2.5 emissions from this proposed modification to less than 25, 15 and 10 tons per year, respectively. Therefore, this modification is not a major modification under 326 IAC 2-2.

In order to demonstrate the compliance with the above limits:

(a) The Dryer Baghouse shall be in operation and control emissions at all times that the dryer is in operation.

(b) The Cage Mill Baghouse shall be in operation and control emissions at all times that one or more emission unit listed under 'Indoor equipment, controlled by Cage Mill Baghouse' above table is in operation.

(c) The Dust collectors equipped on Bins 1, 2, 3 and 4 shall be in operation and control emissions at all times that the associated bin to these Dust collectors is in operation.

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 significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Federal Rule Applicability Determination

NSPS:
There are no NSPS (326 IAC 12 and 40 CFR Part 60) included in the permit due to this proposed modification.

NESHAP:
There are no NESHAP (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit due to this proposed modification.

Compliance Assurance Monitoring (CAM)
Pursuant to 40 CFR 64.2, CAM is applicable to each new or modified pollutant-specific emission unit that meets 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.

All the proposed emission units except the Dryer and Bins 1, 2, 3 and 4 have potential PM10 emissions less than 100 tons per year; therefore, CAM requirements apply to the Dryer and Bins 1, 2, 3 and 4.

CAM for the Dryer and Bins 1, 2, 3 and 4 has been evaluated as follows:

CAM Applicability Analysis

Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Dryer	Dryer Baghouse	Y	2562.3	25.62	100	Y	N
Bin 1 loading	Loadout Dust Collector 1	Y	154.4	1.5	100	Y	N
Bin 2 loading	Loadout Dust Collector 2	Y	154.4	1.5	100	Y	N

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
Bin 3 loading	Loadout Dust Collector 3	Y	154.4	1.5	100	Y	N
Bin 4 loading	Loadout Dust Collector 4	Y	185.3	1.9	100	Y	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the Dryer and Bins 1, 2, 3 and 4for PM10 upon issuance of the Title V Renewal. The Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

State Rule Applicability Determination

326 IAC 2-2 (PSD)
PSD applicability is discussed under the Permit Level Determination – PSD.

326 IAC 6.8-1-2(a) (Particulate emission limitations)
The Indoor equipment (controlled by Cage Mill Baghouse), Loadout Bins 1, 2, 3 and 4 and the Dryer are subject to the provisions of 326 IAC 6.8-1-2(a) (Particulate Matter Limitations) because particulate matter is emitted from these facilities and these type of operations are not listed in 326 IAC 6.8-1-2(b) through (g).

Pursuant to 326 IAC 6.8-1-2(a), the particulate emissions from Indoor equipment (controlled by Cage Mill Baghouse), Loadout Bins 1, 2, 3 and 4 and the Dryer shall not exceed 0.03 grains/dscf.

The grain loading from Dryer Baghouse and Cage Mill Baghouse are 0.01 grains/dscf and the grain loading from dust collectors equipped on Bins 1, 2, 3 and 4 are 0.005 grains/dscf. Therefore, Indoor equipment (controlled by Cage Mill Baghouse), Loadout Bins 1, 2, 3 and 4 and the Dryer can comply with this limit.

In order to comply with this limit, the Permittee shall comply with the particulate control operation requirements specified in 'Permit Level Determination – PSD' section of this TSD.

326 IAC 6.8-10 (Compliance Requirements: Control Plans)
The following Outdoor equipment is subject to 326 IAC 6.8-10. The Permittee shall comply with the particulate emission limitations specified in 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Control Requirements) for all of these facilities, using the fugitive dust control plan (FDCP) (See Attachment A).

(a) Outdoor equipment (fugitive emissions)
- (i) Loading Feed Hopper, capacity: 90 tph
- (ii) Feed Hopper, capacity: 90 tph
- (iii) Feeder, capacity: 90 tph
- (iv) Conveyor, capacity: 90 tph

(d) Indoor Equipment (fugitive emissions)
- (i) FE Hopper Box (scrap), capacity: 10 tph

Compliance Determination and Monitoring Requirements

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.

Compliance determination requirement applicable due to this proposed modification is as follows:

In order to ensure compliance with PSD Minor limit specified in paragraph (a) of 'Permit Level Determination – PSD' section of this TSD, the Permittee shall use wet suppression to control emissions of particulate from the below as necessary to ensure that the aggregate processed has a moisture content not less than seven (7) percent. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with this limit. If weather conditions preclude the use of wet suppression, the Permittee shall perform analysis to ensure a moisture content equal to or greater than seven (7) percent. The method for the moisture content analysis shall be approved by IDEM, OAQ.

Compliance monitoring Requirements applicable to the proposed modification are as follows:

Emission Unit	Control Device	Parameter	Frequency
Dryer	Dryer Baghouse	visible emission notations	Daily
		baghouse pressure drop	Daily
Indoor equipment, controlled by Cage Mill Baghouse	Cage Mill Baghouse	visible emission notations	Daily
		baghouse pressure drop	Daily
Loadout Bins 1, 2, 3 and 4	Dust Collectors	visible emission notations	Daily
		baghouse pressure drop	Daily
Outdoor equipment (fugitive emissions) (i) Loading Feed Hopper, capacity: 90 tph (ii) Feed Hopper, capacity: 90 tph (iii) Feeder, capacity: 90 tph (iv) Conveyor, capacity: 90 tph	-	visible emission notations	Daily

These monitoring conditions are necessary because the above listed control equipment must operate properly to ensure compliance with 326 IAC 6.8-1-2(a), 326 IAC 6.8-10, 326 IAC 2-2 (PSD), 40 CFR 64.2 (CAM) and 326 IAC 2-7 (Part 70)).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T089-29698-00133. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1:
Section B - Annual Compliance Certification has been clarified.

Change 2:
IDEM has clarified Section B - Preventive Maintenance Plan.

Change 3:
On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section A - General Information, Section A - Emission Units and Pollution Control Equipment Summary, Section A -Specifically Regulated Insignificant Activities, Section B - Preventative Maintenance Plan, Section B - Emergency Provisions, Section B - Operational Flexibility, Section C - Risk Management Plan, the Facility Descriptions, and
Section D - Preventative Maintenance Plan.

Change 4:
TSD Language: IDEM, OAQ has clarified the Permittee's responsibility under CAM.

Change 5:
IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

Change 6:
Revisions to have been made to the Section C – General Recordkeeping and Section C – General Reporting Requirements to reflect NSR (New Source Review) reform provisions at major sources.

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

. . .

Vitrafine Plant, consisting of the following equipment, approved in 2012 for Construction:

(a) Outdoor equipment (fugitive emissions)
- **(i) Loading Feed Hopper, capacity: 90 tph**
- **(ii) Feed Hopper, capacity: 90 tph**
- **(iii) Feeder, capacity: 90 tph**
- **(iv) Conveyor, capacity: 90 tph**

(b) Dryer, capacity: 90 tph, using natural gas for combustion, with 50 MMbtu/hr of heat input capacity, controlled by Dryer Baghouse.

(c) Indoor equipment, controlled by Cage Mill Baghouse
- **(i) Conveyor, capacity: 90 tph**
- **(ii) Bucket Elevator 1, capacity: 75 tph**
- **(iii) Feeder,capacity: 90, tph**
- **(iv) Conveyor (to Bucket Elevator 2), capacity: 90 tph**
- **(v) Bucket Elevator 2, capacity: 90 tph**
- **(vi) Cage Mill (Fines Crusher) , capacity: 90 tph**
- **(vii) Cage Mill Output Screw Conveyor, capacity: 90 tph**
- **(viii) Bucket Elevator 3, capacity: 90 tph**
- **(ix) Fines Screen 1 capacity: 75 tph**
- **(x) Fines Screen 2, capacity: 75 tph**
- **(xi) Screen Output 1 Screw A, capacity: 75 tph**
- **(xii) Screen Output 1 Screw B, capacity: 75 tph**
- **(xiii) Screen Output 2 Screw, capacity: 15 tph**
- **(xiv) Screen Output 2 Conveyor, capacity: 15 tph**
- **(xv) Rare Earth Magnet 1, capacity: 90,tph**
- **(xvi) Rare Earth Magnet 2, capacity: 90 tph**
- **(xvii) Conveyor (to Loadout Bins), capacity: 75 tph**

(xviii) BH to Loadout Bin Screw 1, capacity: 1 tph
(xix) BH to Loadout Bin Screw 2, capacity: 1 tph

(d) Indoor Equipment (fugitive emissions)
(i) FE Hopper Box (scrap), capacity: 10 tph

(e) Load out Bins, controlled by dust collectors
(i) Bin 1, capacity: 75 tph
(ii) Bin 2, capacity: 75 tph
(iii) Bin 3, capacity: 75 tph
(iv) Bin 4, capacity: 90 tph

. . .

~~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, T089-29698-00133, 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. 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:~~

~~(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and~~

~~(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.~~

~~(b) The Permittee may use the attached Certification Form, or its equivalent 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. All 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:~~

~~(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.~~

~~The Permittee shall implement the PMPs.~~

~~(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:~~

~~(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;~~

~~(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and~~

~~(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.~~

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

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

~~The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~The Permittee shall implement the PMPs.~~

~~(c) 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. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.~~

~~B.11 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, or 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 and Enforcement Branch), or~~
~~Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)~~
~~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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.~~

~~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 T089-29698-00133 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 permit, all previous registrations and permits are superseded by this 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 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.16 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~Request for renewal shall be submitted to:~~

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

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

~~(1) Submitted at least 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, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.~~

~~B.17 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~~
~~Permit Administration and Support Section, Office of Air Quality~~
~~100 North Senate Avenue~~
~~MC 61-53 IGCN 1003~~
~~Indianapolis, Indiana 46204-2251~~

~~Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.18 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 or notice 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.19 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~~
~~Permit Administration and Support Section, 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.20 Source Modification Requirement [326 IAC 2-7-10.5]~~

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

~~B.21 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.22 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~~
~~Permit Administration and Support Section, Office of Air Quality~~
~~100 North Senate Avenue~~
~~MC 61-53 IGCN 1003~~
~~Indianapolis, Indiana 46204-2251~~

~~Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.23 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. In the event that the source is a sub-contractor and is combined with a larger Part 70 source, the larger Part 70 source may pay the Permittees' annual fees as part of the larger source billing and subject to the fee cap of the larger source. If, however, the larger Part 70 source does not pay its annual Part 70 permit fee, IDEM, OAQ will assess a separate fee in accordance with 326 IAC 2-7-19(c) to be paid by the Permittee. 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.24 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 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:~~

~~(a) Opacity shall not exceed an average of 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 except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.~~

~~C.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 Particulate Matter Emissions [326 IAC 6.8-10-3]~~

~~Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (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 opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.~~

~~(d) 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) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.~~

~~(f) 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) 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) Material processing facilities shall include the following:~~

~~(1) 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.~~

~~(2) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.~~

~~(3) The PM_{10} stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.~~

~~(4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.~~

~~(5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).~~

~~(i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).~~

~~(j) Material transfer limits shall be as follows:~~

~~(1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).~~

~~(2) 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%), three (3) minute average.~~

~~(3) 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).~~

~~(k) 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~~
~~Compliance and Enforcement Branch, Office of Air Quality~~
~~100 North Senate Avenue~~
~~MC 61-53 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 that meets the requirements of 326 IAC 2-7-6(1) by a "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) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:~~

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

~~no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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 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.12 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 maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.~~

~~(b) 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.13 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.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]~~

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

~~(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.~~

~~(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:~~

~~(1) initial inspection and evaluation;~~

~~(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or~~

~~(3) any necessary follow-up actions to return operation to normal or usual manner of operation.~~

~~(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:~~

~~(1) monitoring results;~~

~~(2) review of operation and maintenance procedures and records; and/or~~

~~(3) inspection of the control device, associated capture system, and the process.~~

~~(d) Failure to take reasonable response steps shall be considered a deviation from the permit.~~

~~(e) The Permittee shall record the reasonable response steps taken.~~

~~C.15 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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.~~

~~(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline~~

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

~~The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.16 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]~~

~~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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~C.17 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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.~~

~~(c) 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(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) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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.18 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 except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.~~

~~(b) The address for report submittal is:~~

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

~~(c) 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) 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.~~

~~(e) 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).~~

~~(f) The report for project at an existing emissions *unit* shall be submitted no later than 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 wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.~~

~~Reports required in this part shall be submitted to:~~

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

~~(g) 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.19 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 applicable standards for recycling and emissions reduction.~~

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, T089-29698-00133, 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. 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][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) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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, or 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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)(8) 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.

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 T089-29698-00133 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

(4) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this 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 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.16 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

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

(1) Submitted at least 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, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.18 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 or notice 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.19 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) or (c) 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
Permit Administration and Support Section, 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)(1) and (c)(1). 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) and (c)(1).

(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 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.22 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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.23 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.24 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 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

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

C.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 Particulate Matter Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (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 opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(d) 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) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(f) 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) 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) Material processing facilities shall include the following:

(5) 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.

(6) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(7) The PM_{10} stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(8) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.

(5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).

(i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(j) Material transfer limits shall be as follows:

(1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(2) 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%), three (3) minute average.

(3) 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).

(k) 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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 that meets the requirements of 326 IAC 2-7-6(1) by a "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) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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)][40 CFR 64][326 IAC 3-8]

(a) Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.

(b) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(c) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 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.

(c) 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.12 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than ninety (90) days after the date of issuance of this permit.

The ERP does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.13 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.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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. 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). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or 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.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.15 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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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.16 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]

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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 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. Support information includes the following:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(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 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), 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.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B – Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(c) 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) 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.

(e) 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 (oo) and/or 326 IAC 2-3-1 (jj)) 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 (ww) and/or 326 IAC 2-3-1 (pp), 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).

(f) The report for project at an existing emissions unit shall be submitted no later than 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 wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

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

(g) 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.19 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 applicable standards for recycling and emissions reduction.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]:

Vitrafine Plant, consisting of the following equipment, approved in 2012 for Construction:

(a) Fugitive emissions
- **(i) Loading Feed Hopper, capacity: 90 tph**
- **(ii) Feed Hopper, capacity: 90 tph**
- **(iii) Feeder, capacity: 90 tph**
- **(iv) Conveyor, capacity: 90 tph**

(b) Dryer, capacity: 90 tph, using natural gas for combustion, with 50 MMbtu/hr of heat input capacity, controlled by Dryer Baghouse.

(c) Indoor equipment, controlled by Cage Mill Baghouse
- **(i) Conveyor, capacity: 90 tph**
- **(ii) Bucket Elevator 1, capacity: 75 tph**
- **(iii) Feeder,capacity: 90, tph**
- **(iv) Conveyor (to Bucket Elevator 2), capacity: 90 tph**
- **(v) Bucket Elevator 2, capacity: 90 tph**
- **(vi) Cage Mill (Fines Crusher) , capacity: 90 tph**
- **(vii) Cage Mill Output Screw Conveyor, capacity: 90 tph**
- **(viii) Bucket Elevator 3, capacity: 90 tph**
- **(ix) Fines Screen 1 capacity: 75 tph**
- **(x) Fines Screen 2, capacity: 75 tph**
- **(xi) Screen Output 1 Screw A, capacity: 75 tph**
- **(xii) Screen Output 1 Screw B, capacity: 75 tph**
- **(xiii) Screen Output 2 Screw, capacity: 15 tph**
- **(xiv) Screen Output 2 Conveyor, capacity: 15 tph**
- **(xv) Rare Earth Magnet 1, capacity: 90,tph**
- **(xvi) Rare Earth Magnet 2, capacity: 90 tph**
- **(xvii) Conveyor (to Loadout Bins), capacity: 75 tph**
- **(xviii) BH to Loadout Bin Screw 1, capacity: 1 tph**
- **(xix) BH to Loadout Bin Screw 2, capacity: 1 tph**

(d) Indoor Equipment (fugitive emissions)
- **(i) FE Hopper Box (scrap), capacity: 10 tph**

(e) Load out Bins, controlled by dust collectors
- **(i) Bin 1, capacity: 75 tph**
- **(ii) Bin 2, capacity: 75 tph**
- **(iii) Bin 3, capacity: 75 tph**
- **(iv) Bin 4, capacity: 90 tph**

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

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

D.4.1 PSD Minor and Nonattainment New Source Review Limit [326 IAC 2-2]

PM, PM10 and PM2.5 emission shall be limited as follows:

(a) Outdoor equipment (fugitive emissions)

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
(i) Loading Feed Hopper, capacity: 90 tph	0.017	0.006	0.006
(ii) Feed Hopper, capacity: 90 tph	0.017	0.006	0.006
(iii) Feeder, capacity: 90 tph	0.017	0.006	0.006
(iv) Conveyor, capacity: 90 tph	0.017	0.006	0.006

(b) Dryer

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Dryer	2.97	2.07	2.07

(c) The total input of the materials at Vitrafine Plant shall not exceed 495,000 tons per 12 consecutive month period with compliance determined at the end of each month.

(d) Indoor equipment, controlled by Cage Mill Baghouse

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Conveyor to Bucket Elevator 1	0.0027	0.0010	0.0010
Bucket Elevator 1	0.0027	0.0010	0.0010
Feeder	0.0027	0.0010	0.0010
Conveyor to Bucket Elevator 2	0.0027	0.0010	0.0010
Bucket Elevator 2	0.0027	0.0010	0.0010
Cage Mill (Fines Crusher)	0.0351	0.0135	0.0135
Cage Mill Output Screw Conveyor	0.0027	0.0010	0.0010
Bucket Elevator 3	0.0027	0.0010	0.0010
Rare Earth Magnet 1	0.0027	0.0010	0.0010
Rare Earth Magnet 2	0.0027	0.0010	0.0010
Fines Screen 1	0.225	0.0540	0.0540
Fines Screen 2	0.225	0.0540	0.0540
Screen Output 1 Screw A	0.00225	0.0008	0.0008
Screen Output 1 Screw B	0.00225	0.0008	0.0008
Screen Output 2 Screw	0.00045	0.0002	0.0002
Screen Output 2 Conveyor	0.00045	0.0002	0.0002
Conveyor to Loadout Bins	0.00225	0.0008	0.0008
BH to Loadout Bin Screw 1	0.00045	0.0002	0.0002
BH to Loadout Bin Screw 2	0.00045	0.0002	0.0002

(e) Load out Bins

Emission Unit	PM (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)
Bin 1	0.548	0.353	0.12
Bin 2	0.548	0.353	0.12
Bin 3	0.548	0.353	0.12
Bin 4	0.657	0.42	0.12

Compliance with these limits, in conjunction with the fugitive particulate emissions approved under SSM 089-31980-00133 will limit the PM, PM10 and PM2.5 emissions from the modification approved under SSM 089-31980-00133 to less than 25, 15 and 10 tons per year, respectively. Therefore, the modification approved under SSM 089-31980-00133 is not a major modification under 326 IAC 2-2.

D.4.2 Particulate [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a) (Particulate emission limitations), particulate emissions from the emission units listed in Conditions 4.1(b), (d) and (e) shall not exceed 0.03 grains per dry standard cubic foot (dscf).

D.4.3 Fugitive Dust Emission Limitations [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 Lake County Fugitive Particulate Matter Emissions Limitations, the following operations shall comply with the emissions limitations in Section C - Fugitive Dust Emissions:

(a) Fugitive emissions
- **(i) Loading Feed Hopper, capacity: 90 tph**
- **(ii) Feed Hopper, capacity: 90 tph**
- **(iii) Feeder, capacity: 90 tph**
- **(iv) Conveyor, capacity: 90 tph**

(d) Indoor Equipment (fugitive emissions)
- **(i) FE Hopper Box (scrap), capacity: 10 tph**

D.4.4 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 these facilities and all control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.4.5 Particulate Matter Control

In order to demonstrate the compliance with Conditions D.4.1 and D.4.2:

(a) The Dryer Baghouse shall be in operation and control emissions at all times that the dryer is in operation.

(b) The Cage Mill Baghouse shall be in operation and control emissions at all times that one or more emission unit listed in Condition D.4.1(d) is in operation.

(c) The Dust collectors equipped on Bins 1, 2, 3 and 4 shall be in operation and control emissions at all times that the associated bin to these Dust collectors is in operation.

D.4.6 Particulate Matter Control

In order to ensure compliance with Condition D.4.1(a), the Permittee shall use wet suppression to control emissions of PM, PM_{10}, and $PM_{2.5}$ from the from the equipment listed in Condition D.4.1(a) as necessary to ensure that the material processed has a moisture content not less than seven (7) percent. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.4.1(a). If weather conditions preclude the use of wet suppression, the Permittee shall perform analysis to ensure a moisture content equal to or greater than seven (7) percent. The method for the moisture content analysis shall be approved by IDEM, OAQ.

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

D.4.7 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) The Permittee shall record the pressure drop across the dust collectors (used in conjunction with Bins 1, 2, 3 and 4), Dryer baghouse (used in conjunction with the Dryer) and Cage Mill Baghouse (used in conjunction with the emission units listed in Condition D.4.1(c)) at least once per day when one or more of the associated emission unit to these controls is in operation. When for any one reading, the pressure drop across these control devices is outside the normal range of 1.0 and 6 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

The above monitoring conditions satisfy the Compliance Assurance Monitoring (CAM) for the Dryer and Bins 1, 2, 3 and 4.

D.4.8 Broken or Failed Bag Detection

(a) For a single compartment baghouse/dust collector controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.4.9 Visible Emissions Notations

(a) Visible emission notations of the emission units described in this section shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.4.9 Record Keeping Requirements

(a) To document the compliance status with D.4.7, the Permittee shall maintain a daily record of the pressure drop across the baghouses and dust collectors. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.4.8, the Permittee shall maintain records of once per day visible emission notations for the emission units described in this section. 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).

(c) To document the compliance status with Condition D.4.1(c), the Permittee shall maintain records of the total input of the materials at Vitrafine Plant.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.1(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, 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. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

Part 70 Quarterly Report

Source Name:	**South Shore Slag LLC**
Source Address:	**One North Buchanan, Gary, Indiana 46402**
Part 70 Permit No.:	**T089-29698-00133**
Facility:	**Vitrafine Plant**
Parameter:	**the total input of the materials at Vitrafine Plant**
Limit:	**495,000 tons per twelve consecutive month period**

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: _____

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-31980-00133 and operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 089-31982-00133. The staff recommends to the Commissioner that the Part 70 Significant Source and Significant Permit Modifications be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Mehul Sura 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) 233-6868 or toll free at 1-800-451-6027 extension 3-6868.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.:089-31980-00133
Significant Permit Modification No.:089-31982-00133
Reviewer: Mehul Sura
Date: 7/12/2012

Hours of Operation **5500**

				Uncontrolled Emission Factor					Uncontrolled Emission			Controlled Emission		
Unit	**Maximum Throughput (tons/hr)**	**Maximum Throughput (tons/year)**	**Source of Uncontrolled Emission Factor**	**PM (lb/tn)**	**PM_{10} (lb/tn)**	**$PM_{2.5}$ (lb/tn)**	**Control Method**	**Control Efficiency**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
Vitrafine Process Feed End (Outside of Bldg)														
Loading Feed Hopper	90	495,000	AP 42 Table 11.19.2-2	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.027
Feed Hopper	90	495,000	AP 42 Table 11.19.2-3	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.027
Feeder	90	495,000	AP 42 Table 11.19.2-4	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.027
Conveyor to Dryer	90	495,000	AP 42 Table 11.19.2-5	0.003	0.0011	0.0011	Wet Supp/Moisture	90.0%	0.743	0.272	0.272	0.074	0.027	0.027
Dryer	90	495,000	AP 42 Table 11.1-3.	28	6.5	6.5000	Dryer Baghouse	99.0%	6930.000	1608.750	1608.750	9.950	6.930	6.93*
Conveyor to Bucket Elevator 1	90	495,000	AP 42 Table 11.19.2-2	0.003	0.0011	0.0011	Cage Mill Baghouse	99.0%	0.743	0.272	0.272	0.007	0.003	0.0027
Bucket Elevator 1	90	495,000	AP 42 Table 11.19.2-3	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Feeder	90	495,000	AP 42 Table 1.4-3	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Conveyor to Bucket Elevator 2	90	495,000	AP 42 Table 1.4-4	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Bucket Elevator 2	90	495,000	AP 42 Table 1.4-5	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Cage Mill (Fines Crusher)	90	495,000	AP 42 Table 11.19.2-2	0.039	0.015	0.0150			9.653	3.713	3.713	0.097	0.037	0.0371
Cage Mill Output Screw Conveyor	90	495,000	AP 42 Table 11.19.2-2	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Bucket Elevator 3	90	495,000	AP 42 Table 11.19.2-3	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Rare Earth Magnet 1	90	495,000	AP 42 Table 11.19.2-4	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Rare Earth Magnet 2	90	495,000	AP 42 Table 11.19.2-5	0.003	0.0011	0.0011			0.743	0.272	0.272	0.007	0.003	0.0027
Fines Screen 1	75	412,500	AP 42 Table 11.19.2-6	0.3	0.072	0.0720			61.875	14.850	14.850	0.619	0.149	0.1485
Fines Screen 2	75	412,500	AP 42 Table 11.19.2-7	0.3	0.072	0.0720			61.875	14.850	14.850	0.619	0.149	0.1485
Screen Output 1 Screw A	75	412,500	AP 42 Table 11.19.2-8	0.003	0.0011	0.0011			0.619	0.227	0.227	0.006	0.002	0.0023
Screen Output 1 Screw B	75	412,500	AP 42 Table 11.19.2-9	0.003	0.0011	0.0011			0.619	0.227	0.227	0.006	0.002	0.0023
Screen Output 2 Screw	15	82,500	AP 42 Table 11.19.2-10	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
Screen Output 2 Conveyor	15	82,500	AP 42 Table 11.19.2-11	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
Conveyor to Loadout Bins	75	412,500	AP 42 Table 11.19.2-12	0.003	0.0011	0.0011			0.619	0.227	0.227	0.006	0.002	0.0023
BH to Loadout Bin Screw 1	15	82,500	AP 42 Table 11.19.2-13	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
BH to Loadout Bin Screw 2	15	82,500	AP 42 Table 11.19.2-14	0.003	0.0011	0.0011			0.124	0.045	0.045	0.001	0.000	0.0005
FE Hopper Box (scrap)	10	55,000	AP 42 Table 11.19.2-15	0.003	0.0011	0.0011	None	0%	0.083	0.030	0.030	0.083	0.0303	0.0303
Bin 1 loading	75	412,500	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 1	99.0%	150.563	96.94	96.938	1.506	0.969	0.4*
Bin 2 loading	75	412,500	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 2	99.0%	150.563	96.94	96.938	1.506	0.969	0.4*
Bin 3 loading	75	412,500	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 3	99.0%	150.563	96.94	96.938	1.506	0.969	0.4*
Bin 4 loading	90	495,000	AP 42 Table 11.12-2	0.7300	0.4700	0.4700	Loadout Dust Collector 4	99.0%	180.675	116.33	116.325	1.807	1.163	0.4*
								Total	7,707.9	2,053.7	2,053.7	18.1	11.5	9.5

Methodology
All conveyors and screws are enclosed.
Uncontrolled Emissions (tpy) = Capacity (tpy) * Uncontrolled Emission Factor (lb/ton) * 8760 (hrs/yr) / 2000 (lb/ton)
Controlled Emissions (tpy) = Uncontrolled Emissions (tpy) * (1-(Controlled efficiency/100))
Except for Dryer and Bins 1, 2 and 3, it is assumed that controlled PM2.5 emissions are equal to controlled PM10 emissions.
* Controlled particulate emissions for the Dryer and controlled PM2.5 emissions for the Bins 1, 2 and 3 are determined as below.

					Controlled Emission Factor				Controlled Emission			Controlled Emission		
Unit	**Maximum Throughput (tons/hr)**	**Limited Hours of Operation (hrs/yr)**	**Limited Throughput (tons/year)**	**Source of Controlled Emission Factor**	**Controlled Emission Factor PM (lb/tn)**	**Controlled Emission Factor PM_{10} (lb/tn)**	**Controlled Emission Factor $PM_{2.5}$ (lb/tn)**	**Control Method**	**PM (lb/hr)**	**PM_{10} (lb/hr)**	**$PM_{2.5}$ (lb/hr)**	**PM (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**
Dryer	90	6,700	603,000	AP 42 Table 11.1-3.	0.033	0.023	0.023	Dryer Baghouse	2.97	2.07	2.07	9.95	6.93	6.93

Methodology
Controlled Emissions (tpy) = Controlled Emission Factor (lb/ton) * Limited Hours of Operation (hrs/yr) / 2000 (lb/ton)
For Dryer it is assumed that PM2.5 emissions are equal to PM10 emissions. Controlled particulate emissions for the Dryer are determined as below.
The particulate emissions factor for the dryer includes process and natural gas combustion emission.

Unit	**Maximum Throughput (tons/hr)**	**Limited Hours of Operation (hrs/yr)**	**Limited Throughput (tons/year)**	**Source of Controlled Emission Factor**	**Controlled Emission Factor $PM_{2.5}$ (lb/hr)**	**Control Method**	**$PM_{2.5}$ (tpy)**
Bin 1 loading	75	6,700	502,500	Emission factor provided by the source	0.12	Loadout Dust Collector 1	0.40
Bin 2 loading	75	6,700	502,500		0.12	Loadout Dust Collector 2	0.40
Bin 3 loading	75	6,700	502,500		0.12	Loadout Dust Collector 2	0.40
Bin 4 loading	90	6,700	603,000		0.12	Loadout Dust Collector 3	0.40

Methodology
Controlled Emissions (tpy) = Controlled Emission Factor (lb/ton) * Limited Hours of Operation (hrs/yr) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Dryer Natural Gas Combustion

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 7/12/2012

	Heat Input Capacity	HHV	Potential Throughput
Unit	MMBtu/hr	mmBtu	MMCF/yr
		mmscf	
Dryer	50		
	50.0	1000	438.0

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.416	1.66	1.7	0.1314	21.9	1.205	18.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPs Emissions

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.599E-04	2.628E-04	1.643E-02	3.942E-01	7.446E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.095E-04	2.409E-04	3.066E-04	8.322E-05	4.599E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 3 for Greenhouse Gas calculations.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	26,280	0.5	0.5
Summed Potential Emissions in tons/yr	26,281		
CO2e Total in tons/yr	26,440		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential

Appendix A: Emissions Calculations
Wind Erosion Calculations

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 7/12/2012

ALL ROADS INSIDE THE PLANT ARE UNPAVED

Vehicle	Production (tons/yr)	Product Weight (tons/RT)	Round Trips/yr	Avg miles per round trip	VMT/yr
Front-end loaders	495,000	10	49,500	0.04	1,980

Vehicle	Mean Weight (W) (tons)	PM Emission Factor[2] (lb/VMT)	PM2.5 Emission Factor[2] (lb/VMT)	PM10 Emission Factor[2] (lb/VMT)	VMT/yr	UNCONTROLLED EMISSIONS PM Emissions (TPY)	UNCONTROLLED EMISSIONS PM10 Emissions (TPY)	UNCONTROLLED EMISSIONS PM2.5 Emissions (TPY)	CONTROLLED EMISSIONS PM Emissions (TPY)	CONTROLLED EMISSIONS PM10 Emissions (TPY)	CONTROLLED EMISSIONS PM2.5 Emissions (TPY)
Front-end loaders	31	8.63	0.23	2.30	1,980	8.54	2.28	0.00098	4.2706	1.1381	0.00049
						8.54	**2.28**	**0.00**	**4.27**	**1.14**	**0.00**

50% control efficiency

*Based on a control efficiency in the AP-42 from the periodic application of water and/or other dust suppressants and speed controls (15 mph).

Reference AP-42, 13.2.2, 11/2006
E = k(s/12)^a x (W/3)^b)

Variable	PM10 Value	Units
k (lb/VMT)	1.5	Table 13.2.2-2
a	0.9	Table 13.2.2-2
b	0.45	Table 13.2.2-2
W	see above	tons
M	-	% (default)
s	6	% (Table 13.2.2-1)(iron/steel mills)

Variable	PM Value	Units
k (lb/VMT)	4.9	Table 13.2.2-2
a	0.7	Table 13.2.2-2
b	0.45	Table 13.2.2-2
W	see above	tons
M	-	% (default)
s	6	% (Table 13.2.2-1)(iron/steel mills)

Variable	PM2.5 Value	Units
k (lb/VMT)	0.15	Table 13.2.2-2
a	0.9	Table 13.2.2-2
b	0.45	Table 13.2.2-2
W	see above	tons
M	-	% (default)
s	6	% (Table 13.2.2-1)(iron/steel mills)

Appendix A: Emissions Calculations
Wind Erosion Calculations

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Potential to Emit - From Storage Pile Operations
From AP-42 13.2.4, Aggregate Handling and Storage Piles, 11/2006

Emissions from slag storage piles can be described by the following empirical equation:

$$E = k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}$$

Where:
E = emission factor (lb/tn)
k = particle size multiplier (dimensionless)
U = mean wind speed, miles per hour
M = material moisture content (%)

k =	PM	0.74
	PM10	0.35
	PM2.5	0.11

U =	13.4

mean wind speed, (mph) [source=rredc.nrel.gov/wind/pubs/atlas/maps/chap1/2-06m.html

The mean moisture content was estimated as the average moisture content based on onsite test data.

M =	2.00

%, site specific moisture data

E = Emission Factors (lb/ton)

PM	PM10	PM2.5
0.0085302	0.0040345	0.001268

Production: 603,000 tons - op hours are limited
Control Eff: 50%

2.57	**Uncontrolled PM (tons)**
1.22	**Uncontrolled PM10 (tons)**
0.38	**Uncontrolled PM2.5 (tons)**
1.29	**Controlled PM (tons)**
0.61	**Controlled PM10 (tons)**
0.191	**Controlled PM2.5 (tons)**

Appendix A: Emissions Calculations
Wind Erosion Calculations

Company Name:	South Shore Slag LLC
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The small area at the base of each pile where daily activity can occur is negligible and does not need to be calculated.
(see sample calculation, AP-42 12.2.5-9, Step 2)
Disturbance via topping off of piles by stackers creates the fresh surface by which these calculations represent.
N = 365, assuming pile disturbances are once per day, conservative (plant does not operate daily)
The following equations are used to calculate wind erosion emission factors and velocity friction:

AP-42, 13.2.5, Date 11/2006
PTE Wind Erosion from Storage Piles (Storage)

Eqn 2:

$$EF = K \sum_{i=1}^{N} P_i$$

EF = emission factor (g/m^2)
k = particle size multiplier
N = number of disturbances
P_i = erosion potential corresponding to obs or prob fastest mile of wind for the ith period between disturbances, g/m^2

k =	1	particle size multiplier for PM
k =	0.5	particle size multiplier for PM10
k =	0.075	particle size multiplier for PM2.5

u* = friction velocity (m/s)
u*t = threshold friction velocity (m/s)
u*t = 1.33 m/s, using AP-42 value, Table 13.2.5-2 for Scoria (roadbed material)

Eqn 3:

$$P = 58(u^* - u_t^*)^2 + 25(u^* - u_t^*)$$

P = 0 for u* ≤ u*$_t$

u^*_{10} = fastest mile of reference anemometer ht, 10, for period between disturbances (m/s)
u^* = fastest mile of reference anemometer ht, z, for period between disturbances (m/s)
0.005 = assumed roughnes height (m)

(Note: anemometer height not available for O'Hare weather station, assume 7 meters)
$u^*10 = 1.05\, u^*$

Eqn 5:

$$u_{10}^+ = u^+ \frac{\ln(10/0.005)}{\ln(z/0.005)}$$

u^*s = surface wind speed distribution (m/s)

Eqn 6:

$U^+_s = u_s/Ur$

u^*10 = fastest mile of reference anemometer ht, 10, for period between disturbances (m/s)
u_s = surface wind speed (m/s)
u_r = approach wind speed (m/s)

Eqn 7: $u^*=0.10\, u^*s$

u* = friction velocity (m/s)

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CALCULATE AREAS OF A TYPICAL PILE, BROKEN INTO SUB-AREAS

Calculate estimated average area of each storage pile:
oblong piles, not conical, see B2, AP-42 Figure 13.2.5-2
calculate as a rectangular box shape for surface area, conservatively
4 sides and 1 top

Area top = length x width
Area each side = length x height

Area top =	648	m^2
Area four sides =	720	m^2
Total Surface Area of Each Pile =	1368	m^2

length (m):	36	typical size of piles at slag plant, based on pile inventories at Levy ECL 2006.
width (m):	18	typical size of piles at slag plant, based on pile inventories at Levy ECL 2006.
height (m):	5	typical size of piles at slag plant, based on pile inventories at Levy ECL 2006.

Using B2 Type Pile, see Figure 13.2.5-2, AP-42

Pile Subarea	u_s/u_r	% of Surface Area	Area (m_2)
1	0.2	3%	41
2	0.2	28%	383
3	0.6	29%	397
4	0.6	22%	301
5	0.9	15%	205
6	1.1	3%	41
		Total Area:	1368

(see integrated wind erosion calculation spreadsheet, next Page)

CALCULATE ESTIMATED NUMBER OF PILES BASED ON MAXIMUM CAPACITY OF FEED END OF THE SEPARATION PLANT

Maximum throughput is equal to maximum amount of slag in storage piles, whether raw material or product material.

Operating hours limit =	6,700	
Maximum throughput =	90	tph
	603,000	tpy - operating hours are limited to 6700 per year.
Bulk Density of Slag =	1,762	kg/m3
Volume of the calculated pile above =	12,960	m^3
Weight of slag per pile =	22,835,520	kg of slag per pile
	25,171	tons of slag per pile
Estimated number of piles =	24	piles based on max plant equipment capacity

CALCULATE TOTAL EMISSIONS

Total emissions from one pile:	0.09	tons PM	(see integrated wind erosion calculation spreadsheet, next Page)
	0.05	tons PM_{10}	
	0.01	tons $PM_{2.5}$	
Emissions for all potential piles:	2.19	tons PM	uncontrolled
	1.09	tons PM_{10}	uncontrolled
	0.16	tons $PM_{2.5}$	uncontrolled
	50%	estimated control efficiency, wet suppression	
	1.09	tons PM	controlled
	0.55	tons PM_{10}	controlled
	0.08	tons $PM_{2.5}$	controlled

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PTE Wind Erosion from Storage Piles (Storage)

INTEGRATED WIND EROSION CALCULATION OF ONE PILI

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{PM}/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

P_{i-k} = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u'	u*10	u's (m/s) = (u$_u$/u$_s$) u*10					u* (m/s) = 0.10 u*s					Pile Subarea 1			Pile Subarea 2			Pile Subarea 3			Pile Subarea 4			Pile Subarea 5							Pile Subarea 6						
Period	mph	m/s	m/s	u$_u$/u$_s$: 0.2	u$_u$/u$_s$: 0.6	u$_u$/u$_s$: 0.9	u$_u$/u$_s$: 1.1	u$_u$/u$_s$: 0.2	u$_u$/u$_s$: 0.6	u$_u$/u$_s$: 0.9	u$_u$/u$_s$: 1.1	P$_i$		EF$_{ALL}$	P$_i$		EF$_{ALL}$	P$_i$		EF$_{ALL}$	P$_i$		EF$_{ALL}$	P$_i$	EF$_{PM}$	EF$_{PM10}$	EF$_{PM2.5}$	PM	PM$_{10}$	PM$_{2.5}$	P$_i$	EF$_{PM}$	EF$_{PM10}$	EF$_{PM2.5}$	PM	PM$_{10}$	PM$_{2.5}$
1/1/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/2/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/3/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/4/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/5/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/6/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/7/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/8/2010	23	10.282	10.796	2.159	6.478	9.716	11.876	0.216	0.648	0.972	1.188	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/9/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/10/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/11/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/12/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/13/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/14/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/15/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/16/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/17/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/18/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/19/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/20/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/21/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/22/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/23/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/24/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/25/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	3E-05	2E-05	2E-06
1/26/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/27/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/28/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/29/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/30/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
1/31/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/1/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/2/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/3/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/4/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/5/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	3E-05	2E-05	2E-06
2/6/2010	28	12.517	13.143	2.629	7.886	11.829	14.457	0.263	0.789	1.183	1.446	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.712	3.356	0.503	0.0003	0.0002	2E-05
2/7/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/8/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/9/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/10/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/11/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/12/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/13/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/14/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/15/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/16/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/17/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/18/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/19/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/20/2010	9	4.023	4.225	0.845	2.535	3.802	4.647	0.084	0.253	0.380	0.465	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/21/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/22/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0

INTEGRATED WIND EROSION CALCULATION OF ONE PILI

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{PM}/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

P_{i-k} = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u'	u*10	u's (m/s) = (u$_u$/u$_s$) u*10					u* (m/s) = 0.10 u*s					Pile Subarea 1			Pile Subarea 2			Pile Subarea 3			Pile Subarea 4			Pile Subarea 5							Pile Subarea 6						
Period	mph	m/s	m/s	u$_u$/u$_s$: 0.2	u$_u$/u$_s$: 0.6	u$_u$/u$_s$: 0.9	u$_u$/u$_s$: 1.1	u$_u$/u$_s$: 0.2	u$_u$/u$_s$: 0.6	u$_u$/u$_s$: 0.9	u$_u$/u$_s$: 1.1	P$_i$		EF$_{ALL}$	P$_i$		EF$_{ALL}$	P$_i$		EF$_{ALL}$	P$_i$		EF$_{ALL}$	P$_i$	EF$_{PM}$	EF$_{PM10}$	EF$_{PM2.5}$	PM	PM$_{10}$	PM$_{2.5}$	P$_i$	EF$_{PM}$	EF$_{PM10}$	EF$_{PM2.5}$	PM	PM$_{10}$	PM$_{2.5}$
2/23/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/24/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/25/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/26/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/27/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
2/28/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/1/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/2/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/3/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/4/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/5/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/6/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/7/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/8/2010	8	3.576	3.755	0.751	2.253	3.380	4.131	0.075	0.225	0.338	0.413	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/9/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/10/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	=>	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
3/11/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845

Appendix A: Emissions Calculations
Wind Erosion Calculations

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 7/12/2012

INTEGRATED WIND EROSION CALCULATION OF ONE PILE

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_M/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

$P_{1,y}$ = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u^*	u^* t0		u^*x (mph) = $u_{x/u}$ u^* t0					u^* (mph) = 0.10 u^*x				Pile Subarea 1			Pile Subarea 2				Pile Subarea 3				Pile Subarea 4				Pile Subarea 5							Pile Subarea 6						
Period	mph	mps	mps	u_x/u 0.2	u_x/u 0.3	u_x/u 0.4	u_x/u 0.5	u_x/u 1.1	u_x/u 0.2	u_x/u 0.3	u_x/u 0.4	u_x/u 0.5	P_i	EF_M	EF_{PM10}	P_i	EF_M	EF_{PM10}	P_i	EF_M	EF_{PM10}	P_i	EF_M	P_i	EF_M	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$	P_i	EF_M	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$
4/30/2010	31	13.858	14.551	2.910	8.731	13.096	16.008	0.291	0.873	1.310	1.601	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	15.7	15.696	7.848	1.177	0.000710087	0.000355043	5.32564E-05
5/1/2010	20	8.941	9.388	1.877	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/2/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/3/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/4/2010	28	12.507	13.140	2.628	7.885	11.828	14.457	0.263	0.789	1.183	1.446	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.712	3.356	0.503	0.000303653	0.000151826	2.27738E-05
5/5/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/6/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/7/2010	32	14.305	15.021	3.004	9.012	13.518	16.523	0.300	0.901	1.352	1.652	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	1.3	1.267	0.634	0.095	0.000289854	0.000143321	2.14982E-05	18.7	18.691	9.346	1.402	0.000845583	0.000422783	6.34173E-05
5/8/2010	30	13.411	14.082	2.816	8.449	12.674	15.490	0.282	0.845	1.267	1.549	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	12.7	12.702	6.351	0.953	0.000574656	0.000287934	4.39956E-05
5/9/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/10/2010	30	13.411	14.082	2.816	8.449	12.674	15.490	0.282	0.845	1.267	1.549	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	12.7	12.702	6.351	0.953	0.000574656	0.000287934	4.39956E-05
5/11/2010	29	12.954	13.612	2.722	8.167	12.251	14.974	0.272	0.817	1.225	1.497	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	9.7	9.707	4.853	0.728	0.00043911	0.000219956	3.29347E-05
5/12/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/13/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.723	3.361	0.054	3.26962E-05	1.63481E-05	2.45221E-06
5/14/2010	23	10.282	10.796	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/15/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/16/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/17/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/18/2010	30	13.411	14.082	2.816	8.449	12.674	15.490	0.282	0.845	1.267	1.549	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	12.7	12.702	6.351	0.953	0.000574656	0.000287934	4.39956E-05
5/19/2010	15	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/20/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/21/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/22/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/23/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/24/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/25/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/26/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/27/2010	20	8.941	9.388	1.877	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/28/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/29/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/30/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
5/31/2010	31	13.858	14.551	2.910	8.731	13.096	16.008	0.291	0.873	1.310	1.601	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	15.7	15.696	7.848	1.177	0.000710087	0.000355043	5.32564E-05
6/1/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/2/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/3/2010	11	4.917	5.163	1.033	3.098	4.647	5.580	0.103	0.310	0.465	0.568	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/4/2010	23	10.282	10.796	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/5/2010	31	13.858	14.551	2.910	8.731	13.096	16.008	0.291	0.873	1.310	1.601	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	15.7	15.696	7.848	1.177	0.000710087	0.000355043	5.32564E-05
6/6/2010	28	12.954	13.612	2.722	8.167	12.251	14.974	0.272	0.817	1.225	1.497	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	9.7	9.707	4.853	0.728	0.000439111	0.000219956	3.29347E-05
6/7/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/8/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/9/2010	23	10.282	10.796	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/10/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/11/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.723	3.361	0.054	3.26962E-05	1.63481E-05	2.45221E-06
6/12/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/13/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/14/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/15/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/16/2010	20	8.941	9.388	1.877	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/17/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/18/2010	46	20.564	21.592	4.318	12.955	19.433	23.751	0.432	1.296	1.943	2.375	0.0	***	0.000	0.0	***	0.000	35.6	35.570	17.785	2.688	0.508045828	0.004022919	0.000603435	60.6	60.617	30.309	4.546	0.002742253	0.001371127	0.000205690
6/19/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/20/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/21/2010	36	16.093	16.898	3.380	10.139	15.208	18.588	0.338	1.014	1.520	1.859	0.0	***	0.000	0.0	***	0.000	11.1	11.069	5.534	0.830	0.032503052	0.000125177	0.000187766	30.7	30.674	15.335	2.300	0.001387475	0.000693737	0.000104049
6/22/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/23/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	6.7	6.723	3.361	0.054	3.26962E-05	1.63481E-05	2.45221E-06
6/24/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/25/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/26/2010	11	4.917	5.163	1.033	3.098	4.647	5.580	0.103	0.310	0.465	0.568	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/27/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/28/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/29/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
6/30/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/1/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/2/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/3/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
7/4/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0

INTEGRATED WIND EROSION CALCULATION OF ONE PILE

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_M/EF_{PM10}/EF_{P

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Appendix A: Emissions Calculations
Wind Erosion Calculations

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 7/12/2012

INTEGRATED WIND EROSION CALCULATION OF ONE PILE

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{Pi}/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

$P_{i,k}$ = erosion potential (g/m^2)

Assuming worst case of 365 day disturbances.

	u^*	u^*t0	u^*e (m/s) = u_k/u_t u^*t0						u^* (m/s) = 0.10 u^*e					Pile Subarea 1			Pile Subarea 2			Pile Subarea 3			Pile Subarea 4			Pile Subarea 5							Pile Subarea 6					
Period	mph	m/s	m/s	u_k/u_t 0.2	u_k/u_t 0.6	u_k/u_t 0.9	u_k/u_t 1.1	u_k/u_t 0.2	u_k/u_t 0.6	u_k/u_t 1.1	P_i		EF_{Pi}	P_i		EF_{Pi}	P_i		EF_{Pi}	P_i		EF_{Pi}	P_i		EF_{Pi}	P_i	EF_{PM}	EF_{PM10}	$EF_{PM2.5}$	PM	PM_{10}	$PM_{2.5}$	P_i	EF_{Pi}	EF_{PM}	EF_{PM10}	PM	PM_{10}	$PM_{2.5}$
8/6/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/10/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/11/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/12/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/13/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/14/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/15/2010	18	8.047	8.449	1.690	5.069	7.604	9.294	0.169	0.507	0.760	0.929	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/16/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/17/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/18/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/19/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/20/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/21/2010	32	14.355	15.321	3.064	9.192	13.318	16.523	0.350	0.961	1.352	1.652	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	1.5	0.000288064	0.000144321	2.14962E-05	18.7	18.591	9.346	1.462	0.000845582	0.000422304	0.000062907	0.341738-05			
8/22/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/23/2010	33	14.752	15.498	3.099	9.294	13.941	17.039	0.310	0.929	1.394	1.704	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	3.7	3.717	1.859	0.279	0.000849087	0.000424539	6.36953E-05	21.7	21.688	10.843	1.626	0.000981041	0.000490520	7.35791E-05						
8/24/2010	37	16.540	17.368	3.474	10.421	15.631	19.104	0.347	1.042	1.563	1.910	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	13.5	13.518	6.759	1.014	0.003057787	0.001528892	0.000229334	33.7	33.665	16.832	2.525	0.001522557	0.000761478	0.000114227						
8/25/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/26/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/27/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/28/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/29/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/30/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
8/31/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/2/2010	29	12.984	13.612	2.722	8.167	12.251	14.974	0.272	0.817	1.225	1.497	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.707	4.853	0.728	0.000439131	0.000219565	3.29347E-05			
10/3/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/4/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/5/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/6/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/7/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/8/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/9/2010	10	4.470	4.694	0.939	2.816	4.225	5.163	0.094	0.282	0.422	0.516	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/10/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/11/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/12/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/13/2010	21	9.388	9.857	1.971	5.914	8.872	10.843	0.197	0.591	0.887	1.084	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/14/2010	23	10.282	10.798	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/15/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/16/2010	20	8.941	9.388	1.878	5.633	8.449	10.327	0.188	0.563	0.845	1.033	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/17/2010	12	5.364	5.633	1.127	3.380	5.069	6.196	0.113	0.338	0.507	0.620	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/18/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/19/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/20/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/21/2010	23	10.282	10.798	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/22/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/23/2010	35	15.441	16.082	2.816	8.449	12.674	15.778	0.282	0.845	1.267	1.545	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	13.7	12.702	6.351	0.953	0.000574604	0.000287304	4.30958E-05			
10/24/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/25/2010	26	11.623	12.204	2.441	7.323	10.984	13.425	0.244	0.732	1.098	1.342	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.7	0.723	0.361	0.054	1.35992E-05	1.63481E-05	2.45221E-06			
10/26/2010	38	16.988	17.837	3.567	10.702	16.053	19.621	0.357	1.070	1.605	1.962	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	16.0	15.969	7.984	1.198	0.003612806	0.001806004	0.000270906	36.7	36.659	18.330	2.749	0.001658431	0.000829215	0.000124383						
10/27/2010	41	18.329	19.245	3.849	11.547	17.321	21.170	0.385	1.155	1.732	2.117	0.0	***	0.000	23.3	23.319	11.660	1.749	0.005274697	0.002637348	0.000395602	45.6	45.644	22.822	3.423	0.002064864	0.001032432	0.000154865						
10/28/2010	23	10.282	10.798	2.159	6.476	9.716	11.876	0.216	0.648	0.972	1.188	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/29/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/30/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
10/31/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/1/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/2/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/3/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/4/2010	22	9.835	10.327	2.065	6.196	9.294	11.359	0.207	0.620	0.929	1.136	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/5/2010	24	10.729	11.265	2.253	6.759	10.139	12.392	0.225	0.676	1.014	1.239	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/6/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/7/2010	17	7.600	7.980	1.596	4.788	7.182	8.778	0.160	0.479	0.718	0.878	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/8/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/9/2010	13	5.812	6.102	1.220	3.661	5.492	6.712	0.122	0.366	0.549	0.671	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/10/2010	16	7.153	7.510	1.502	4.506	6.759	8.261	0.150	0.451	0.676	0.826	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/11/2010	14	6.259	6.571	1.314	3.943	5.914	7.229	0.131	0.394	0.591	0.723	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/12/2010	15	6.706	7.041	1.408	4.225	6.337	7.745	0.141	0.422	0.634	0.774	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0
11/13/2010	25	11.176	11.735	2.347	7.041	10.561	12.908	0.235	0.704	1.056	1.291	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	***	0.000	0.0	0.000	0.000	0.000	0	0	0	0.0	0.000	0.000	0.000	0	0	0

INTEGRATED WIND EROSION CALCULATION OF ONE PILE

AP-42, 13.2.5, Date 1/2006

Wind data, u^*, purchased from NOAA local climatic data website, ORD weather station 2010 monthly charts, maximum speed 2-min.

$EF_{Pi}/EF_{PM10}/EF_{PM2.5}$ = emission factor (g/m^2)

$PM/PM_{10}/PM_{2.5}$ = particulate matter emissions (tpy), uncontrolled

$P_{i,k}$ = erosion potential (g/m^2)

Appendix A: Emissions Calculations
Summary

Company Name: South Shore Slag LLC
Address, City, IN, Zip: One North Buchanan, Gary, Indiana 46402
Significant Source Modification No.: 089-31980-00133
Significant Permit Modification No.: 089-31982-00133
Reviewer: Mehul Sura
Date: 7/12/2012

	PM	PM10	PM2.5
Material Handling Equipment	18.08	11.51	9.50
Unpaved Roads	4.27	1.14	0.00
Drop Operation at Storage Pile	1.29	0.61	0.19
Wind Erosion from storage pile	1.09	0.55	0.08
Total	24.73	13.80	9.77

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

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

TO: Dave Oram
South Shore Slag LLC - contractor of USS Gary Work
3411 Sheffield Ave
Hammond, IN 46327-1004

DATE: November 8, 2012

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

SUBJECT: Final Decision
Title V
089-31980-00133

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

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

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

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

Final Applicant Cover letter.dot 11/30/07

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

November 8, 2012

TO: Gary Public Library

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

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

Applicant Name: South Shore Slag LLC - contractor of USS Gary Work

Permit Number: 089-31980-00133

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

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

Enclosures
Final Library.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

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Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: November 8, 2012

RE: South Shore Slag LLC / 089-31980-00133

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

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

If you would like to request a paper copy of the permit document, please contact IDEM's central file room at:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 11/14/08

Mail Code 61-53

IDEM Staff	CDENNY 11/08/2012 South Shore Slag LLC - contractor of USS Gary Works 089-31980-00133 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Dave Oram South Shore Slag LLC - contractor of USS Gary Work 3411 Sheffield Ave Hammond IN 46327-1004 (Source CAATS)									
2		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
3		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 *(Affected Party)*									
4		Gary Mayors Office 401 Broadway # 203 Gary IN 46402 *(Local Official)*									
5		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
6		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
7		Lake County Fish and Game Association P.O. Box 1006 Hammond IN 46325 *(Affected Party)*									
8		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 *(Affected Party)*									
9		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 *(Affected Party)*									
10		Mark Coleman 107 Diana Road Portage IN 46368 *(Affected Party)*									
11		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 *(Affected Party)*									
12		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
13		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)									
14		Northwestern In Regional Planning Com (NIRPC) 6100 Southport Road Portage IN 46368 *(Affected Party)*									
15		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

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Mail Code 61-53

IDEM Staff	CDENNY 11/08/2012 South Shore Slag LLC - contractor of USS Gary Works 089-31980-00133 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Barbara G. 506 Lilac Street East Chicago IN 46312 (Affected Party)									
2		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									
3		General Manager US Steel One North Broadway Gary IN 46402 *(Source ? addl contact)*									
4		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									
5		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 *(Affected Party)*									
6		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									
7		Gary Public Library 4030 West 5th Avenue Gary IN 46406 *(Library)*									
8		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
9		Gitte Laasby Post Tribune 1433 E. 83rd Ave Merrillville IN 46410 *(Affected Party)*									
10		Susan Severtson City of Gary Law Dept. 401 Broadway 4th Floor Gary IN 46402 *(Local Official)*									
11		Susan Grenzebach ST Environmental, LLC 209 S Calumet Road, Suite 5 Chesterton IN 46304 *(Consultant)*									
12											
13											
14											
15											

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