



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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

*Thomas W. Easterly*  
**Commissioner**

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

TO: Interested Parties / Applicant

DATE: December 5, 2011

RE: Tube City IMS, LLC / 089-29892-00132

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, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

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

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

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

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

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

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



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**Part 70 Administrative Operating Permit Renewal  
OFFICE OF AIR QUALITY**

**Tube City IMS, LLC  
One North Broadway  
Gary, Indiana 46404**

(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.

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T089-29892-00132	
Issued by:  Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 5, 2011  Expiration Date: December 5, 2016

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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, A.3, and 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)]

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The Permittee owns and operates a stationary slag processing and metal recovery operation as a contractor at US Steel - Gary Works.

Source Address:	One North Broadway, Gary, Indiana 46404
General Source Phone Number:	(219) 881-5721
SIC Code:	7389 and 3398
County Location:	Lake
Source Location Status:	Nonattainment for PM <sub>2.5</sub> standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules and Nonattainment NSR 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)]

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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, located at One North Broadway, Gary, IN 46402; and
- (b) Tube City IMS, 089-00132, an on-site contractor, located at One North Broadway, Gary, IN 46402.

IDEM has determined that Tube City IMS is under the common control of US Steel - Gary Works. These two plants are considered one (1) source due to contractual control. Therefore, the term "source" in the Part 70 documents refers to both US Steel - Gary Works and Tube City IMS as one (1) source.

Separate Part 70 Operating permits have been issued to US Steel - Gary Works (T089-29907-00121) and Tube City IMS (T089-29892-00132), 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)]

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

- (a) One (1) kish iron crushing operation, identified as M029, constructed in October 1990, with a maximum capacity of 125 tons per hour, with emissions controlled by building enclosure, kish iron pre-watering and use of water sprays consisting of the following:
  - (1) One (1) jaw crusher;

- (2) One (1) hammer mill;
  - (3) Two (2) screens;
  - (4) Sixteen (16) conveyers;
  - (5) Storage piles, four-tenths (0.4) acre with storage capacity of 6,000 tons; and
  - (6) Unpaved haul road traffic.
- (b) One (1) slag processing plant, identified as M057, constructed on October 6, 1995, with a maximum capacity of 1,000 tons per hour, with emissions controlled by slag pre-watering and water sprays consisting of the following:
- (1) Five (5) screen stations;
  - (2) Eighteen (18) conveyers;
  - (3) Storage piles, nine-tenths (0.9) acre with storage capacity of 16,000 tons;
  - (4) One (1) VSI crusher, constructed October 1997;
  - (5) Four (4) conveyers, constructed October 1997; and
  - (6) Unpaved haul road traffic; and
  - (7) Material transfers.
- (c) One (1) steel slab scarfing plant, constructed in August 1991, with a maximum capacity of 180 tons per hour, controlled by a baghouse, ducted to the Scarfing Stack, using a 1.5 MMBtu per hour natural gas flame.
- (d) Oxygen lancing of metal, with a maximum capacity of 50 tons per hour, controlled by building enclosure.
- (e) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity of 21,000 gallons, and an approximate throughput of 230,000 gallons per month.
- (1) One (1) diesel fuel storage tank, identified as 1, with a maximum capacity of 250 gallons.
  - (2) Two (2) diesel fuel storage tanks, identified as 19, with a maximum capacity of 10,000 gallons, each.
  - (3) One (1), low sulfur diesel fuel storage tank, identified as 21, with a maximum capacity of 500 gallons.

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

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

- (a) Gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons. [326 IAC 8-9-1]

- (b) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons. [326 IAC 8-9-1]

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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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]

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) 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)]

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- (a) This permit, T089-29892-00132, 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]

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

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

### B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

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

### B.5 Severability [326 IAC 2-7-5(5)]

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

### B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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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)]

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

### B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

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- (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]

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- (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]**

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- (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 T089-29892-00132 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]**

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(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)]**

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(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]**

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(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. 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 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

- (a) The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

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

#### C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (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 percent (0%) 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 percent (0%) 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<sub>10</sub> 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<sub>10</sub> 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]**

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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]**

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- (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]

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

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

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

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

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

#### C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

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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)]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps [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]**

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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]**

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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]**

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

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

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

**C.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:

- (a) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

- (b) 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]

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

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

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

- (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**

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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**

**Emissions Unit Description:**

(a) One (1) kish iron crushing operation, identified as M029, constructed in October 1990, with a maximum capacity of 125 tons per hour, with emissions controlled by building enclosure, kish iron pre-watering and use of water sprays consisting of the following:

- (1) One (1) jaw crusher;
- (2) One (1) hammer mill;
- (3) Two (2) screens;
- (4) Sixteen (16) conveyers;
- (5) Storage piles, four-tenths (0.4) acre with storage capacity of 6,000 tons; and
- (6) Unpaved haul road traffic.

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

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

**D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] Emission Offset [326 IAC 2-3]**

- (a) The nonfugitive particulate emissions from the one (1) kish iron crushing operation, identified as M029 shall be limited to the following pound per ton rates:

<b>Emission Units</b>	<b>PM Emissions (lb/ton)</b>	<b>PM<sub>10</sub> / PM<sub>2.5</sub> Emissions (lb/ton)</b>
Each Crusher	0.0012	0.00054
Each Screen	0.0036	0.0022
Each conveyor transfer point	0.00014	0.000046

- (b) The moisture content of the kish iron processed shall not be less than 0.55%.

Compliance with the above limits combined with the controlled potential emissions from the fugitive sources of the kish iron operation, shall limit the PM and PM<sub>10</sub> from the kish iron operation to less than twenty-five (25) tons of PM and less than fifteen (15) tons of PM<sub>10</sub> per twelve (12) consecutive month period and render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable to this modification.

**D.1.2 Preventive Maintenance Plan**

A Preventive Maintenance Plan is required for this facility. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.1.3 Particulate Control [326 IAC 2-2][326 IAC 2-3]**

In order to ensure compliance with Condition D.1.1, the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the PM, PM<sub>10</sub> emissions from the

crushers, screens, and the conveyors at Kish Iron Operation. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.1.1. If weather conditions preclude the use of wet suppression, the Permittee shall perform gravimetric analysis on the metallurgical material to ensure it has a moisture content of at least 0.55 percent of the process stream by weight or greater. The Permittee shall submit to IDEM, OAQ the method for moisture content analysis for approval.

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

#### **D.1.4 Visible Emission Notations**

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- (a) Visible emission notations of the exhausts from the jaw crusher, hammer mill, screens, and conveyor transfer points 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. Section C- Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

#### **D.1.5 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.1.1(a) and (b) and D.1.3, the Permittee shall maintain records as needed of the gravimetric analysis of the metallurgical material.
- (b) To document the compliance status with Condition D.1.4, the Permittee shall maintain records of visible emission notations of the crushing, screening, conveying operations once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).
- (c) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (b) One (1) slag processing plant, identified as M057, constructed on October 6, 1995, with a maximum capacity of 1,000 tons per hour, with emissions controlled by slag pre-watering and water sprays consisting of the following:
- (1) Five (5) screen stations;
  - (2) Eighteen (18) conveyers;
  - (3) Storage piles, nine-tenths (0.9) acre with storage capacity of 16,000 tons;
  - (4) One (1) VSI crusher, constructed October 1997;
  - (5) Four (4) conveyers, constructed October 1997; and
  - (6) Unpaved haul road traffic; and
  - (7) Material transfers.

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

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

#### D.2.1 Emission Offset Minor Particulate Limit [326 IAC 2-3]

Pursuant to CP 089-4337-00132, issued on March 31, 1995,

- (a) the input of raw material to the slag processing plant, identified as M057, shall be less than 2.3 million tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (b) the PM shall not exceed 0.387 pound per ton of raw material;
- (c) the PM<sub>10</sub> shall not exceed 0.038 pound per ton of raw material; and
- (d) the moisture content of the slag processed shall not be less than 0.55%.

Compliance with these limits shall limit the emissions of PM to less than twenty-five (25) tons and the emissions of PM<sub>10</sub> to less than fifteen (15) tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the slag processing plant.

#### D.2.2 Preventive Maintenance Plan

A Preventive Maintenance Plan is required for this facility. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

### Compliance Determination Requirements

#### D.2.3 Particulate Control [326 IAC 2-3]

In order to ensure compliance with Condition D.2.1, the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the PM, PM<sub>10</sub> emissions from the screens and the conveyors at slag processing plant, identified as M057. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.2.1(d). If weather conditions preclude the use of wet suppression, the Permittee shall perform gravimetric analysis on the metallurgical material to ensure it has a moisture content of at least 0.55 percent of the process stream by weight or greater. The Permittee shall submit to IDEM, OAQ the method for moisture content analysis for approval.

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

#### **D.2.4 Visible Emissions Notations**

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- (a) Visible emission notations of the screens, conveyor transfer points, and crusher exhaust stacks 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. Section C- Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

#### **D.2.5 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.2.1(a), the Permittee shall maintain records of the raw material input for the slag processing plant identified as M057.
- (b) To document the compliance status with Condition D.2.1(d), the Permittee shall maintain records as needed of the gravimetric analysis of the metallurgical material.
- (c) To document the compliance status with Condition D.2.4, the Permittee shall maintain records of visible emission notations of the screens, conveyor transfer points and crusher exhaust stacks once per day. The Permittee shall include in its daily record when visible emission notations are not taken and the reason for the lack of visible emission notations, (i.e. the process did not operate that day).
- (d) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

#### **D.2.6 Reporting Requirements**

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- (a) A quarterly summary of the information to document the compliance status with D.2.1 shall be submitted using the reporting form located at the end of this permit, or its equivalent.

- (b) These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee 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).

## SECTION D.3

## EMISSIONS UNIT OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (c) One (1) steel slab scarfing plant, constructed in August 1991, with a maximum capacity of 180 tons per hour, controlled by a baghouse, ducted to the Scarfing Stack, using a 1.5 MMBtu per hour natural gas flame.

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

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

#### D.3.1 Emission Offset Minor Particulate Limit [326 IAC 2-3]

Pursuant to CP 089-2092-00132, issued on September 13, 1991, the particulate matter emissions from the scarfing operation shall not exceed 0.004 gr/dscf at an actual flow rate of 90,000 cfm.

Compliance with this limit shall limit the emissions of PM to less than twenty-five (25) tons and the emissions of PM<sub>10</sub> to less than fifteen (15) tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the steel slab scarfing plant.

#### D.3.2 Particulate Limitations [326 IAC 6.8-1-2(a)]

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the scarfing operation shall be limited to three-hundredths (0.03) grain per dry standard cubic foot (dscf).

#### D.3.3 Preventive Maintenance Plan

A Preventive Maintenance Plan is required for this facility. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

### Compliance Determination Requirements

#### D.3.4 Particulate Matter Control [326 IAC 2-7-6(6)]

- (a) In order to comply with Conditions D.3.1 and D.3.2, the baghouse for particulate control shall be in operation and control particulate emissions from the scarfing building at all times the scarfing process is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

#### D.3.5 Visible Emissions Notations [40 CFR 64]

- (a) Visible emission notations of the scarfing operations stack 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

#### D.3.6 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across the baghouse used in conjunction with the scarfing process, at least once per day when the scarfing process is in operation. When for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or 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.

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

#### D.3.7 Broken or Failed Bag Detection [40 CFR 64]

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

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

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

#### D.3.8 Record Keeping Requirements

- (a) To document the compliance status with Condition D.3.5, the Permittee shall maintain records of visible emission notations of the scarfing stack exhaust once per day.

- (b) To document the compliance status with Condition D.3.6, the Permittee shall maintain records of the pressure drop across the scarfer baghouse once per day. The Permittee shall include in its daily record when visible emission notation is not taken and the reason for the lack of visible emission notation, (i.e. the process did not operate that day).
- (c) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

**SECTION D.4**

**EMISSIONS UNIT OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]:**

- (e) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity of 21,000 gallons, and an approximate throughput of 230,000 gallons per month.
  - (1) One (1) diesel fuel storage tank, identified as 1, with a maximum capacity of 250 gallons.
  - (2) Two (2) diesel fuel storage tanks, identified as 19, with a maximum capacity of 10,000 gallons, each.
  - (3) One (1), low sulfur diesel fuel storage tank, identified as 21, with a maximum capacity of 500 gallons.

Insignificant activities:

- (a) Gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons. [326 IAC 8-9-1]
- (b) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons. [326 IAC 8-9-1]

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

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

**D.4.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-1]**

Pursuant to 326 IAC 8-9-6(a) and (b), the owner or operator of each Volatile Organic Liquid Storage vessel to which 326 IAC 8-9-1 applies shall maintain the following records for the life of the vessel and submit a report to IDEM, OAQ containing the following for each vessel:

- (a) The vessel identification number,
- (b) The vessel dimensions, and
- (c) The vessel capacity.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Tube City IMS, LLC  
Source Address: One North Broadway, Gary, Indiana 46404  
Part 70 Permit No.: T089-29892-00132

**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: Tube City IMS, LLC  
Source Address: One North Broadway, Gary, Indiana 46404  
Part 70 Permit No.: T089-29892-00132

**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 <sub>2</sub> , VOC, NO <sub>x</sub> , 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: Tube City IMS, LLC  
Source Address: One North Broadway, Gary, Indiana 46404  
Part 70 Permit No.: T089-29892-00132  
Facility: Slag Processing Plant, identified as M057  
Parameter: Slag processed  
Limit: 2.3 million tons of slag processed per twelve (12) 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: Tube City IMS, LLC  
 Source Address: One North Broadway, Gary, Indiana 46404  
 Part 70 Permit No.: T089-29892-00132

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

<p>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".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_



***Tube City IMS***  
We Create Value®

**TUBE CITY IMS, LLC  
USS GARY WORKS OPERATION  
PM-10 COMPLIANCE PLANS**

**THIS VOLUME CONTAINS:**

- 1) FUGITIVE EMISSION CONTROL PLAN**
- 2) CONTINUOUS COMPLIANCE PLAN**
- 3) VISIBLE EMISSION EVALUATION PLAN**

Revision:  
January 12, 2010

## FUGITIVE EMISSION CONTROL PLAN

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## FUGITIVE EMISSION CONTROL PLAN

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### FUGITIVE EMISSION CONTROL PLAN INTRODUCTION

This Fugitive Emission Control Plan is prepared in accordance with the Indiana Department of Environmental Management (IDEM) promulgated Rule 10, 326 IAC 6.8-10, Lake County Fugitive Particulate Matter and 326 IAC 6.8-10-4, Control Plans. This rule requires that affected sources submit a fugitive particulate control plan to reduce emissions of PM-10 (particulate matter with an aerodynamic diameter of 10 microns or less) from nontraditional sources of fugitive emissions. This plan must include a description of each nontraditional source, measurements of the parameters needed to estimate emissions from these sources, control measures and other work practices to be employed to limit PM-10 emissions from these sources, and conditions (i.e. rain, snow, high wind speeds, freezing conditions, etc.) that may prevent or delay routine implementation of some control measures.

The following sections contain the plan developed to control fugitive particulate emissions from the Mill Service Group of Tube City IMS at USS Gary Works. This plan will be implemented on a year round basis except, when not required to do so under Subsection F – Conditions Preventing Use of Control Measures.

This Fugitive Emission Control Plan (Plan) is structured in the same form as the rule. An index for this Plan is included on the first page. The **bold font** in the body of the Plan below identifies the regulatory citations from 326 IAC 6.8-10-4 and associated requirements. Our responses follow in plain text.

### **THE PLAN**

#### **326 IAC 6.8-10-4 [Control plans]**

**Sec. 4. Control plans shall include the following:**

**(1) Within six (6) months of June 11, 1993, a source to which this rule applies shall submit a control plan that, when fully implemented, will achieve compliance with the applicable emission limitations stated in section 3 of this rule. Failure to submit a control plan in accordance with this rule shall be considered a violation of this article. A control plan shall also be included as part of a construction permit application under 326 IAC 2-5.1.**

**(2) A control plan, upon submittal to the department, shall become part of a source's operating permit or registration conditions.**

### **LOCATION OF SOURCE**

#### **APPLICABLE REGULATION FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3 [Control plans] as follows:**

**(3) The Control Plan shall contain the following information:**

**(A) The name and address of the following:**

**(i) The source and location, if the source is located on another source's property.**

REQUESTED INFORMATION:

## **FUGITIVE EMISSION CONTROL PLAN**

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[Section 3A(i)] The address of the source location is as follows:

Tube City IMS at USS - Gary Works  
One North Broadway  
Gary, Indiana 46402

Tube City IMS is responsible for specific areas within this facility, please refer to the maps in Section 3D(i).

### **ADDRESS OF OWNER**

**326 IAC 6.8-10-4-3 [Control plans] as follows:**

**(3) The Control Plan shall contain the following information:**

**(A) The name and address of the following:**

**(ii) If different from that of the source, the owner or operator responsible for the execution of the plan.**

REQUESTED INFORMATION:

[Section 3A(ii)] The operator responsible for the facilities described in this Plan is:

Tube City IMS, LLC  
1155 Business Center Drive, Suite 200  
Horsham, Pennsylvania 19044-3454

### **LIST OF FACILITIES**

#### **APPLICABLE REGULATION FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3 [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(B) Identification of the facilities or operations listed in section 1(a)(1) of this rule and those affected by 326 IAC 6.8-2 through 326 IAC 6.8-7 that exist at the source.**

REQUESTED INFORMATION:

[Section 3B], TUBE CITY IMS FACILITIES WITHIN USS-GARY WORKS

- 1 Main Slag Processing
- 2 Iron Crushing
- 3 Ball Drop
- 4 Tundish Lancing
- 5 Slag Pit - #1 BOP
- 6 Slag Pit - #2 Q-BOP
- 7 Surface Conditioning
- 8 Slab Hauling
- 9 Paved Roads and Parking Lots
- 10 Unpaved Roads and Parking Lots
- 11 Material Transfer
- 12 Wind Erosion from Storage Piles and Exposed Areas
- 13 Material Transportation Activities

## FUGITIVE EMISSION CONTROL PLAN

---

### **MAPS OF FACILITIES**

#### **APPLICABLE REGULATION FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3 [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(C) A map showing the location of all of the following:**

- (i) Unpaved roads.**
- (ii) Paved roads.**
- (iii) Parking lots.**
- (iv) Storage piles.**
- (v) Material processing facilities.**
- (vi) Dust handling equipment.**
- (vii) Material transfer points.**
- (viii) Waste disposal and reclamation sites.**

#### **REQUESTED INFORMATION:**

[Section 3C]. The following is a list of maps provided to define the location of Tube City IMS Facilities within USS - Gary Works. The various maps included in this section in a reduced size identify the approximate locations of unpaved and paved roads, parking areas, storage piles, material processing facilities and material transfer points.

- Drawing No. 5041-1, Slag Processing - Equipment Plan
- Drawing No. 5041-2, Slag Processing - Building Plan
- Drawing No. 5041-3, Iron Crushing - Equipment Plan
- Drawing No. 5041-4, Iron Crushing - Building Plan
- Drawing No. 5041-5, USS Gary Works - TUBE CITY IMS Site Plan (Sheet 1)
- Drawing No. 5041-6, USS Gary Works - TUBE CITY IMS Site Plan (Sheet 2)

All Maps are included in the Appendix.

## FUGITIVE EMISSION CONTROL PLAN

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### **ROADWAYS**

#### **APPLICABLE REGULATION FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3(D)(i) [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(D) A full description of the facilities on the map, including the following information, where applicable:**

**(i) The road lengths and widths, average daily traffic, surface silt loading, classification of vehicle traffic, and other data necessary to estimate PM10 emissions from paved and unpaved roads and parking lots.**

#### **REQUESTED INFORMATION:**

[Section 3D(i)], ROADWAY INDEX

Roadway at #1 BOP Shop Dump Station

Roadway at Slag Processing/#2 Q-BOP Shop Dump Station

Roadway at Ball Drop - Site "C"

Roadway in Slab Laydown Yards

Information about Roadways follows below.

## FUGITIVE EMISSION CONTROL PLAN

---

### ROADWAY AT #1 BOP SHOP DUMP STATION

Width: 20 Feet  
Silt loading: 17% passing 200 mesh

#### Average Daily Traffic:

Type of vehicle: Pot Hauler  
Trips loaded (gross weight): 47 (191 Ton)  
Trips Unloaded (net weight): 47 (116 Ton)  
Number of wheels: 8  
Travel Distance: 480 Feet

Type of vehicle: Loader  
Trips Loaded (gross weight): 30 (113 Ton)  
Trips Unloaded (net weight): 42 (98 Ton)  
Number of wheels: 4  
Travel Distance: 90 Feet

Type of vehicle: 35 Ton Truck  
Trips loaded (gross weight): 46 (81 Ton)  
Trips unloaded (net weight): 46 (46 Ton)  
Nuner of wheels: 6  
Travel Distance: 370 Feet

Type of vehicle: 50 Ton Truck  
Trips loaded (gross weight): 20 (106 Ton)  
Trips Unloaded (net weight): 20 (56 Ton)  
Number of wheels: 6  
Travel Distance: 370 Feet

## FUGITIVE EMISSION CONTROL PLAN

---

### ROADWAY AT #1 BOP SHOP DUMP STATION

Width: 20 Feet  
Silt loading: 12.7% passing 200 mesh

#### Average Daily Traffic:

Type of vehicle: Pot Hauler  
Trips loaded (gross weight): 47 (191 Ton)  
Trips Unloaded (net weight): 47 (116 Ton)  
Number of wheels: 4  
Travel Distance: 960 Feet

Type of vehicle: Loader  
Trips Loaded (gross weight): 81(113 Ton)  
Trips Unloaded (net weight): 95 (98 Ton)  
Number of wheels: 4  
Travel Distance: 560 Feet

Type of vehicle: 35 Ton Truck  
Trips loaded (gross weight): 149 (81 Ton)  
Trips unloaded (net weight): 149 (46 Ton)  
Nuner of wheels: 6  
Travel Distance: 32600 Feet

Type of vehicle: 50 Ton Truck  
Trips loaded (gross weight): 53 (106 Ton)  
Trips Unloaded (net weight): 53(56 Ton)  
Number of wheels: 6  
Travel Distance: 3260 Feet

## FUGITIVE EMISSION CONTROL PLAN

---

### ROADWAY AT #1 BOP SHOP DUMP STATION

Width: 20 Feet  
Silt loading: 8.2% passing 200 mesh

Average Daily Traffic:

Type of vehicle: Loader  
Trips Loaded (gross weight): 60 (113 Ton)  
Trips Unloaded (net weight): 60 (98 Ton)  
Number of wheels: 4  
Travel Distance: 750 Feet

Type of vehicle: 35 Ton Truck  
Trips loaded (gross weight): 21 (81 Ton)  
Trips unloaded (net weight): 21 (46 Ton)  
Number of wheels: 6  
Travel Distance: 750 Feet

Type of vehicle: 50 Ton Truck  
Trips loaded (gross weight): 6 (106 Ton)  
Trips Unloaded (net weight): 6 (56 Ton)  
Number of wheels: 6  
Travel Distance: 750 Feet

## FUGITIVE EMISSION CONTROL PLAN

---

### ROADWAY AT #1 BOP SHOP DUMP STATION

Width: 20 Feet  
Silt loading: 9.1% passing 200 mesh

#### Average Daily Traffic in H Yard (includes CY, HY & RJ)

Type of vehicle: Slab Hauler  
Trips loaded (gross weight): 120 (121 Ton)  
Number of wheels: 6  
Travel Distance: 1000 Feet

#### Average Daily Traffic in P Yard (includes PY)

Type of vehicle: Slab Hauler  
Trips Loaded (gross weight): 180 (121 Ton)  
Number of wheels: 6  
Travel Distance: 1150 Feet

#### Average Daily Traffic in Yard 80 (includes 80)

Type of vehicle: Slab Hauler  
Trips loaded (gross weight): 60 (121 Ton)  
Number of wheels: 6  
Travel Distance: 1150 Feet

Type of vehicle: 50 Ton Truck  
Trips loaded (gross weight): 53 (106 Ton)  
Trips Unloaded (net weight): 53 (56 Ton)  
Number of wheels: 6  
Travel Distance: 3260 Feet

## FUGITIVE EMISSION CONTROL PLAN

---

### **MATERIAL STORAGE PILES**

#### **APPLICABLE REGULATION FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3(D)(ii) [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(D) A full description of the facilities on the map, including the following information, where applicable:**

**(ii) A description of each storage pile, including the following:**

**(AA) The type of material in the pile.**

**(BB) Its moisture content.**

**(CC) The silt content.**

**(DD) The throughput.**

**(EE) The equipment used to load onto and load out of the storage piles.**

**REQUESTED INFORMATION:**

**[Section 3D(ii)] Information about Material Storage Piles follows below.**

**MATERIAL STORAGE PILES**

**AT MAIN SLAG PROCESSING**

1) +10" Oversize

type of material	lumps of slag or iron
moisture content	too large to test *
silt content	too large to test*
throughput	not processed thru plant sent to Ball Drop
to pile	from grizzly screen
from pile	FEL (front end loader)

2) 10" x 6" "A" Scrap

type of material	10" x 6" metallic
moisture content	too large to test*
silt content	too large to test*
throughput	5 tph
to pile	from screen
from pile	FEL (front end loader)

3) 6" x 3" "A" Scrap

type of material	6" x 3" metallic
moisture content	0.1%
silt content	0.1% passing 200 mesh
throughput	9 tph
to pile	from screen
from pile	FEL (front end loader)

4) 3" x 1/2" "B" Mix

type of material	3" x 1/2" metallic/ slag mixture
moisture content	0.7%
silt content	0.3% passing 200 mesh
throughput	170 tph
to pile	from conveyor
from pile	FEL (front end loader)

\* Items 1, 2 and 3 are initially screened together. They are subsequently screened into the sizes shown with three (3) being the "passing" fraction. All three should be considered identical for moisture and silt content.

**MATERIAL STORAGE PILES**

**AT MAIN SLAG PROCESSING**

5) 3" x 3/8" "B" Slag

type of material	3"x3/8"slag
moisture content	0.7% moisture
silt content	0.3% passing 200 mesh
throughput	28 tph
to pile	from conveyor
from pile	FEL (front end loader)

6) 1/2" x 1/4" "B" Scrap

type of material	1/2"x 1/4"metallic
moisture content	1.0% moisture
silt content	0.1% passing 200 mesh
throughput	17 tph
to pile	from conveyor
from pile	FEL (front end loader)

7) 1/2" x 0" "B" Slag

type of material	1/2" x 0" metallic/slag mix
moisture content	0.8%
silt content	0.2% passing 200 mesh
throughput	86 tph
to pile	from conveyor
from pile	FEL (front end loader)

8) 3/8" x 0" "C" Scrap

type of material	3/8" x 0" metallic
moisture content	3.8%
silt content	7.2% passing 200 mesh
throughput	43 tph
to pile	from conveyor
from pile	FEL (front end loader)

## FUGITIVE EMISSION CONTROL PLAN

---

### MATERIAL STORAGE PILES

#### AT MAIN SLAG PROCESSING

##### 9) 3/8" x 0" "C" Slag

type of material	3/8"x 0"metallic
moisture content	3.8%
silt content	8.5% passing 200 mesh
throughput	75 tph
to pile	from conveyor
from pile	FEL (front end loader)

##### 10) 1/4" x 0" ."C" Scrap

type of material	1/4" x 0" metallic
moisture content	3.4%
silt content	16.4% passing 200 mesh
throughput	not produced
to pile	from conveyor
from pile	FEL (front end loader)

##### 11) Crushed Slag

type of material	3" x 0" slag
moisture content	0.0% moisture
silt content	0.1% passing 200 mesh
throughput	63 tph
to pile	from conveyor
from pile	FEL (front end loader)

It should be noted that only the materials in Piles 8, 9 and 10, that is the "C" Size materials have a silt content above 0.5%. Therefore, they are the only materials in this list which meet the definition of "material" as stated in 326 IAC 6-1-11.1(c)(11) and are subject to fugitive emission regulations.

## FUGITIVE EMISSION CONTROL PLAN

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### MATERIAL STORAGE PILES AT IRON CRUSHING

1) +6" Iron

type of material	+6" metallic
moisture content	0.1%
silt content	0.0% passing 200 mesh
throughput	8 tph
to pile	from screen
from pile	FEL (front end loader)

2) 6" x 1/4" Iron

type of material	6" x 1/4" metallic
moisture content	0.1%
silt content	0.0% passing 200 mesh
throughput	56 tph
to pile	from conveyor
from pile	FEL (front end loader)

3) 1/4" x 0" Iron

type of material	1/4" x 0" metallic
moisture content	4.5%
silt content	7.4% passing 200 mesh
throughput	47 tph
to pile	from conveyor
from pile	FEL (front end loader)

4) 1/4" x 0" "C" Slag

type of material	1/4" x 0" slag
moisture content	1.6%
silt content	0.4% passing 200 mesh
throughput	4 tph
to pile	from conveyor
from pile	FEL (front end loader)

It should be noted that only the materials in Piles 3 and 4 indicate a silt content above or close to 0.5%. Therefore, these are the only materials in this list which meet the definition of "material" as stated in 326 IAC 6-1-11.1( c )(11) and are subject to fugitive emission regulations.

## FUGITIVE EMISSION CONTROL PLAN

---

### **MATERIAL PROCESSING FACILITIES**

#### **APPLICABLE REGULATIONS FOR PLAN CONTENT:**

326 IAC 6.8-10-4-3(D)(iii) [Control plans] as follows:

Section (3) The Control Plan shall contain the following information:

(D) A full description of the facilities on the map, including the following information, where applicable:

(iii) A complete description of the material processing facilities on the plant property, including the following:

(AA) A material flow diagram of the processing lines.

(BB) The rated capacity of each piece of equipment.

(CC) The existing control equipment and their efficiencies, including the process equipment served.

REQUESTED INFORMATION:

[Section 3D(iii)] MATERIAL PROCESSING FACILITIES INDEX (DESCRIPTION FOLLOWS)

1. Main Slag Processing
2. Iron Crushing
3. Tundish Lancing
4. Slag Pits at #1 BOP Shop and #2 Q-BOP Shop
5. Ball Drop
6. Surface Conditioning

### **MATERIAL PROCESSING FACILITIES**

#### **1. MAIN SLAG PROCESSING**

##### **DESCRIPTION:**

This area processes slag from steelmaking operations. Slag is delivered by truck to a feed hopper station. The material travels across a grizzly which removes + 10" material. This material is sent to the ball drop area for further processing. The remaining material is elevated by conveyor belt to the screening station. The screening station consists of two multi-deck screens operating in parallel. The screens separate the material into three sizes: "A" - +3", "B" - 3" x 3/8", and "C" - 3/8" x 0". It is important to limit the moisture content of this material for proper screening. The sized material travels on a series of conveyor belts equipped with magnetic head pulleys which separate each size into magnetic material (scrap) and non-magnetic material (slag). The "B" material is rescreened to further eliminate fine material. The finished products are discharged to stock piles. When a sufficient amount is accumulated it is loaded into trucks for delivery to be reused in production operations.

See Map of Facilities included; see Drawing No. 5041-1, Slag Processing - Equipment Plan

##### **EQUIPMENT CAPACITIES:**

- |                              |             |
|------------------------------|-------------|
| 1) Simplicity Feeder         | 600 tph     |
| 2) 6' x 20' - 3 deck screens | 300 tph ea. |
| 3) 6' x 16' - 2 deck screens | 300 tph     |
| 4) 4' x 16' - 2 deck screens | 100 tph     |
| 5) 5' x 10' - 1 deck screen  | 150 tph     |
| 6) Jaw crusher               | 125 tph     |

## FUGITIVE EMISSION CONTROL PLAN

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### **APPLICABLE REGULATIONS:**

326 IAC 6.8-8-5(3)(F)(i) as follows:

(F) Waste disposal and recycling practices of iron and steel scrap and other metallic scrap shall comply with the following:

(i) Provide a description of the routine activities involving disposal and reclamation of iron and steel. The visible emissions from such activities shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9. The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.

### **EMISSION LIMIT:**

20% opacity - 3 minute average

## **MATERIAL PROCESSING FACILITIES**

### **2. IRON CRUSHING**

#### **DESCRIPTION:**

The Iron Crushing Operation processes high iron content slags and spills from steelmaking operations so that the material is of acceptable size to be recycled into the steelmaking operation. This material consists mostly of iron and steel with a small amount of slag mixed into it. This operation is housed in a building. The Iron Crushing operation consists of the following steps. Material is recovered from outdoor storage piles by front end loaders and dumped into a feed hopper inside the building. The material passes over a grizzly to separate oversize material. The oversize material passes through a jaw crusher which achieves primary size reduction, then rejoins the balance of the feed material. The material then passes through a screening station. Oversize material is separated and piled. Material which passes through the first screening station, is conveyed to a hammermill and then to a second screening station. Larger material from this screening station is conveyed across a magnetic head pulley. The magnetic (metallic) portion of the material is stockpiled outdoors by conveyor. This is the primary finished product of the process, 6" x 1/4" Iron. Material which is not magnetically separated is returned to the hammermill for further processing. The material which passes through the second screening station is magnetically separated and stockpiled indoors as 1/4" x 0" Iron (metallic) or 1/4" x 0 11 slag. The oversize material from the first screening operation is removed to outdoor storage piles. All of this material is +6" in size and has been screened so that it contains no dust. The outdoor piles are managed by a crane equipped with an electromagnet. The crane uses an Iron Screening Grate to further separate the material into 6" x 8" and +8" sizes. Oversize material is returned to the initial feed hopper for further crushing. This process is repeated until all of the material is an acceptable maximum size for recycling.

See Map of Facilities included; see Drawing No. 5041-3, Iron Crushing - Equipment Plan

#### **EQUIPMENT CAPACITY:**

The capacities of the equipment in this operation are as follow:

1) Simplicity Grizzly Feeder	600 tph
2) A-C Jaw Crusher	150 tph
3) Simplicity 6'x20'-3 deck screens	250 tph
4) Simplicity 5'x16'-2 deck screens	150 tph
5) Pennsylvania Hammermill	75 tph
6) Jaw Crusher	not installed

## FUGITIVE EMISSION CONTROL PLAN

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7) Iron Screening Grate 12.5 tph

**APPLICABLE REGULATIONS:**

326 IAC 6.8-8-5(3)(F)(i) as follows:

*(F) Waste disposal and recycling practices of iron and steel scrap and other metallic scrap shall comply with the following:*

*(i) Provide a description of the routine activities involving disposal and reclamation of iron and steel. The visible emissions from such activities shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9. The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

**EMISSION LIMIT:**

20% opacity - 3 minute average

### MATERIAL PROCESSING FACILITIES

#### 3. TUNDISH LANCING

**DESCRIPTION:**

Tube City IMS is responsible for recycling of the skulls which form in the tundishes during steel casting operations. Skulls are solid masses of steel weighing several tons. To be recycled they must be reduced to pieces of approximately 24 inches or less. This reduction is done in stages. Lancing is the first step. In the lancing step, each Tundish skull has notches cut in several places. The lancing is done using conventional oxygen lances. It is followed by Ball Drop to break the pieces and delivered to Melt Shop. From a regulatory viewpoint, this operation is covered by both 326 IAC 6-1-10.1 and 11.1. Lancing operations are specifically listed in 10.1(p)(3)(F)(iii). As presently practiced the operation also meets the definition of "fugitive particulate matter" under 11.1(b)(9). The allowable limit in both cases is 20% opacity on a three (3) minute average.

**EQUIPMENT CAPACITY:**

(3) Lancing Stations

**APPLICABLE REGULATIONS:**

326 IAC 6.8-8-5(3)(F)(i) as follows:

*(F) Waste disposal and recycling practices of iron and steel scrap and other metallic scrap shall comply with the following:*

*(i) Provide a description of the routine activities involving disposal and reclamation of iron and steel. The visible emissions from such activities shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9. The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

Also, 326 IAC 6.8-10-2(9) and 6.8-10-(3)(9) as follows:

Section (2) The following definitions apply throughout this rule:

*(9) "Fugitive particulate matter" means any particulate matter emitted into the atmosphere other than through a stack.*

Also, 326 IAC 6.8-10-3(9)

Section (3) The following are particulate matter emission limitations:

*(9) Any facility or operation not specified in this subsection shall meet a twenty percent (20%), three (3) minute opacity standard. Compliance with this limitation shall be*

## FUGITIVE EMISSION CONTROL PLAN

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*determined by 40 CFR 60, Appendix A, Method 9\*\*\* except that the opacity standard shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals. Compliance of any operation lasting less than three (3) minutes shall be determined as an average of consecutive observations recorded in fifteen (15) second intervals for the duration of the operation.*

### **EMISSION LIMIT:**

20% opacity - 3 minute average

## **MATERIAL PROCESSING FACILITIES**

### **4. SLAG PITS #1 BOP SHOP AND #2 Q-BOP SHOP**

#### **DESCRIPTION:**

Molten slag from steelmaking is collected by US Steel in slag pots. Tube City IMS is responsible for recovering these pots and transports them using special rubber-tired vehicles to the adjacent slag pot operations where they are dumped into the pits. In the pits the molten slag is allowed to cool and solidify. Water sprays are used to enhance cooling and to control dusting. Once solidified the slag, which is still quite hot, is removed from the pits for further cooling by front end loaders. When the slag has cooled sufficiently to be safely handled in the main slag processing plant conveyor system, it is loaded into trucks by front end loaders.

#### **EQUIPMENT CAPACITY:**

The capacities of the equipment in this operation are as follows:

Front End Loaders	12 cu. yd. bucket
Trucks	30 or 50 ton

#### **APPLICABLE REGULATIONS:**

*326 IAC 6-1-11.1(d)(3)(c)(i) and (ii) and (d)(9) as follows:*

*(d) The following are particulate matter emission limitations:*

*(3) Material transfer limits shall be as follows:*

*(C) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:*

*(i) 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.*

*(ii) 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 subdivision (9).*

*Also 326 IAC 6-1-11.1(d)(9) as follows:*

*(d)(9) Any facility or operation not specified in this subsection shall meet a twenty percent (20%), three (3) minute opacity standard. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 9 except that the opacity standard shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals. Compliance of any operation lasting less than three (3) minutes shall be determined as an average of consecutive observations recorded at fifteen (15) second intervals for the duration of the operation.*

#### **EMISSION LIMITS:**

From pots into pits - 20% opacity - six minute average.

From pits into trucks - 20% opacity - three minute average.

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### MATERIAL PROCESSING FACILITIES

#### 5. BALL DROP

##### DESCRIPTION:

The function of the Ball Drop facility is to reduce the size of materials that are too large to be processed through conventional screening/crushing equipment. The process consists of dropping a large steel ball on the material to crack and break it. The process continues until the desired degree of size reduction is achieved. Material is delivered to the site by truck. Cranes fitted with electro-magnets are used to lift and drop the steel balls. The cranes are also used to load magnetic material into trucks for shipment to the Melt Shop.

##### EQUIPMENT CAPACITY:

(7) Ball Drop Stations

##### APPLICABLE REGULATIONS:

326 IAC 6.8-8-5(3)(F)(i) as follows:

*(F) Waste disposal and recycling practices of iron and steel scrap and other metallic scrap shall comply with the following:*

*(i) Provide a description of the routine activities involving disposal and reclamation of iron and steel. The visible emissions from such activities shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9. The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

##### EMISSION LIMIT:

20% opacity - 3 minute average

### MATERIAL PROCESSING FACILITIES

#### 6. SURFACE CONDITIONING

##### DESCRIPTION:

The surface conditioning facility removes surface defects from steel slabs before they are rolled to finished size. The conditioning equipment consists of a scarfing torch mounted on a robotic arm. The slab being conditioned is carried on a rail mounted car. The operation is housed in an enclosed area with a capture system connected to a dust collection system. The dust is collected in an adjacent baghouse. A series of screw conveyors carries the dust to tote bins. The tote bins are removed by others. The material removed by the scarfing torch (swarf) falls into a water-filled trench where it solidifies. Periodically, it is removed to a pile outside of the building. This material consists of small pellets formed by cooling of the molten steel and contains no dust. Surface conditioning operations are not specifically covered under Section 6-1-10.1 of the regulations. A continuous compliance plan has been prepared for the associated baghouse. Surface conditioning is included in Section 6-1-11.1 because the dust collected in the baghouse falls under that regulation.

##### EQUIPMENT CAPACITY:

Baghouse 90,000 ACFM @ 150 degree F

##### APPLICABLE REGULATIONS:

326 IAC 5-1-2(2)(B) as follows:

## FUGITIVE EMISSION CONTROL PLAN

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*Section (2) Visible emissions from a source or facility shall not exceed any of the following limitations, and unless otherwise stated, all visible emissions shall be observed in accordance with the procedures set forth in Section 4 of this rule:*

*(2) Sources or facilities of visible emissions located in the areas listed in section 1 (c) of this rule shall meet the following limitations:*

*(B) Visible emissions from a facility located in Lake County shall not exceed an average of twenty percent (20%) opacity in twenty-four (24) consecutive readings unless otherwise specified in 326 IAC 6-1-10.1. This visible emission limit shall supercede (sic) the visible emissions limit contained in clause (A).*

*Also 326 IAC 6-1-11.1(c)(7) as follows:*

*(c) The following definitions apply throughout this section:*

*(7) "Dust handling equipment" means the equipment used to handle dust collected by control equipment, such as, but not limited to, a conveyor used to transfer dust from a control equipment hopper to a temporary storage container. A truck is an example of a temporary storage container. Both a conveyor and temporary storage container, in this case, are dust handling equipment.*

*Also 326 IAC 6-1-11.1(d)(8) as follows:*

*(d) The following are particulate emission limitations:*

*(8) Dust handling equipment. The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%). Compliance with this standard shall be determined by 40 CFR 60, Appendix A, Method 9.*

### **EMISSION LIMIT:**

Stack - 20% opacity - 3 minute average

Dust handling equipment - 10% opacity - 3 minute average

### **MATERIAL TRANSFER & INPLANT TRANSPORTATION**

#### **APPLICABLE REGULATIONS FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3(D)(iv) [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(D) A full description of the facilities on the map, including the following information, where applicable:**

**(iv) A complete description of the material transfer, inplant transportation, and dust handling equipment. Material transfer operations shall include, at a minimum, those operations contained in section 2(13) of this rule.**

**Also definition from 326 IAC 6.8-10-2(10)**

**(10) "Inplant transportation" means transportation of material on plant transportation routes, such as railroads and plant roads, in equipment such as trucks, railroad cars, front end loaders, conveyors, and skip hoists. The inplant transportation might be from:**

**(A) one (1) process to another;**

**(B) process equipment to waste disposal and reclamation sites; or**

**(C) one (1) storage pile to another.**

**This includes, for example, hauling of slag from slag pits to the slag processing facility on the plant property.**

## FUGITIVE EMISSION CONTROL PLAN

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**Also definition from 326 IAC 6.8-10-2(13)**

**(13) "Material transfer" means the transfer of material:**

**(A) from process equipment onto the ground;**

**(B) from the ground into hauling equipment;**

**(C) from hauling equipment onto a storage pile;**

**(D) from a storage pile into hauling equipment for transport; or**

**(E) into an initial hopper for further processing.**

**Dumping of slag from blast furnaces or basic oxygen furnaces into the slag pits and subsequent transfer to the hauling vehicle and initial hopper at the slag processing facility is an example of material transfer.**

REQUESTED INFORMATION:

[Section 3D(iv)] MATERIAL TRANSFER & INPLANT TRANSPORTATION  
INDEX (DESCRIPTION FOLLOWS)

MATERIAL TRANSFER INDEX

1. Main Slag Processing
2. Iron Crushing
3. Ball Drop
4. Slag Pits for #1 BOP Shop and #2 Q-BOP Shop
5. Surface Conditioning

### **MATERIAL TRANSFER & INPLANT TRANSPORTATION**

#### **1. MAIN SLAG PROCESSING**

##### **DESCRIPTION:**

All materials in the Main Slag Processing area are recovered from stockpiles by front end loaders and loaded into trucks for delivery. The trucks carrying finished materials are operated by US Steel and the materials become their responsibility at that point. Material recovered from the crusher is loaded into Tube City IMS trucks and is dumped into the system feed hopper for reprocessing. Material recovered from the grizzly is sent by Tube City IMS truck to the Ball Drop area for further size reduction. The primary feed to the system is Tube City IMS trucks which are loaded in the slag pot dumping stations.

##### **OPERATIONS COVERED:**

The following facets of this operation fall under the classification of material transfer:

- 1) Loading of "C" Slag into trucks
- 2) Loading of "C" Scrap into trucks
- 3) Loading of unscreened material into trucks
- 4) Dumping of trucks into the feed hopper

The following facets of this operation fall under the classification of in-plant transportation:

- 1) Trucking of crushed slag from the crusher to the feed hopper.
- 2) Trucking of unscreened material to the Ball Drop area.

As shown in the data presented in the section on Material Storage Piles, only the above materials meet the definition of a "material" under the fugitive emission regulations.

## FUGITIVE EMISSION CONTROL PLAN

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### **APPLICABLE REGULATIONS:**

326 IAC 6.8-10-2(11) and 6.8-10-(3)(3)(B) and 6.8-10-(3)(6)(A) as follows:

Section (2) The following definitions apply throughout this rule:

(11) "Material" means raw process material, byproduct, intermediate product, waste product, final product, and dust collected by control equipment, having proportion of loose, dry dust equal to or greater than five-tenths percent (0.5%) as measured by the ASTM C-136 method\*, having potential to emit particulate emissions when disturbed by transfer, processing, and transportation activities defined in this rule. Material may include the following: (E) Slag.

326 IAC 6.8-10-3(3)(B)

Section (3) The following are particulate matter emission limitations:

(3) Material transfer limits shall be as follows:

(B) 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. This includes material transfer to the initial hopper of a material processing facility as defined in section 2 of this rule or material transfer for transportation within or outside the source property including, but not limited to, the following:

326 IAC 6.8-10-3(6)(A)

Section (3) The following are particulate matter emission limitations:

(6) Material transportation activities shall include the following:

(A) There shall be a zero percent (0%) frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the inplant transportation requirement. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car.

### **EMISSION LIMITS:**

Material Transfer - 10% opacity - 3 minute average, or duration of operation

In-plant Transportation - 0% opacity

## **MATERIAL TRANSFER & INPLANT TRANSPORTATION**

### **2. IRON CRUSHING**

#### **DESCRIPTION:**

Material is delivered to the Iron Crushing Operation in trucks and dumped in piles outside of the building. All intermediate moves during processing are done by front end loader. Large pieces of iron pass through the process several times during which they are reduced in size by a crusher, and then screened. Since they are screened last, this material is dust free. Loading of finished products into trucks is done by front end loader including the 1/4" x 0" slag and 1/4" x 0" iron.

#### **OPERATIONS COVERED:**

The following facets of this operation fall under the classification of material transfer:

- 1) Dumping of new material on-site.
- 2) Loading of new material into feed hopper by front end loader.

## FUGITIVE EMISSION CONTROL PLAN

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3) Loading of trucks by front end loader with 1/4" x 0" slag and iron. As shown in the data presented in the section on Material Storage Piles, only the above materials meet the definition of a "material" under the fugitive emission regulations.

### **APPLICABLE REGULATIONS:**

326 IAC 6.8-10-2(11)(E) and 6.8-10-(3)(3)(B) and (3)(6)(A) as follows:

Section (2) The following definitions apply throughout this rule:

(11) "Material" means raw process material, byproduct, intermediate product, waste product, final product, and dust collected by control equipment, having proportion of loose, dry dust equal to or greater than five-tenths percent (0.5%) as measured by the ASTM C-136 method\*, having potential to emit particulate emissions when disturbed by transfer, processing, and transportation activities defined in this rule. Material may include the following:(E) Slag

326 IAC 6.8-10-3(3)(B)

(3)The following are particulate matter emission limitations:

(3) Material transfer limits shall be as follows:

(B) 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. This includes material transfer to the initial hopper of a material processing facility as defined in section 2 of this rule or material transfer for transportation within or outside the source property including, but not limited to, the following:

Compliance with any operation lasting less than three (3) minutes shall be determined as an average of consecutive observations recorded at fifteen (15) second intervals for the duration of the operation.

326 IAC 6.8-10-3(6)(A)

(3)The following are particulate matter emission limitations:

(6) Material transportation activities shall include the following:

(A) There shall be a zero percent (0%) frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the inplant transportation requirement. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car.

### **EMISSION LIMITS:**

Material Transfer - 10% opacity - 3 minute average, or duration of operation

Inplant Transportation - 0% opacity

## **MATERIAL TRANSFER & INPLANT TRANSPORTATION**

### **3. BALL DROP**

#### **DESCRIPTION:**

All material processed in the Ball Drop area is delivered and removed by truck. The trucks are loaded in two ways. Magnetic material is picked up by the electromagnets on

## FUGITIVE EMISSION CONTROL PLAN

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the cranes and loaded into trucks. Non-magnetic material is loaded into trucks by front end loader.

### **OPERATIONS COVERED:**

The following facets of this operation fall under the classification of material transfer:

- 1) Dumping of material to be processed from trucks.
- 2) Loading of material into trucks by electromagnet.
- 3) Loading of material into trucks by front end loader.

The following facets of this operation fall under the classification of inplant transportation:

- 1) Trucking of oversized materials from various points in the plant.
- 2) Trucking of metallic material to the iron crushing operation.
- 3) Trucking of material to the slag processing operation.

### **APPLICABLE REGULATIONS:**

326 IAC 6.8-10-2(11)(E) and 6.8-10-(3)(3)(B) and (3)(6)(A) as follows:

Section (2) The following definitions apply throughout this rule:

(11) "Material" means raw process material, byproduct, intermediate product, waste product, final product, and dust collected by control equipment, having proportion of loose, dry dust equal to or greater than five-tenths percent (0.5%) as measured by the ASTM C-136 method\*, having potential to emit particulate emissions when disturbed by transfer, processing, and transportation activities defined in this rule. Material may include the following:(E) Slag

326 IAC 6.8-10-3(3)(B)

(3)The following are particulate matter emission limitations:

(3) Material transfer limits shall be as follows:

(B) 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. This includes material transfer to the initial hopper of a material processing facility as defined in section 2 of this rule or material transfer for transportation within or outside the source property including, but not limited to, the following:

Compliance with any operation lasting less than three (3) minutes shall be determined as an average of consecutive observations recorded at fifteen (15) second intervals for the duration of the operation.

326 IAC 6.8-10-3(6)(A)

(3)The following are particulate matter emission limitations:

(6) Material transportation activities shall include the following:

(A) There shall be a zero percent (0%) frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the inplant transportation requirement. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car.

### **EMISSION LIMITS:**

Material Transfer - 10% opacity - 3 minute average, or duration of operation

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Inplant Transportation - 0% opacity

### **MATERIAL TRANSFER & INPLANT TRANSPORTATION**

#### **4. SLAG PITS FOR #1 BOP SHOP AND #2 Q-BOP SHOP**

##### **DESCRIPTION:**

Slag pots are picked up by special carrier vehicles and transported to the respective slag pits. The pots are dumped into the pits. The empty pots are returned to the steel shops for reuse. When the molten slag in the pits has cooled enough to solidify, it is removed from the pits by front end loader and stacked in an adjacent area to allow it to cool further. When cooled sufficiently for further processing, the slag is loaded into trucks by front end loaders for transport to the Main Slag Processing area.

##### **OPERATIONS COVERED:**

The following facets of this operation fall under the classification of material transfer:

- 1) Dumping of slag pots into pits
- 2) Piling of slag by front end loaders
- 3) Loading of trucks by front end loaders

The following facets of this operation fall under the classification of inplant transportation:

- 1) Hauling of slag pots to slag pits.
- 2) Trucking of slag to processing facility.

##### **APPLICABLE REGULATIONS:**

326 IAC 6.8-10-(3)(C)(i), and (C)(ii) and (d)(6)(A) and (d)(9) as follows:

Section (3) The following are particulate matter emission limitations:

(3) *Material transfer limits shall be as follows:*

(C) *Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:*

(i) *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.*

(ii) *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 subdivision (9).*

Also 326 IAC 6.8-10-(3)(6)(A)

(6) *Material transportation activities shall include the following:*

(A) *There shall be a zero percent (0%) frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the inplant transportation requirement. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car.*

Also 326 IAC 6.8-10-(3)(9)

(9) *Any facility or operation not specified in this section shall meet a twenty percent (20%), three (3) minute opacity standard. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 9, except that the opacity standard shall*

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*be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals. Compliance of any operation lasting less than three (3) minutes shall be determined as an average of consecutive observations recorded at fifteen (15) second intervals for the duration of the operation.*

### **EMISSION LIMITS:**

Pots to Pits - 20% opacity - 6 minute average  
Pits to Trucks - 20% opacity - 3 minute average  
Inplant Transportation - 0% opacity

## **MATERIAL TRANSFER & INPLANT TRANSPORTATION**

### **5. SURFACE CONDITIONING**

#### **DESCRIPTION:**

The Surface Conditioning operation includes a dust collection system with a baghouse. Dust collected in the baghouse is placed in totes.

#### **OPERATIONS COVERED:**

There are no activities in this operation that fall under the classification of material transfer.

The inplant transportation of the material is performed by others.

#### **APPLICABLE REGULATIONS:**

NONE. See the Continuous Compliance Plan

#### **EMISSION LIMITS:**

NOT APPLICABLE

## **OTHER MATERIAL PROCESSING FACILITIES**

### **APPLICABLE REGULATIONS FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3(D)(v) [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(D) A full description of the facilities on the map, including the following information, where applicable:**

**(v) A complete description of all other fugitive particulate matter emitting facilities not covered in this clause.**

#### **REQUESTED INFORMATION:**

[Section 3D(v)] There are no other fugitive particulate matter emitting facilities not covered in this clause.

## **PROPOSED CONTROL MEASURES AND PRACTICES**

### **APPLICABLE REGULATIONS FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3(E) [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

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**(E) The description of the proposed control measures and practices that the source will employ to achieve compliance with the emission limitations and data that prove its effectiveness.**

REQUESTED INFORMATION:

[Section 3(E)] PROPOSED CONTROL MEASURE INDEX (DESCRIPTION FOLLOWS)

1. Main Slag Processing
2. Iron Crushing
3. Ball Drop
4. Tundish Lancing
5. Slag Pits #1 BOP Shop and #2 Q-BOP Shop
6. Surface Conditioning
7. Roadways

### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **1. MAIN SLAG PROCESSING**

##### **DESCRIPTION:**

The material processed through this facility has a moisture content which helps in controlling the amount of fugitive emissions during processing. However, if the moisture level gets too high the material cannot be screened properly. Control measures in this area are based on the use of water sprays. These sprays are directed at the dust being emitted from specific points within the process. The purpose is to agglomerate the dust particles so they settle more quickly. The system also has sprays which can be used to wet the material when this can be done without interfering with the screening process.

The water distribution system is fitted with flow meters. The meters are checked weekly by the visual emissions observer. In this way he can correlate the flow rate to the effectiveness of the dust suppression system.

### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **2. IRON CRUSHING**

##### **DESCRIPTION:**

The material processed through this facility has a significant moisture content which helps in controlling the amount of fugitive emissions during processing. However, if the moisture level gets too high the material cannot be screened properly. Control measures in this area are based on the use of water sprays. These sprays are directed at the dust being emitted from specific points within the process. The purpose is to agglomerate the dust particles so they settle more quickly. The system also has sprays which can be used to wet the material when this can be done without interfering with the screening process.

The water distribution system is fitted with flow meters. The meters are checked weekly by the visual emission observer. In this way he can correlate the flow rate to the effectiveness of the dust suppression system.

## **FUGITIVE EMISSION CONTROL PLAN**

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### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **3. BALL DROP**

##### **DESCRIPTION:**

Dust suppression in the Ball Drop area will be accomplished by applying water to the material being processed. Because this operation is totally outdoors, conditions will vary widely. Operating personnel will be trained to recognize unacceptably high dust levels and will react by applying water using hoses.

### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **4. TUNDISH LANCING**

##### **DESCRIPTION:**

Tube City IMS relocated Tundish Lancing to the #4 Open Hearth Building to control emissions from operations. Since potential emissions are under roof, emissions are controlled and contained within the enclosure.

### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **5. ROADWAYS**

##### **DESCRIPTION:**

The roadways for which Tube City IMS is responsible are limited to those which are within their operating areas. All of these roads are unpaved. Dust control is accomplished through the service of a subcontractor who applies water using sprays mounted on tank trucks.

This program has been in place for over five years. Historically, Tube City IMS has learned that the use of dust suppressant chemicals does not benefit this process. The weight of the large vehicles used in their operations negates the agglomeration of fine particles which the chemicals application is designed to effect within the road surface.

### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **6. SLAG PITS #1 BOP SHOP AND #2 Q-BOP SHOP**

##### **DESCRIPTION:**

Visual readings of these activities are within the limits allowed in the regulations.

### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **6. SURFACE CONDITIONING**

##### **DESCRIPTION:**

Surface conditioning activities do not generate any fugitive emissions. All emissions are captured and processed through a baghouse. A detailed CCP for operation and maintenance of the baghouse has been prepared and is contained in this document.

### **PROPOSED CONTROL MEASURES AND PRACTICES**

#### **7. ROADWAYS**

##### **DESCRIPTION:**

## FUGITIVE EMISSION CONTROL PLAN

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Roadways are inspected daily and a determination is made if control measures are required to prevent emissions from roadways. Use of dust suppressant such as water or chemicals will be used as a control measure. Daily records are available describing whether control measures are employed and whether they are effective in controlling air emissions.

### **CONDITIONS WHICH PREVENT CONTROL** **APPLICABLE REGULATIONS FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-3(F) [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(F) A list of the conditions that will prevent control measures and practices from being applied and alternative control practices and measures that will achieve compliance with the emission limitations.**

REQUESTED INFORMATION:

[Section 3F] CONDITIONS WHICH PREVENT CONTROL INDEX (DESCRIPTION FOLLOWS)

#### CONDITIONS INDEX

1. Main Slag Processing
2. Iron Crushing
3. Ball Drop
4. Roadways

### **CONDITIONS WHICH PREVENT CONTROL**

#### **1. MAIN SLAG PROCESSING**

##### **DESCRIPTION:**

The moisture content of this material directly affects the amount of dust which it produces. Rainy weather will cause the material to hold more moisture; therefore less water will be needed to achieve control. The net effect will be a change in control practices, but no change in achieving compliance. The addition of water to the material during extremely cold weather may lead to icing of the material which will interfere with processing. It may also lead to icing on the equipment and work area which would be a safety hazard. For these reasons it may be necessary to curtail the use of water for dust control under these conditions. However, the propensity of the material to dust under these conditions is reduced. No problem in achieving compliance is anticipated.

### **CONDITIONS WHICH PREVENT CONTROL**

#### **2. IRON CRUSHING**

##### **DESCRIPTION:**

The moisture content of this material directly affects the amount of dust which it produces. Rainy weather will cause the material to hold more moisture; therefore less water will be needed to achieve control. The net effect will be a change in control practices, but no change in achieving compliance.

The addition of water to the material during extremely cold weather may lead to icing of the material which will interfere with processing. It may also lead to icing on the

## FUGITIVE EMISSION CONTROL PLAN

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equipment and work area which would be a safety hazard. For these reasons it may be necessary to curtail the use of water for dust control under these conditions. However, the propensity of the material to dust under these conditions is reduced. No problem in achieving compliance is anticipated.

### CONDITIONS WHICH PREVENT CONTROL

#### 3. BALL DROP

##### DESCRIPTION:

The moisture content of this material directly affects the amount of dust which it produces. Rainy weather will cause the material to hold more moisture; therefore less water will be needed to achieve control. The net effect will be a change in control practices, but no change in achieving compliance.

The addition of water to the material during extremely cold weather may lead to icing of the material which will interfere with processing. It may also lead to icing on the equipment and work area which would be a safety hazard. For these reasons it may be necessary to curtail the use of water for dust control under these conditions. However, the propensity of the material to dust under these conditions is reduced. No problem in achieving compliance is anticipated.

### CONDITIONS WHICH PREVENT CONTROL

#### 4. ROADWAYS

##### DESCRIPTION:

The moisture content of roadways directly affects the amount of dust which is produced. Rainy weather will cause the roads to hold more moisture; therefore less water will be needed to achieve control. The net effect will be a change in control practices, but no change in achieving compliance.

The application of water to the roadways during extremely cold weather may lead to icing of the roadways which would be a safety problem. It may also lead to icing on the equipment which would be a safety hazard. For these reasons it may be necessary to curtail the use of water for dust control under these conditions. However, the propensity of the roadways to dust under these conditions is reduced. No problem in achieving compliance is anticipated.

### PROPOSED SCHEDULE

#### APPLICABLE REGULATIONS FOR PLAN CONTENT:

**326 IAC 6.8-10-4-3(G) [Control plans] as follows:**

**Section (3) The Control Plan shall contain the following information:**

**(G) A schedule for achieving compliance with the provisions of the control plan.**

**The schedule shall specify the time required to:**

- (i) award necessary contracts; and**
- (ii) begin and complete construction and installation.**

**Final compliance shall be achieved no later than December 10, 1993.**

REQUESTED INFORMATION:

[Section 3(G)] PROPOSED SCHEDULE

## FUGITIVE EMISSION CONTROL PLAN

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None. Fugitive dust control measures as described have all been initiated and are on-going. The Plan was submitted coinciding with the compliance date of this Plan.

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

**326 IAC 6.8-10-4-4**

**Section (4) Control plans shall include the following:**

**(4) The source shall keep the following documentation to show compliance with each of its control measures and control practices:**

**(A) A map or diagram showing the location of all emission sources controlled, including the:**

- (i) location;**
- (ii) identification;**
- (iii) length; and**
- (iv) width of roadways.**

**(B) For each application of water or chemical solution to roadways, the following shall be recorded:**

- (i) The name and location of the roadway controlled.**
- (ii) Application rate.**
- (iii) The time of each application.**
- (iv) The width of each application.**
- (v) The identification of each method of application.**
- (vi) The total quantity of water or chemical used for each application.**
- (vii) For each application of chemical solution, the concentration and**

**identity of the chemical.**

- (viii) The material data safety sheets for each chemical.**

**(C) For application of physical or chemical control agents not covered by clause (B), the following:**

- (i) The name of the agent.**
- (ii) The location of application.**
- (iii) The application rate.**
- (iv) The total quantity of agent used.**
- (v) If diluted, the percent of concentration.**
- (vi) The material data safety sheets for each chemical.**

**(D) A log recording incidents when control measures were not used and a statement of explanation.**

**(E) Copies of all records required by this rule shall be submitted to IDEM within twenty (20) working days of a written request by IDEM.**

**(F) The records required under this subdivision shall be:**

- (i) kept and maintained for at least three (3) years; and**
- (ii) available for inspection and copying by IDEM representatives during working hours.**

- (G) A quarterly report shall be submitted to IDEM stating the following:**
- (i) The dates any required control measures were not implemented.**
  - (ii) A listing of those control measures.**
  - (iii) The reasons that the control measures were not implemented.**
  - (iv) Any corrective action taken.**

**REQUESTED INFORMATION:**

[Section 4(4)] See attached example for Control Measures Report and sample quarterly report cover page.

Tube City IMS is complying with the above regulation regarding record keeping and reporting concerning dust suppression measures for roadways under Tube City IMS control. Associated road maps are also provided.

## FUGITIVE EMISSION CONTROL PLAN

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To: Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, In 46206-6015

January 13, 2010

Re: Operating Permit No. T089-5630-00132  
Fugitive Emission Control Plan  
IMS Division, Tube City IMS  
At USS Gary Works  
Gary, In 46401

This report is submitted in accordance with the Lake County: Fugitive Particulate Matter Control Plan requirements specified in accordance with 326 IAC 6.8-10-4(4)(G) regarding submittal of quarterly reports. These requirements replace the previous requirements specified in 326 IAC 6-1-11.1(e)(4)(g) which is now repealed. IMS Division, Tube City IMS has implemented the required control measures at all locations for the fourth quarter ending December 31, 2009. Control measures for the dates listed on the attached charts were not implemented, as outlined in 326 IAC 6.8-10-4(4)(G) regarding conditions which prevent use of control measures and as specified in the IMS PM-10 Compliance Plans submitted on December 9, 1993.

If you have any questions or require additional information, please contact me at (219) 881-5700 or (219) 746-1282.

Sincerely

Justin D. Rich  
Tube City IMS – IMS Division  
Corporate Safety Manager

Attachments

Cc: M. Connolly  
D. Sampias  
USS Gary Works – Environmental Department

# FUGITIVE EMISSION CONTROL PLAN



IMS DIVISION, TUBE CITY IMS  
AT U.S. STEEL, GARY WORKS

CONTROL MEASURE REPORT  
[326 IAC 6.8-10-4(4) (G)]

LOCATION: MO-57 Slag Plant

Date Ending: \_\_\_\_\_

SUBMITTED BY: S. Kupsik

Date (must be completed each day) [4(G)(i)]	Control Measure Applied [4(D)]		Type of Control Measure (e.g. water spray, water truck, truck w/CaCl) [4(G)(ii)]	If no, reason NOT applied (e.g. weather, plant not operating) [4(G)(iii)]	Corrective Action Taken [4(G)(iv)]	Total Gallons Applied	Is Control Measure Effective?	
	Yes	No					Yes	No

## CONTINUOUS COMPLIANCE PLAN

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### TUBE CITY IMS AT US STEEL GARY INDIANA CONTINUOUS COMPLIANCE PLAN

#### INTRODUCTION

This Compliance Plan has been prepared to comply with Rule 8 under Article 6.8 of 326 IAC Lake County: Continuous Compliance Plan. The Plan covers the operations of Tube City IMS which occur within the facility listed as US Steel Gary. The regulations defining the required contents of this plan are listed as follows:

#### *326 IAC 6.8-8-2 [Documentation of operation and maintenance practices]*

##### *Sec. 2.*

*The continuous compliance plan CCP shall contain, for the facilities specified in section 1 of this rule, documentation of operation and maintenance practices of process operations and any particulate matter control equipment existing or required to be installed, replaced, or improved by 326 IAC 6.8-7 that are essential to maintaining compliance with the mass and opacity limits specified in 326 IAC 5-1, 326 IAC 6.8-2, and 326 IAC 6.8-3.*

#### *326 IAC 6.8-8-3 [Required contents]*

##### *Sec. 3.*

*The continuous compliance plan (CCP) shall include the following:*

*(1) A list of the processes and facilities at the source.*

*(2) A list of the particulate matter control equipment associated with the processes and facilities listed in section 1 of this rule.*

*(3) The process operating parameters critical to continuous compliance with the applicable PM10 or TSP mass and opacity limits, including applicable specific requirements listed in section 5 of this rule.*

*(4) The particulate matter control equipment operating parameters critical to continuous compliance with the applicable PM10 or TSP mass and opacity including applicable requirements listed in section 6 of this rule.*

*(5) The specific monitoring, recording, and record keeping procedures for process and control equipment for each facility in the CCP specified in subdivisions (1) and (2).*

*(6) The procedure used to assure that adequate exhaust ventilation is maintained through each duct at facilities where emissions are captured by a collection hood and transported to a control device.*

#### *326 IAC 6.8-8-5 [Required information, procedures, or actions]*

## CONTINUOUS COMPLIANCE PLAN

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### *Sec. 5.*

*A source or facility to which section 1 of this rule applies, which belongs to any source category listed in this section, shall include the following information, applicable procedures, or commit to the following actions in its continuous compliance plan (CCP):*

*(3) Steel mill CCPs shall include, at a minimum, the following:*

*(F) Waste disposal and recycling practices of iron and steel scrap and other metallic scrap shall comply with the following:*

*(i) Provide a description of the routine activities involving disposal and reclamation of iron and steel. The visible emissions from such activities shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\* . The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

*(ii) Maintenance of process vessels, for example, pugh ladles, shall be performed in enclosed structures. The visible emissions from such structures shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\* . The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

*(iii) Emissions from all steel scrap burning or cutting and oxygen lancing operations shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\* . The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

*(G) Visible emission evaluation plans shall comply with the following:*

*(i) Within sixty (60) days of June 11, 1993, each steel mill shall submit a plan to conduct visible emissions evaluations per the approved test method or procedures to determine compliance with the applicable opacity standard. The plan shall specify the frequency of visible emissions evaluations at the operations included in clauses (A) through (F). The plan shall include charging, pushing, lids and oftakes, doors, standpipes, and gas collector mains at coke production operations and lime plants.*

*(ii) If the plan specifies that the duration of readings is less than one (1) hour per day at each facility, the plan shall include the basis for less frequent evaluations.*

*(iii) The department shall disapprove the plan if:*

*(AA) it does not include all facilities; or*

*(BB) the proposed duration and frequency will not provide for a reasonable assessment of compliance.*

*(iv) Upon approval of a steel mill's plan by the department, the visible emissions evaluations shall commence and the data submitted to the department within one (1) month of the end of the calendar quarter.*

*(v) The plan may be revised with department approval at any time.*

## CONTINUOUS COMPLIANCE PLAN

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### *326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

#### *Sec. 6.*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

- (1) Startup, shutdown, and emergency shutdown procedures.*
- (2) Sources shall notify the department fifteen (15) days in advance of startup of either new control equipment or control equipment to which major modifications have been made.*
- (3) Manufacturer's recommended inspection procedures, preventive and corrective maintenance procedures, and safety devices and procedures, such as sensors, alarm systems, and bypass systems. If manufacturer's recommendations are not available, procedures shall be developed by the source.*
- (4) Contents of the operator's training program and the frequency with which the training is held.*
- (5) A list of spare parts available at the facility.*
- (6) A list of control equipment safety devices, for example:
  - (A) high temperature sensors and alarm systems;*
  - (B) exhaust gas stream bypass system; or*
  - (C) safety interlock system.**
- (7) Monitoring and recording devices or instruments, or both, to monitor and record control equipment operating parameters specified in section 3(4) of this rule.*

### *326 IAC 6.8-8-7 [Particulate matter control equipment operation, recording, and inspection procedure requirements]*

#### *Sec. 7.*

*Particulate matter control equipment operation, recording, and inspection procedure requirements shall be as follows:*

- (1) A continuous compliance plan (CCP) for a facility controlled with a baghouse shall include the recording, inspection, and maintenance procedures to be consistent with the requirements of section 2 of this rule such as the following:
  - (A) Operating parameters, such as the following:
    - (i) Pressure drop across the baghouse.*
    - (ii) Gas flow rate at baghouse inlet.*
    - (iii) Gas temperatures at inlet.***

## CONTINUOUS COMPLIANCE PLAN

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*A CCP shall identify the monitors and instrumentation and their location, accuracy, precision, and calibration frequency. A CCP shall also include a description of any visible emission evaluation program.*

*(B) Baghouse cleaning system. A complete description of the cleaning system, including such information as the following:*

- (i) Intensity.*
- (ii) Duration.*
- (iii) Frequency.*
- (iv) Method of activation.*

*(C) Baghouse inspection and maintenance schedule. The inspection schedule logs or records shall be available for inspection by the department for up to one (1) year after the date of inspection. The inspection shall include the activities and frequency of the activities. A source may request an alternative schedule based on manufacturer's recommendations or alternatives documented by the company. The revised schedule must be approved by the department.*

*Inspections shall include the following:*

*(i) Daily inspections shall include the following:*

- (AA) Pressure drop.*
- (BB) Fan amperage.*
- (CC) Cleaning cycle.*
- (DD) Compressed air on pulse jet baghouses for values outside of the operating ranges.*
- (EE) Dust discharge equipment for proper operation.*
- (FF) General check for abnormal audible and visual conditions.*

*(ii) Weekly inspections of the following:*

- (AA) Moving parts on discharge system.*
- (BB) Bypass and isolation damper operation.*
- (CC) Bag tension.*
- (DD) Compressed air lines, oilers, and filters.*
- (EE) Manometer lines.*
- (FF) Temperature indicating equipment.*
- (GG) Bag cleaning sequence.*
- (HH) Drive components on fans.*

*(iii) Monthly inspections of the following:*

- (AA) Bag seating condition.*
- (BB) Moving parts on shaker baghouses.*
- (CC) Fan corrosion and blade wear.*
- (DD) Hoses and clamps.*
- (EE) Bags for leaks and holes.*
- (FF) Bag housing for corrosion.*

*(iv) Quarterly inspections of the following:*

- (AA) Bags.*
- (BB) Ducts for dust build-up.*

## CONTINUOUS COMPLIANCE PLAN

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- (CC) Damper valves for proper setting.*
- (DD) Door gaskets.*
- (EE) Baffle plate for wear.*
- (v) Annual inspection of the following:*
  - (AA) Welds and bolts.*
  - (BB) Hoppers for wear.*
  - (CC) Cleaning parts for wear.*

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

#### ***326 IAC 6.8-8-2 [Documentation of operation and maintenance practices]***

***The continuous compliance plan CCP shall contain, for the facilities specified in section 1 of this rule, documentation of operation and maintenance practices of process operations and any particulate matter control equipment existing or required to be installed, replaced, or improved by 326 IAC 6.8-7 that are essential to maintaining compliance with the mass and opacity limits specified in 326 IAC 5-1, 326 IAC 6.8-2, and 326 IAC 6.8-3.***

### **REQUESTED INFORMATION**

Operating practices to control emissions consist of the addition of water to control dusting or on limited cases the use of a baghouse. A detailed discussion of these practices on an operation by operation basis is included in the Fugitive Emissions Control Plan.

## **CONTINUOUS COMPLIANCE PLAN**

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

*326 IAC 6.8-8-3 [Required contents]*

*The continuous compliance plan (CCP) shall include the following:*

*(1) A list of the processes and facilities at the source.*

### **REQUESTED INFORMATION**

A detailed discussion of the processes is included in the Fugitive Emissions Control Plan.

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

*326 IAC 6.8-8-3 [Required contents]*

*The continuous compliance plan (CCP) shall include the following:*

*(2) A list of the particulate matter control equipment associated with the processes and facilities listed in section 1 of this rule.*

### **REQUESTED INFORMATION**

A detailed discussion of the processes and control equipment is included in the Fugitive Emissions Control Plan.

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

*326 IAC 6.8-8-3 [Required contents]*

*The continuous compliance plan (CCP) shall include the following:*

*(3) The process operating parameters critical to continuous compliance with the applicable PM10 or TSP mass and opacity limits, including applicable specific requirements listed in section 5 of this rule.*

### REQUESTED INFORMATION

Baghouse is over sized therefore no parameters affect continuous compliance.

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

*326 IAC 6.8-8-3 [Required contents]*

*The continuous compliance plan (CCP) shall include the following:*

*(4) The particulate matter control equipment operating parameters critical to continuous compliance with the applicable PM10 or TSP mass and opacity including applicable requirements listed in section 6 of this rule.*

### **REQUESTED INFORMATION**

To ensure proper operation, baghouse air pressure must be maintained at 80 psi minimum not to exceed 130 psi.

In the event that an interruption in air supply should occur, Tube City IMS will shut down until air supply is restored.

The pressure drop across the baghouse, that is from the inlet and outlet ducts, also called the differential pressure photohelic, located at the control cabinet, should remain in the 3 psig to 10 psig range for the baghouse to be properly operating.

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

*326 IAC 6.8-8-3 [Required contents]*

*The continuous compliance plan (CCP) shall include the following:*

*(5) The specific monitoring, recording, and record keeping procedures for process and control equipment for each facility in the CCP specified in subdivisions (1) and (2).*

### **REQUESTED INFORMATION**

None of the Tube City IMS operations include any monitoring or recording devices for emissions. The CCP for the baghouse includes monitoring and recording of operating parameters and maintenance activity. Please refer to that section for details.

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

#### ***326 IAC 6.8-8-3 [Required contents]***

*The continuous compliance plan (CCP) shall include the following:*

*(6) The procedure used to assure that adequate exhaust ventilation is maintained through each duct at facilities where emissions are captured by a collection hood and transported to a control device.*

### **REQUESTED INFORMATION**

The only exhaust ductwork in the Tube City IMS facilities is to be found in the baghouse at the Scarfing Facility (surface conditioning) that is utilized in removing imperfections from the surface of steel slabs. By monitoring fan amps and the Photohelic gauge on a daily basis, any plugging of the ductwork can be detected. Additionally the CCP includes an annual inspection of the ductwork to determine whether there is a build up of solids.

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

*326 IAC 6.8-8-5 [Required information, procedures, or actions]*

*A source or facility to which section 1 of this rule applies, which belongs to any source category listed in this section, shall include the following information, applicable procedures, or commit to the following actions in its continuous compliance plan (CCP):*

*(3) Steel mill CCPs shall include, at a minimum, the following:*

*(F) Waste disposal and recycling practices of iron and steel scrap and other metallic scrap shall comply with the following:*

*(i) Provide a description of the routine activities involving disposal and reclamation of iron and steel. The visible emissions from such activities shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\* . The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

*(ii) Maintenance of process vessels, for example, pugh ladles, shall be performed in enclosed structures. The visible emissions from such structures shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\* . The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

*(iii) Emissions from all steel scrap burning or cutting and oxygen lancing operations shall not exceed twenty percent (20%) opacity on a three (3) minute average as measured by 40 CFR 60, Appendix A, Method 9\* . The opacity shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals.*

### REQUESTED INFORMATION

Tube City IMS will comply with these requirements

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

*326 IAC 6.8-8-5 [Required information, procedures, or actions]*

*A source or facility to which section 1 of this rule applies, which belongs to any source category listed in this section, shall include the following information, applicable procedures, or commit to the following actions in its continuous compliance plan (CCP):*

*(3) Steel mill CCPs shall include, at a minimum, the following:*

*(G) Visible emission evaluation plans shall comply with the following:*

*(i) Within sixty (60) days of June 11, 1993, each steel mill shall submit a plan to conduct visible emissions evaluations per the approved test method or procedures to determine compliance with the applicable opacity standard. The plan shall specify the frequency of visible emissions evaluations at the operations included in clauses (A) through (F). The plan shall include charging, pushing, lids and oftakes, doors, standpipes, and gas collector mains at coke production operations and lime plants.*

*(ii) If the plan specifies that the duration of readings is less than one (1) hour per day at each facility, the plan shall include the basis for less frequent evaluations.*

*(iii) The department shall disapprove the plan if:*

*(AA) it does not include all facilities; or*

*(BB) the proposed duration and frequency will not provide for a reasonable assessment of compliance.*

*(iv) Upon approval of a steel mill's plan by the department, the visible emissions evaluations shall commence and the data submitted to the department within one (1) month of the end of the calendar quarter.*

*(v) The plan may be revised with department approval at any time.*

### REQUESTED INFORMATION

The Visible Emission Evaluation Plan was previously submitted to IDEM prior to the deadline.

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

*326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

*(1) Startup, shutdown, and emergency shutdown procedures.*

### REQUESTED INFORMATION

The systems which Tube City IMS uses to control particulate emissions either operate continuously or start and stop with the processing function which they service. The only process that requires specific procedures are the baghouse operation utilized during the cutting of scrap, and is described as follows:

#### Start Up Procedure

1. Verify that Motor Control Center is energized.
2. Turn on the compressed air.
3. Turn on "Baghouse" Control.
4. Verify that fan breaker is on at MCC
5. Verify that screw conveyor breakers are on at MCC
6. Check that the main stack damper is closed if not **CLOSE IT**. The fan will not start with the damper open
7. Push the fan start button
8. After the fan reaches nominal speed open the main damper.
9. Start both screw conveyors.

#### During Operation

1. Check the reading of the photohelic gauge
2. Check if the cleaning cycle is off line
3. Follow the closure of each module during the cleaning cycle.

#### Shut Down

1. Push the fan stop button
2. Turn the screw conveyors off.
3. Turn the fan breaker off (*for maintenance or repair*).
4. Turn the screw conveyor breakers off (*for maintenance or repair*).
5. Turn the baghouse control panel off (*for maintenance or repair*).
6. Close the main damper

## CONTINUOUS COMPLIANCE PLAN

7. Turn off all compressed air. (*for maintenance or repair*).

### **Emergency Shut Down**

1. Push the emergency stop button located on the face of the baghouse control panel.
2. Turn off the fan breakers.
3. Turn off the conveyor breakers.
4. If necessary turn off the MCC.

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

*326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

*(2) Sources shall notify the department fifteen (15) days in advance of startup of either new control equipment or control equipment to which major modifications have been made.*

### REQUESTED INFORMATION

Tube City IMS will comply with the above requirement.

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

*326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

*(3) Manufacturer's recommended inspection procedures, preventive and corrective maintenance procedures, and safety devices and procedures, such as sensors, alarm systems, and bypass systems. If manufacturer's recommendations are not available, procedures shall be developed by the source.*

### **REQUESTED INFORMATION**

These requirements are set forth for the scarfing baghouse in the specific CCP for that system.

See baghouse manufacturer's recommendations that can be found in the Appendix of the Tube City IMS at US Steel Gary PM10 Compliance Plan consisting of 1) Fugitive Emission Control Plan, 2) CCP and 3) VEEP.

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

*326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

*(4) Contents of the operator's training program and the frequency with which the training is held.*

### **REQUESTED INFORMATION**

The systems which are employed are not sophisticated, specialized training is not required. Operators are trained to operate the systems as part of their overall training program. The weekly system checks provide a cross check on operator effectiveness in operating these systems. If indicated, operators are retrained based on this feedback.

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

*326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

*(5) A list of spare parts available at the facility.*

### REQUESTED INFORMATION

<p style="text-align: center;"><b>RECOMMENDED SPARE PARTS FOR # 1515 JET III DUST COLLECTOR JOB NO.20-4547</b></p>
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<u>QUANTITY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
	N/A	Filters
	N/A	Cages
	N/A	Venturis
5	455935	Compression Fitting – 90 Deg.
20 ft	437704	Nylon Tubing
1	620325	Solenoid Valve
2	620326	Solenoid Valve Kit
1	620337	Diaphragm Valve
2	620528	Diaphragm Valve Kit
1	669400	Timer

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

*326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

*(6) A list of control equipment safety devices, for example:*

### REQUESTED INFORMATION

The control equipment which Tube City IMS operates does not have safety devices other than a safety interlock system on the Baghouse Damper which is a limit. This switch must be closed to start the Baghouse.

## CONTINUOUS COMPLIANCE PLAN

### **APPLICABLE REGULATION FOR PLAN CONTENT:**

*326 IAC 6.8-8-6 [Particulate matter control equipment operation and maintenance requirements]*

*This section concerns particulate matter control equipment operation and maintenance requirements. A continuous compliance plan shall provide that the following control equipment related information will be maintained at the source's property and will be available for inspection by department personnel:*

*(7) Monitoring and recording devices or instruments, or both, to monitor and record control equipment operating parameters specified in section 3(4) of this rule.*

### **REQUESTED INFORMATION**

Tube City IMS personnel routinely monitor and manually record readings of the following devices critical to scrap cutting while utilizing the baghouse.

1. Photohelic Pressure Gauge
2. Amp Meter

## CONTINUOUS COMPLIANCE PLAN

### APPLICABLE REGULATION FOR PLAN CONTENT:

**326 IAC 6.8-8-7 [Particulate matter control equipment operation, recording, and inspection procedure requirements]**

*Particulate matter control equipment operation, recording, and inspection procedure requirements shall be as follows:*

*(1) A continuous compliance plan (CCP) for a facility controlled with a baghouse shall include the recording, inspection, and maintenance procedures to be consistent with the requirements of section 2 of this rule such as the following:*

*(A) Operating parameters, such as the following:*

- (i) Pressure drop across the baghouse.*
- (ii) Gas flow rate at baghouse inlet.*
- (iii) Gas temperatures at inlet.*

*A CCP shall identify the monitors and instrumentation and their location, accuracy, precision, and calibration frequency. A CCP shall also include a description of any visible emission evaluation program.*

*(B) Baghouse cleaning system. A complete description of the cleaning system, including such information as the following:*

- (i) Intensity.*
- (ii) Duration.*
- (iii) Frequency.*
- (iv) Method of activation.*

*(C) Baghouse inspection and maintenance schedule. The inspection schedule logs or records shall be available for inspection by the department for up to one (1) year after the date of inspection. The inspection shall include the activities and frequency of the activities. A source may request an alternative schedule based on manufacturer's recommendations or alternatives documented by the company. The revised schedule must be approved by the department. Inspections shall include the following:*

*(i) Daily inspections shall include the following:*

- (AA) Pressure drop.*
  - (BB) Fan amperage.*
  - (CC) Cleaning cycle.*
  - (DD) Compressed air on pulse jet baghouses for values outside of the operating ranges.*
  - (EE) Dust discharge equipment for proper operation.*
  - (FF) General check for abnormal audible and visual conditions.*
- (ii) Weekly inspections of the following:*

## CONTINUOUS COMPLIANCE PLAN

- (AA) Moving parts on discharge system.*
- (BB) Bypass and isolation damper operation.*
- (CC) Bag tension.*
- (DD) Compressed air lines, oilers, and filters.*
- (EE) Manometer lines.*
- (FF) Temperature indicating equipment.*
- (GG) Bag cleaning sequence.*
- (HH) Drive components on fans.*
- (iii) Monthly inspections of the following:*
  - (AA) Bag seating condition.*
  - (BB) Moving parts on shaker baghouses.*
  - (CC) Fan corrosion and blade wear.*
  - (DD) Hoses and clamps.*
  - (EE) Bags for leaks and holes.*
  - (FF) Bag housing for corrosion.*
- (iv) Quarterly inspections of the following:*
  - (AA) Bags.*
  - (BB) Ducts for dust build-up.*
  - (CC) Damper valves for proper setting.*
  - (DD) Door gaskets.*
  - (EE) Baffle plate for wear.*
- (v) Annual inspection of the following:*
  - (AA) Welds and bolts.*
  - (BB) Hoppers for wear.*
  - (CC) Cleaning parts for wear.*

### **REQUESTED INFORMATION**

Tube City IMS operates a scarfing operation at US Steel Gary. The scarfing operation consists of a burning torch mounted on a robotic arm and two (2) cars which carry slabs past the torch. The purpose of this operation is to remove surface defects from the slab before it is rolled into sheets and coils. The process occurs within an enclosed room. The fume which is generated is captured in fixed hoods built into the roof of the enclosure. The particulate in the fume is collected in a baghouse.

The baghouse is a pulse jet type manufactured by Wheelabrator. It consists of six (6) modules. Each module has 225 bags in a 15 by 15 configuration. Each module has a solid state control board which sequences the jet pulse cleaning cycle. Each module is isolated for off-line cleaning by an outlet damper. The sequencing of the off-line cleaning is controlled by a PLC in the main control cabinet which also monitors the pressure drop in the system to assure proper operation. The control cabinet also houses a pressure gauge which displays pressure drop across the baghouse. The gauge has a range of ten inches of water with half inch gradations.

## **CONTINUOUS COMPLIANCE PLAN**

### **BAGHOUSE CONTINUOUS COMPLIANCE PLAN** *(continued)*

The cleaning sequence operates by isolating one module at a time by closing a damper in the outlet duct. The damper remains closed throughout the cleaning cycle as well as for a period of time after the cycle to allow the dust removed from the bags to settle in the hopper below. The settling time is adjustable within the PLC. Typically, this is set to one minute. The cleaning sequence cycle operates continuously. Within each module the cleaning sequence is controlled by a solid state timer with ten firing circuits. Each row of tubes is connected to one of the circuits. The timer operates a pneumatic valve which passes a pulse of high pressure air through the bags. This "pulse jet" cleaning action was originally patented by Wheelabrator. The typical pulse duration is .5 seconds with a delay of about 20 seconds between the pulse for each row. These parameters are adjustable on the circuit board.

Inspection and maintenance procedures for the baghouse are as follows. Maintenance intervals are based on the recommendations of the manufacturer. Inspection and maintenance procedures for the baghouse are one as shown in the Appendix.

## **CONTINUOUS COMPLIANCE PLAN**

### **BAGHOUSE CONTINUOUS COMPLIANCE PLAN**

#### DAILY

1. Record pressure drop across baghouse from the gauge in the main control panel, and fan amperage from motor starter. Note: All modules must be online when readings are taken.
2. Observe and record the function lights on the main control panel to assure that the cleaning sequence is operating.
3. Record plant air pressure used for cleaning system
4. Observe dust discharge for proper operation
5. Perform a general check for any abnormal visual or audible conditions.

#### WEEKLY

1. Check baghouse doors and compressed air system for leakage.
2. Check moving parts of discharge system for normal operation.
3. Check isolation damper operation and observe proper operation of cleaning sequence by listening to pulses

#### MONTHLY

1. Check fan bearings for lubrication
2. Observe discharge stack for signs of leakage (*EPA Method 22*)

#### SEMI-ANNUALLY

1. Observe LED on timer cards for proper sequence.
2. Check outlet ducts for dust build-up.

#### ANNUALLY

1. Check bags for seating condition and holes.
2. Check fan for wear or corrosion.
3. Check housings, hoppers and ducts for holes or leaks.

## **CONTINUOUS COMPLIANCE PLAN**

4. Check dampers for proper seating.
5. Check deflector plate for wear.
6. Check discharge system for wear.
7. Clean ductwork as necessary.

A permanent record shall be made listing the results of each of the above inspections. A log of all maintenance activity shall also be kept. These records shall be retained for a minimum of one year such that a complete maintenance history is available at all time. For instance, bag replacement records shall be retained until those bags are replaced.

## VISIBLE EMISSION EVALUATION PLAN

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### VISIBLE EMISSION EVALUATION PLAN FOR TUBE CITY IMS OPERATIONS AT US Steel Gary, IN

326 IAC 6.8-8-(5)(3)(G)

(3) Steel mill CCPs shall include, at a minimum, the following:

(G) Visible emission evaluation plans shall comply with the following:

(i) Within sixty (60) days of June 11, 1993, **each steel mill shall submit a plan to conduct visible emissions evaluations** per the approved test method or procedures to determine compliance with the applicable opacity standard. The plan shall specify the frequency of visible emissions evaluations at the operations included in clauses (A) through (F). The plan shall include charging, pushing, lids and offtakes, doors, standpipes, and gas collector mains at coke production operations and lime plants.

(ii) If the plan specifies that the duration of readings is less than one (1) hour per day at each facility, the plan shall include the basis for less frequent evaluations.

(iii) The department shall disapprove the plan if:

(AA) it does not include all facilities; or

(BB) the proposed duration and frequency will not provide for a reasonable assessment of compliance.

(iv) Upon approval of a steel mill's plan by the department, the visible emissions evaluations shall commence and the data submitted to the department within one (1) month of the end of the calendar quarter.

(v) The plan may be revised with department approval at any time.

This plan was prepared and submitted in accordance with revisions to the Indiana Clean Air Statutes as amended June 11, 1993 incorporating PM10 Standards. This plan deals with the visible emissions evaluations as required by 326 IAC 6.8-8-5(3)(G). Tube City IMS operates as an independent contractor within the US Steel Gary facilities. As such, Tube City IMS is submitting the plan covering its facilities directly to the Indiana Department of Environmental Management (IDEM) for review and approval.

Tube City IMS has operations at US Steel Gary to perform work under a contract with US Steel Gary to recycle iron and steel, by processing slag and kish from steel making operations. These processing facilities include slag processing; iron crushing, ball drop and tundish lancing. Each of these operations will be discussed below as well as current plans for achieving compliance and proposed plans for visible emissions evaluations.

The routine activities conducted by Tube City IMS involving the reclamation of iron and steel as stated above, will be subject to a 20% opacity on a three (3) minute measured by 40 CFR 60 Appendix "A", Method 9 [326 IAC 6.8-8-5(3)(F)] visible emission standards. Fugitive emissions from batch and continuous transfer, storage piles, truck loading, pot dumping and transportation related emissions are not a part of this plan, and are discussed in the fugitive emission plan.

A quarterly report demonstrating compliance with the visible emission plan and the PM10 standards will be submitted to IDEM within (1) month of the end of a calendar quarter. Actual visible emission records will be retained for one year.

## **VISIBLE EMISSION EVALUATION PLAN**

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### **METAL RECOVERY AND SLAG PROCESSING**

This area processes by product streams which are high in iron content. The goal of this process is to reduce the slag or iron bearing material in size so that it can be either reused in the iron making process or marketed and sold for other applications. Small amounts of metallic and nonmetallic fines are produced as a by-product of this operation. The process equipment consists of three screening stations and a crusher connected by belt conveyors and magnetic head pulleys to separate iron bearing materials from the nonmagnetic slag. Finished materials, classified by size and iron content, are either returned to the mill for use as feedstock in iron and steelmaking operations, or marketed and sold outside the mill. For emissions evaluation purposes, the slag plant will be treated as a source.

This facility is situated partially outdoors and partially in a vacated mill building which has small areas with roof intact but no walls. The roof provides weather protection for the equipment and material which must remain relatively dry for effective screening. For emissions evaluation purposes, the equipment will be treated as sources, the building plays no role in the control scheme. As stated above, continuous transfer, storage pile, and truck loading operations are covered by fugitive emission regulations.

The normal processing of these materials involves spraying water to cool the hot slag. The moisture introduced controls dusting. Visual emission observations occur on a regular basis to ensure compliance as stipulated in the regulations.

### **IRON CRUSHING**

This area processes by product streams which are high in iron content. The goal of this process is to reduce the iron bearing material to a minus six inch size so that it can be reused in the iron-making process. Small amounts of metallic and nonmetallic fines are produced as a by-product of this operation. The equipment in this operation consists of a jaw crusher, a hammermill, two screens and interconnecting conveyor belts. Magnetic head pulleys separate iron bearing materials from non-magnetic materials.

This facility is situated in a vacated mill building which helps control and contains emissions. The iron bearing material is also watered as needed to control visible emissions from this process.

### **BALL DROP**

This area is used to reduce the size of material which is too large to be processed in the slag plant and iron crushing operations. The process at this facility consists of dropping a large steel ball on the material to break it. Broken material is then sent to the processing areas or directly to the mill for recycling.

## VISIBLE EMISSION EVALUATION PLAN

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This facility is situated outdoors and is surrounded by a fifty foot chain link fence to contain flying debris.

Compliance is achieved by manually wetting the material as needed. Because this is an outdoor facility, the amount of water required will vary with weather conditions. To ensure compliance, designated personnel in this area will be make determination on a regular basis whether emissions are normal or abnormal. If abnormal emissions are observed, Tube City IMS personnel will initiate the application of water to prevent a deviation from permit visible emission limits.

### TUNDISH LANCING

Tube City IMS performs oxygen lancing on Tundish blocks to reduce their size. Cut blocks are sent to the Ball Drop area for further size reduction, and then back to the steel shops for recycling. This work is now performed indoors at the Old Mill Building. There is not expected to be any visible emissions leaving the building enclosure.

### BEACHING OF IRON

Tube City IMS is currently responsible for performing the beaching of iron at USS Gary Works, when necessary. Beaching of iron is an emergency procedure which is only employed when the steel shops are unable to handle the supply of molten iron available.

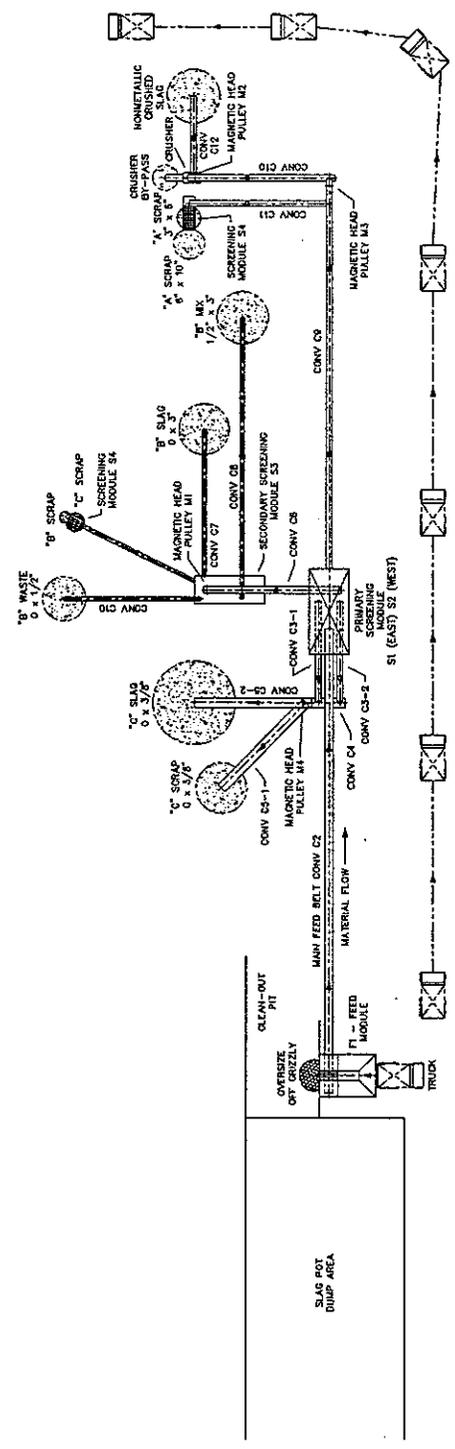
USS has assigned a building for beaching iron. With this activity occurring within a building there is not expected to be any visible emissions leaving the enclosure.

**Table 1. Visible Emission Evaluation**

Source Description	Frequency of Observation		Reasons for less than 1 hour per day visual emission readings (Method 9 opacity readings conducted by USS)
	Initial Observation	After Compliance Confirmed	
Slag Processing	Daily	Weekly	Measurable parameters will be monitored to ensure compliance
Iron Crushing	Daily	Weekly	Measurable parameters will be monitored to ensure compliance
Ball Drop	Daily	Weekly	Measurable parameters will be monitored to ensure compliance
Tundish Lancing	Weekly	Weekly	Control measure implemented will ensure compliance
Beaching of Iron	To be determined by USX.	Weekly	Emission Limitations imposed December 31, 1994. USX to address.

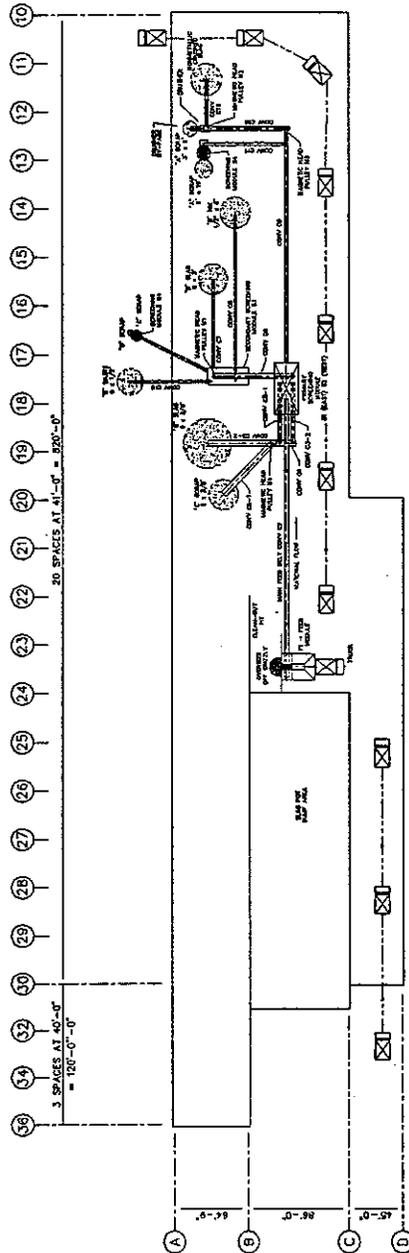
## VISIBLE EMISSION EVALUATION PLAN

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PLAN  
MO-57 STEEL SLAG PROCESS PLANT

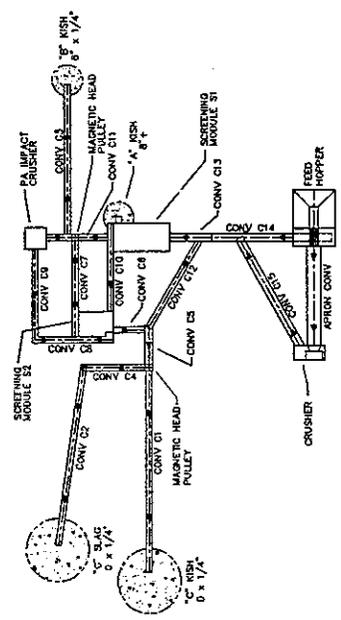
This drawing is a preliminary design and is subject to change without notice. It is not to be used for construction purposes without the approval of the International Mill Service, Inc.



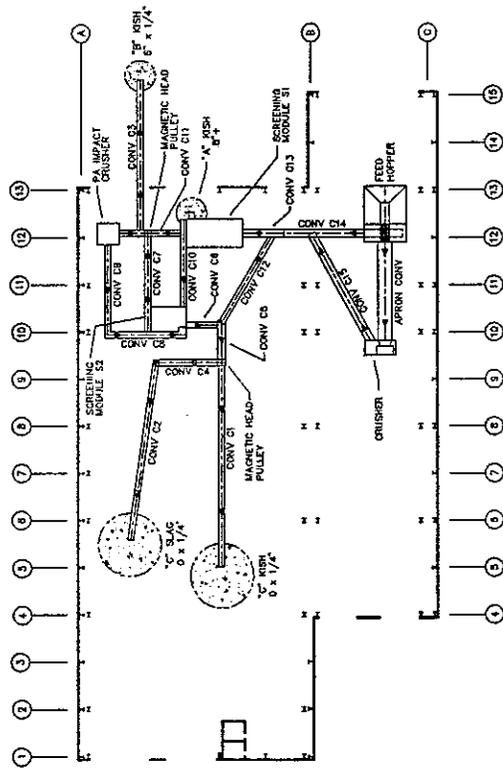
PLAN  
 MO-57 STEEL SLAG PROCESSING PLANT  
 (LOCATED IN FOREST #4 OPEN HEARTH BLDG)

Int'l. E.S.C. Div. 06, 1953	
<b>INTERNATIONAL MILL SERVICE</b>	
MIDWEST REGION	
U.S.S. - GARY WORKS	
MAIN SLAG PROCESSING	
SITE PLAN	
DATE 10/27/51	DRAWN BY [Name]
SCALE 1" = 50'-0"	PROJECT NO. 5041-2

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This diagram is a schematic of the material handling system at the Gary Works, U.S.S., Midwest Region, International Mill Service. It shows the flow of material from the hopper through various conveyors, crushers, and screening modules. The diagram is intended for use in the design and operation of the mill.



INTERNATIONAL MILL SERVICE	
MIDWEST REGION	
U.S.S. - GARY WORKS	
SITE PLAN	
DATE	DATE
SCALE	SCALE
5041-4	

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Other variables which may not be controllable in the field are luminescence and color contrast between the plume and the background against which the plume is viewed. These variables exert an influence upon the appearance of a plume as viewed by an observer, and can affect the ability of the observer to accurately assign opacity values to the observed plume. Studies of the theory of plume opacity and field studies have demonstrated that a plume is most visible and presents the greatest apparent opacity when viewed against a contrasting background. It follows from this, and is confirmed by field trials, that the opacity of a plume, viewed under conditions where a contrasting background is present can be assigned with the greatest degree of accuracy. However, the potential for a positive error is also the greatest when a plume is viewed under such contrasting conditions. Under conditions presenting a less contrasting background, the apparent opacity of a plume is less and approaches zero as the color and luminescence contrast decrease toward zero. As a result, significant negative bias and negative errors can be made when a plume is viewed under less contrasting conditions. A negative bias decreases rather than increases the possibility that a plant operator will be cited for a violation of opacity standards due to observer error.

Studies have been undertaken to determine the magnitude of positive errors which can be made by qualified observers while reading plumes under contrasting conditions and using the procedures set forth in this method. The results of these studies (field trials) which involve a total of 769 sets of 25 readings each are as follows:

(1) For black plumes (133 sets at a smoke generator), 100 percent of the sets were read with a positive error<sup>1</sup> of less than 7.5 percent opacity; 99 percent were read with a positive error of less than 5 percent opacity.

<sup>1</sup> For a set, positive error=average opacity determined by observers' 25 observations—average opacity determined from transmissometer's 25 recordings.

(2) For white plumes (170 sets at a smoke generator, 168 sets at a coal-fired power plant, 298 sets at a sulfuric acid plant), 99 percent of the sets were read with a positive error of less than 7.5 percent opacity; 95 percent were read with a positive error of less than 5 percent opacity.

The positive observational error associated with an average of twenty-five readings is therefore established. The accuracy of the method must be taken into account when determining possible violations of applicable opacity standards.

## 1. Principle and Applicability

1.1 Principle. The opacity of emissions from stationary sources is determined visually by a qualified observer.

1.2 Applicability. This method is applicable for the determination of the opacity of emissions from stationary sources pursuant to §60.11(b) and for qualifying observers for visually determining opacity of emissions.

## 2. Procedures

The observer qualified in accordance with section 3 of this method shall use the following procedures for visually determining the opacity of emissions:

2.1 Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction, and when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses).

2.2 Field Records. The observer shall record the name of the plant, emission location, type facility, observer's name and affiliation, a sketch of the observer's position relative to the source, and the date on a field data sheet (Figure 9–1). The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time opacity readings are initiated and completed.

2.3 Observations. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume, but instead shall observe the plume momentarily at 15-second intervals.

2.3.1 Attached Steam Plumes. When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

2.3.2 Detached Steam Plume. When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

2.4 Recording Observations. Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on an observational record sheet. (See Figure 9–2 for an example.) A minimum of 24 observations shall be recorded. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

2.5 Data Reduction. Opacity shall be determined as an average of 24 consecutive observations recorded at 15-second intervals. Divide the observations recorded on the record sheet into sets of 24 consecutive observations. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. If an applicable standard specifies an averaging time requiring more than 24 observations, calculate the average for all observations made during the specified time period. Record the average opacity on a record sheet. (See Figure 9–1 for an example.)

### 3. Qualifications and Testing

3.1 Certification Requirements. To receive certification as a qualified observer, a

candidate must be tested and demonstrate the ability to assign opacity readings in 5 percent increments to 25 different black plumes and 25 different white plumes, with an error not to exceed 15 percent opacity on any one reading and an average error not to exceed 7.5 percent opacity in each category. Candidates shall be tested according to the procedures described in section 3.2. Smoke generators used pursuant to section 3.2 shall be equipped with a smoke meter which meets the requirements of section 3.3.

The certification shall be valid for a period of 6 months, at which time the qualification procedure must be repeated by any observer in order to retain certification.

3.2 Certification Procedure. The certification test consists of showing the candidate a complete run of 50 plumes—25 black plumes and 25 white plumes—generated by a smoke generator. Plumes within each set of 25 black and 25 white runs shall be presented in random order. The candidate assigns an opacity value to each plume and records his observation on a suitable form. At the completion of each run of 50 readings, the score of the candidate is determined. If a candidate fails to qualify, the complete run of 50 readings must be repeated in any retest. The smoke test may be administered as part of a smoke school or training program, and may be preceded by training or familiarization runs of the smoke generator during which candidates are shown black and white plumes of known opacity.

3.3 Smoke Generator Specifications. Any smoke generator used for the purposes of section 3.2 shall be equipped with a smoke meter installed to measure opacity across the diameter of the smoke generator stack. The smoke meter output shall display instack opacity based upon a pathlength equal to the stack exit diameter, on a full 0 to 100 percent chart recorder scale. The smoke meter optical design and performance shall meet the specifications shown in Table 9-1. The smoke meter shall be calibrated as prescribed in section 3.3.1 prior to the conduct of each smoke reading test. At the completion of each test, the zero and span drift shall be checked and if the drift exceeds  $\pm 1$  percent opacity, the condition shall be corrected prior to conducting any subsequent test runs. The smoke meter shall be demonstrated, at the time of installation, to meet the specifications listed in Table 9-1. This demonstration shall be repeated following any subsequent repair or replacement of the photocell or associated electronic circuitry including the chart recorder or output meter, or every 6 months, whichever occurs first.

Table 9-1\_Smoke Meter Design and Performance Specifications

Parameter	Specification
a. Light source.....	Incandescent lamp operated at nominal rated voltage.
b. Spectral response of photocell.....	Photopic (daylight spectral response of the human eye_Citation 3).
c. Angle of view.....	15° maximum total angle.
d. Angle of projection.....	15° maximum total angle.
e. Calibration error.....	$\pm 3\%$ opacity, maximum.
f. Zero and span drift.....	$\pm 1\%$ opacity, 30 minutes.
g. Response time.....	5 seconds.

3.3.1 Calibration. The smoke meter is calibrated after allowing a minimum of 30 minutes



Company                    Observer.....  
 Location                 Type facility.....  
 Test Number             Point of emissions.....  
 Date

Hr.	Min.	Seconds				Steam plume (check if applicable)	
		0	15	30	45	Attached	Detached
	0						
	1						
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
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Figure 9-2\_Observation Record (Continued)  
Page \_\_ of \_\_

Company	Observer.....	.....
Location	Type facility.....	.....
Test Number	Point of emissions.....	.....
Date		

Hr.	Min.	Seconds				Steam plume (check if applicable)	
		0	15	30	45	Attached	Detached
	30						
	31						
	32						
	33						
	34						
	35						
	36						
	37						
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3.3.2.3 Angle of View. Check construction geometry to ensure that the total angle of view of the smoke plume, as seen by the photocell, does not exceed 15°. The total angle of view may be calculated from:  $\Theta = 2 \tan^{-1} d/2L$ , where  $\Theta$ =total angle of view;  $d$ =the sum of the photocell diameter+the diameter of the limiting aperture; and  $L$ =the distance from the photocell to the limiting aperture. The limiting aperture is the point in the path between the photocell and the smoke plume where the angle of view is most restricted. In smoke generator smoke meters this is normally an orifice plate.

3.3.2.4 Angle of Projection. Check construction geometry to ensure that the total angle of projection of the lamp on the smoke plume does not exceed 15°. The total angle of projection may be calculated from:  $\Theta = 2 \tan^{-1} d/2L$ , where  $\Theta$ =total angle of projection;  $d$ =the sum of the length of the lamp filament + the diameter of the limiting aperture; and  $L$ =the distance from the lamp to the limiting aperture.

3.3.2.5 Calibration Error. Using neutral-density filters of known opacity, check the error between the actual response and the theoretical linear response of the smoke meter. This check is accomplished by first calibrating the smoke meter according to 3.3.1 and then inserting a series of three neutral-density filters of nominal opacity of 20, 50, and 75 percent in the smoke meter pathlength. Filters calibrated within  $\pm 2$  percent shall be used. Care should be taken when inserting the filters to prevent stray light from affecting the meter. Make a total of five nonconsecutive readings for each filter. The maximum error on any one reading shall be 3 percent opacity.

3.3.2.6 Zero and Span Drift. Determine the zero and span drift by calibrating and operating the smoke generator in a normal manner over a 1-hour period. The drift is measured by checking the zero and span at the end of this period.

3.3.2.7 Response Time. Determine the response time by producing the series of five simulated 0 percent and 100 percent opacity values and observing the time required to reach stable response. Opacity values of 0 percent and 100 percent may be simulated by alternately switching the power to the light source off and on while the smoke generator is not operating.

#### 4. Bibliography

1. Air Pollution Control District Rules and Regulations, Los Angeles County Air Pollution Control District, Regulation IV, Prohibitions, Rule 50.
2. Weisburd, Melvin I., Field Operations and Enforcement Manual for Air, U.S. Environmental Protection Agency, Research Triangle Park, NC. APTD-1100, August 1972, pp. 4.1-4.36.
3. Condon, E.U., and Odishaw, H., Handbook of Physics, McGraw-Hill Co., New York, NY, 1958, Table 3.1, p. 6-52.

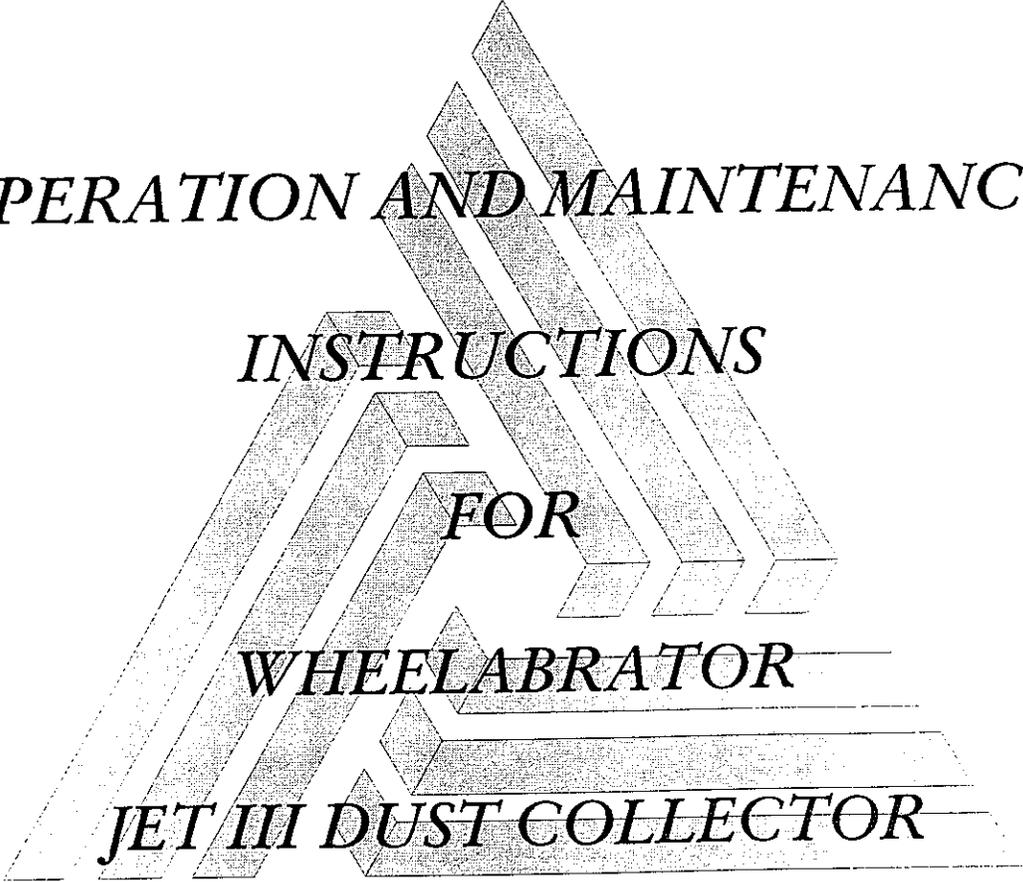




**Tube City IMS**  
We Create Value™

### TUBE CITY IMS VISIBLE EMISSION FORM

Company Name <b>TUBE CITY IMS</b>			Date		Start Time				End Time					
Location			Sec	0	15	30	45	Min	Sec	0	15	30	45	
City	State	Zip												
Process Equipment		Operating Mode		1					31					
Control Equipment		Operating Mode		2					32					
Describe Emission Point			3						33					
			4						34					
Height of Emission Point		Height Relative to Observer		5					35					
		Start End		6					36					
Distance to Emission Point		Direction to Emission Point		7					37					
Start End		Start End		8					38					
Vertical Angle to Obs. Pt		Direction to Obs. Pt.		9					39					
Start End		Start End		10					40					
Describe Emissions			11						41					
Start End			12						42					
Emission Color		If Water Droplet Plume (Circle)		13					43					
Start End		Attached Detached N/A		14					44					
Point in The Plume at Which Opacity was Determined			15						45					
Start End			16						46					
Describe Plume Background			17						47					
Start End			18						48					
Background Color		Sky Condition		19					49					
Start End		Start End		20					50					
Wind Speed		Wind Direction		21					51					
Start End		Start End		22					52					
Ambient Temp		Wet Bulb Temp		RH Percent		23			53					
Start End						24			54					
<p align="center"><b>SOURCE LAYOUT SKETCH</b></p> <p align="center">EMISSION OBSERVATION POINT</p> <p align="center">OBSERVER'S POSITION</p> <p align="center">140°</p> <p align="center">SUN LOCATION LINE</p>			25					55						
			26					56						
			27					57						
			28					58						
			29					59						
			30					60						
			Observer's Name (Print)											
Observer's Signature			Date											
Organization														
Certified by			Date											
Additional Information														



*OPERATION AND MAINTENANCE*

*INSTRUCTIONS*

*FOR*

*WHEELABRATOR*

*JET III DUST COLLECTOR*

## SAFETY INSTRUCTIONS

### DUST COLLECTORS AND VENTILATION

With all types of dust collectors, it is important that the dust hoppers discharge dust on a continuous basis. Many dusts due to their chemical and physical properties have the potential to be easily ignited when left stored. The hazards of fires and explosions are minimized when the dust is discharged from the dust collector hoppers on a continuous basis.

### WARNING

In applications involving the use of *EXPLOSIVE DUST*, measures must be taken to minimize the risk of dust collector fires and/or explosions.

1. The dust collector refuse hopper(s) must be emptied on a continuous basis.
2. The process equipment and dust collector must be grounded where applicable to minimize static electric charges, which could produce sparks.
3. In some cases, the risk of fire/explosion can be reduced by adding No. 200 Mesh Agricultural Limestone ( $\text{CaCO}_3$ ) to the ventilation system at a continuous rate of approximately 0.2 oz. per hour per square foot of filter area.
4. Equipment must be located, and explosion doors vented, in accordance with governing codes.

### CAUTION

( $\text{CaCO}_3$ ) is crushed limestone rock (not to be confused with lime, otherwise known as hot lime, burnt lime, or hydrated lime). Under **NO** circumstances should these highly reactive lime products be used.

## THEORY OF OPERATION

### FOR JET III PULSE TYPE DUST COLLECTOR

The *Jet III Pulse Jet Dust Collector* is a continuous automatic, suction or pressure type dust collector capable of filtering dust laden air through a needled felt or woven (glass) felt filter media.

This dust collector is used for the dry filtration of solids/fumes suspended in gas. Solids/fumes are collected on the outside of the filter tubes as the gas passes through them.

The dirty or contaminated gas enters the dust collector through the module inlet, striking a baffle plate which distributes the gas uniformly throughout the housing and drops out heavy particulate into the hopper. The "dust carrying" gas then passes through the filterbags which retain the dust particles on the exterior surface while allowing the carrying gas to pass through to the module outlet.

As the collector operates, the collected dust begins to form a dust cake which eventually diminishes the porosity of the filter. This reduction in porosity is measured by a magnehelic gauge and is defined as the dust collector pressure drop or differential pressure. As the pressure drop increases, the system static loss will increase, decreasing the ventilating gas volume.

To maintain a moderate pressure drop, and the system design volume, a cleaning cycle is employed to provide continuous cleaning of the filterbags. The cleaning system consists of a solid state timer which actuates electric solenoids governing the air valves. These air valves deliver a momentary burst or pulse of high pressure compressed air through the manifold pipe and into the venturis. The venturis, natural jet pumps induce secondary air several times the original volume and create a reverse air flow through the filterbags to provide necessary cleaning.

This cleaning procedure occurs on a row by row basis, therefore, the momentary interruption of gas flow is unnoticeable allowing continuous ventilation.

The dust cake, when pulsed from the filterbags, falls directly into the hopper where it is discharged into a dust removal system.

## STANDARD PROCEDURE FOR ERECTION OF JET III DUST COLLECTOR

### FORWARD

With the proper care and attention, your machine will provide maximum performance and long service, and we are sure that it will prove to be one of your most valued assets.

Our interest in the successful operation of your machine continues throughout the life of the machine. We want it to serve you well. For that reason, please feel free to discuss any problem that you may have concerning it or the work that you are doing. It will be a pleasure to help you.

The purpose of this manual is to assist you in keeping the equipment in the best possible operating and mechanical condition at all times.

This manual contains instructions on the proper care and operation of your equipment. If followed, they will help you greatly in getting the most production and satisfaction from the machine, plus, drawings and part numbers are included for accurately ordering repairs.

To make sure that your parts order is properly filled, please observe ordering instructions

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The following instructions concern erection procedures for a typical Jet III unit. For the specific arrangement of the equipment purchased, please see the General Arrangement.

### 1.0 FOUNDATION

1.1. The foundation should be prepared according to the anchor bolt layout, which is usually found on the General Arrangement drawing. Piers, or slabs, are to be designed by the Customer to suit loadings of the unit as indicated on the above drawings and by soil conditions.

### 2.0 ERECTION

2.1 After verifying that foundation dimensions are accurate to within  $\pm 1/8"$ , bolt the support columns to the anchor bolts. Erect the rest of the support steel, tightening the bolts only enough to hold the columns in an upright position until the module is installed.

Level and square the framework with shims under the base plates if necessary, then tighten all bolts and ground under the base plates.

**NOTE 1:** It is essential that all pieces of support steel (i.e., columns, beams, bracing, etc.) be erected before setting any piece of the collector.

**NOTE 2:** All high strength bolts shall be installed in accordance with the specifications for structural joints using ASTM A-325 bolts. The tightening mechanism used shall be either a torque wrench, a properly calibrated impact wrench, or the turn of the nut method.

**NOTE 3:** Although all components are closely monitored during fabrication to ensure conformance to tolerances; transportation and handling in the field may necessitate some final adjustment to such items as access doors, etc. On larger units, a backing plate may be required on field splices. Should this be the case it is our recommendation that these be welded on the interior of the unit. (Material and labour by others).

2.2 Set module into place on the support steel and bolt in loosely. Make sure entire structure is level and square; then tighten bolts to the proper pre-tension loads. **Warning:** Do not set module without installing cross bracing.

2.3 **NOTE:** Some small units arrive on site with support steel attached. Extended units shipped with separate housing and hoppers, may have bracing attached to keep sub-assemblies supported during shipping. These braces should be removed before erection.

2.4 Assemble the walkway and handrail on the ground near the unit. Cut, bend and weld handrail to suit if necessary. Place ladder(s) in desired position and cut cage to suit if necessary. Weld to the support framework.

2.5 Bolt inlet and outlet ductwork to module inlet and outlet making sure to use correct gasketing material between flanges. On modules where an inlet or outlet damper valve is required, bolt all mating flanges as above with gasket material. Be sure that damper blade and damper actuator have proper clearance and do not have interferences. See Separate instructions.

*Jet III Dust Collector*

**NOTE:** Inlet and outlet ducts outside baghouse confines to be supported independently.

2.6 Assemble screw conveyor and/or rotary valve to hopper discharge flange, making sure to use a gasketing material between all flanges. Assemble drive components and wire motors taking note of rotation. See Separate Instructions.

### 2.7 BAG INSTALLATION: See Fig. 1

1. **NOTE:** To insure proper operation and the longest possible filterbag life, it is imperative that bags be handled with care at all times. Any small cut or puncture can result in total bag failure in future.
2. Before installing filterbags in the collector, inspect all cages for broken or bent wires. Do not install damaged cages into bags. Install side rows first, and proceed to work towards access door.
3. Install filterbags by first inserting closed end portion into tubesheet hole.
4. Compress snap ring by grasping with both hands and pushing in with thumbs. Once the top ringed portion of the bag is inserted in cup, be certain it is properly seated. Top end of bag cuff should be slightly below top of the tubesheet or just even. We suggest bagging 1/3 of the collector before proceeding to next step. See Page D-9. It is suggested that the collector have bags installed approximately 1/3 near the side, then insert venturi and cages, followed by 1/3 near other side, followed by centre section.
5. Snap cage top (open end) onto venturi lugs, making sure venturi is locked into place.  
**NOTE:** A. Be certain that the venturi lugs do not line up with the splits in the cage ring.  
B. If you have vertical split cages, please contact Wheelabrator for interlock instructions.
6. Insert closed end of cage into bag and allow cage to slide until venturi flange rests flat on the tubesheet. **NOTE:** There is no fastening hardware required as the interference between the bag and cage is sufficient to hold down the assembly.

## JET III TOP ACCESS

**Bag Changing** - Once unit is shut down, remove the manifold, then pull out cage and venturi leaving the dirty bag in place. Reach into the top of the filter bag and using the convenient finger loop, remove the bag.

Bag may then be dropped to the hopper below for removal, keeping the clean air plenum as clean as possible, or, if desired, bag may be pulled up through the collar. This can be difficult, however, if the accumulated dust has caused the bag to swell, or become very heavy.

Proceed with bag installation as per Item 2.7.

### 2.8 MANIFOLD PIPE INSTALLATION

Remove compression nut and spacer from coupling and slide on manifold pipe, followed by gasket. Insert manifold into wall coupling with holes facing down.

Bolt tail to support angle firmly and slip compression nut, spacer and gasket on and into coupling. Secure nut on coupling and at tail end of manifold. Proceed through all rows working side wall ends first and working to door until complete.

### 2.9 COMPRESSED AIR

To ensure trouble free operation an adequate supply of clean, dry compressed air is essential. Check the detail of order to see Wheelabrator recommendations for the compressed air required. The pressure at the air header (air valves) should be 90 PSI. Wheelabrator Canada Inc. recommends that a line filter, dryer and regulator pressure gauge be installed ahead of the air header to ensure trouble free service. All air piping should be of adequate size with a shut-off valve with pressure gauge located at each module. The air header is supplied with 1 1/4 NPT compressed air connection at each end (one end plug to be used as drain).

## 2.10 **ELECTRICAL**

For trouble free service, a solid state pulse timer is provided in a NEMA IV weather-tight enclosure (NEMA IX explosion proof optional). The timer is to be mounted in an area that is free of the danger of being bumped or damaged, yet is accessible.

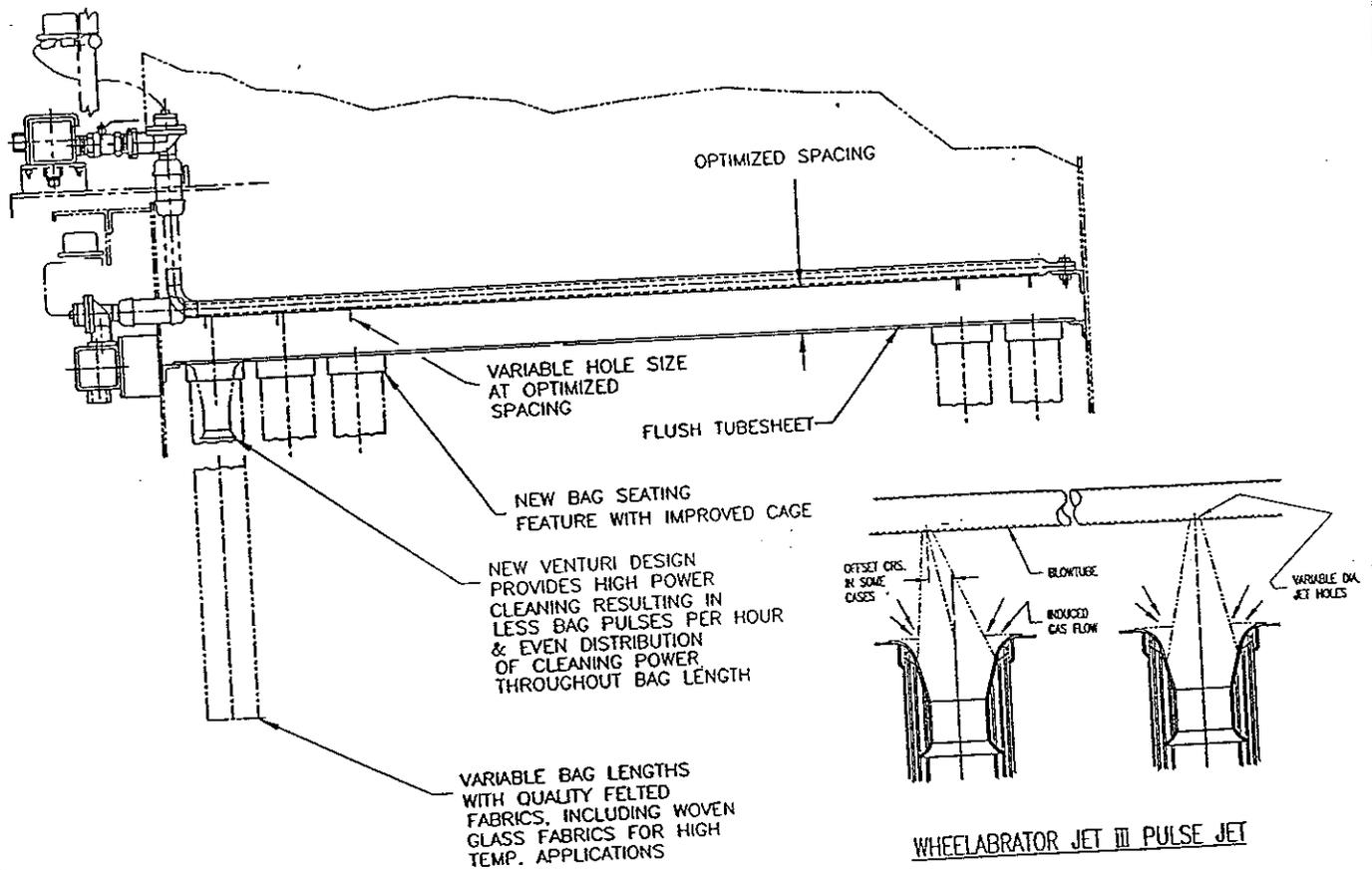
To wire solenoids to timer, follow the wiring schematic as shown per Electrical Drawing Section IV. Recommended wire from the timer to solenoids is No. 14 gauge and should be encased in a conduit according to local codes requirements. Power input and output to and from the timer is 110-115 volt AC.

**NOTE:** The timer is equipped with "on time" and "off time" control knobs. Do not adjust the "on time" setting as it has been factory set to give a 50 millisecond pulse. The "off time" can be adjusted as required to maintain a satisfactory differential pressure across the filter. Decreasing the "off time" increases the pulse rate causing the unit to clean at a faster rate.

Wire all motors, fan, air locks, screw conveyors, compressor, etc., - in accordance with nameplate data and note rotation of each to ensure proper operation of driven equipment.

If light fixture (optional) is furnished, locate in a convenient location free from the danger of being bumped. Be sure to install a toggle-type on/off switch.

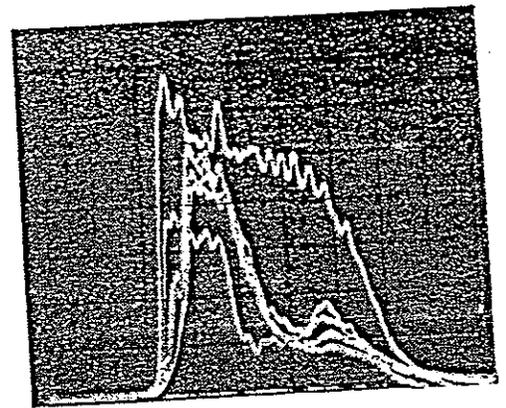
PULSE-JET MARK III COMPONENT HARDWARE BY WHEELABRATOR



**Blowpipe, Venturi design**

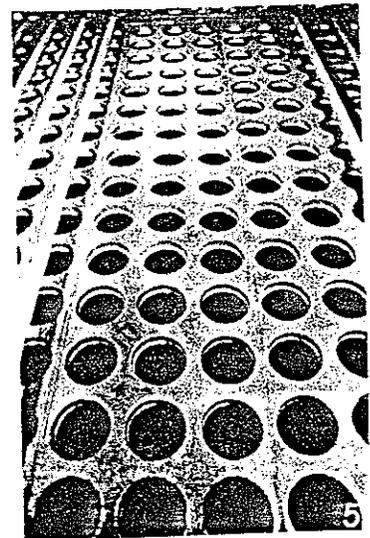
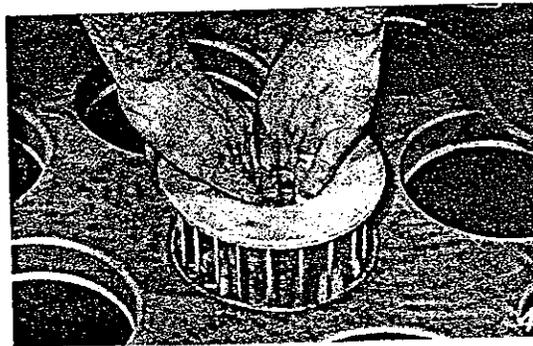
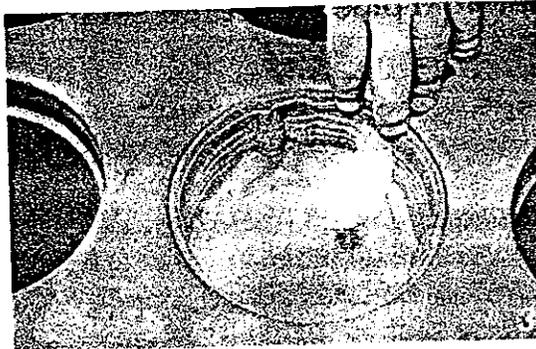
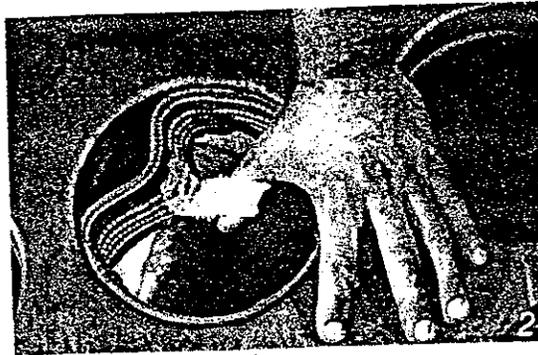
Perhaps the key ingredient to maximized pulsing power to all filter bag elements is the design of the blowpipe manifold. The Wheelabrator design uses variable orifice size, and variable orifice spacing, to maximize cleaning power and effectively reduce filter drag. Note how the placement of the orifice in relation to the venturi and other spacing criteria form part of the design.

The use of a properly designed venturi without question improves cleaning power. The venturi utilizes flow from the primary orifice, which causes inducement of secondary air flow from the clean air plenum. The solid state timing system and double diaphragm valve and manifold distribution, effectively cleans each individual filter bag with split second action. The over-all design lowers filter bag wear as a direct result of fewer bag pulses per hour. This also reduces penetration of the collected dust to the clean gas side improving over-all filtration efficiency for the system.



Optimized ejector pump curve cleans all filter bags effectively. Irregular cleaning power as indicated has been eliminated. Increased flow — lower filter drag — less power consumption. Wheelabrator Mark III conversion is available for all fabric filter installations.

FILTER INSTALLATION INSTRUCTIONS  
FOR  
JET III FILTERS OFFER TRUE SIMPLICITY IN  
IDENTIFICATION AND REPLACEMENT OF  
MALFUNCTIONING BAGS



1. *With unit shut down, remove the manifold pipe, pull out venturi and cage assembly, leaving the dirty bag in place.*
2. *Simply reach into the bag collar and retract the snap ring using the convenient finger loop. No tools required. Bag may then be dropped to the hopper for removal, keeping the clean air plenum as clean as possible.*
3. *Feed the new bag into the unit through the tubesheet hole. Ensure that the bag top is flush with the surface of tube sheet and the snap ring is located securely.*
4. *Replace the cage/venturi assembly and the manifold pipes.*
5. *Because of the clean flat design of the tubesheets in the Jet III, housekeeping at bag changing is minimized.*

**DUSTUBE, CAGE AND VENTURI FIELD ASSEMBLY  
JET III MK. III**

1. Place bag into tube sheet by folding in half lengthwise and carefully sliding it through the tube sheet hole. Ensure the snap ring is set into the proper position inside the cup of the tube sheet and "snaps" open.
2. Snap the venturi into the top of the cage making sure the venturi is locked into place.

NOTE: a) Be certain that the venturi lugs do not line up with the split opening in the cage ring.  
b) If you have vertical split cages, please contact Wheelabrator for interlock instructions.

3. Insert the closed end of the cage into the bag and allow the cage to slide gently until the venturi flange rests flatly on the tube sheet.
4. Replace the manifold pipe with the holes down and on a centre line with the venturis once the manifold pipe is located securely in place.

**PRECOMMISSIONING START-UP  
AND SHUT DOWN  
FOR  
JET III DUST COLLECTORS**

The following should be checked and corrected before introducing dust laden air into the filter.

1. Check filter bags for proper fit into the cup so that top edge of bag cuff is slightly below top of the tube sheet or just even.
2. Make sure the cage is properly snapped into the venturi lugs and that venturi flange is flush with the tube sheet floor.

**NOTE:**

- A. *No additional hold down device is required, as the interference fit between the cage and bag is adequate.*
- B. *If there is a grounding strip supplied in the filter bag; make sure the strip is in contact with the tubesheet.*
- C. *If you have vertical split cages, please contact Wheelabrator for interlock instructions.*

3. Make certain the manifold pipes are parallel, the holes are facing down and the longitudinal center line of the pipes are directly over the center line of the venturis. Blow holes along the pipes do not necessarily line up with the center of the venturi. They have been spaced scientifically to achieve maximum cleaning power. Manifolds should be secured by connecting the open end of pipe to the coupling and the other end bolts to the manifold support angle at rear of module.
4. Insure the access door is properly secured and sealed, if not adjust as necessary by moving butt hinges and/or latch plates as required.
5. Inspect hopper area to insure that the screw conveyor and/or rotary valves are free of debris. Firmly secure hopper access door or bolted panels airtight.
6. Check the screw conveyor for correct rotation. Check rotary valve for correct rotation.
7. Open the compressed air header drain cocks or plugs and turn on compressed air to header system to blow out moisture and debris. When header discharge is free of visible moisture shut off the compressed air supply and close the drain or plugs.
8. Do not open air supply at this time.



9. Energize the electronic(s) on the timer board and adjust for a rapid fire sequence. Observe timer LED's at the same time. Listen for an audible click from the solenoid box until all terminals have been fired. (See timer schematic wiring diagram if trouble occurs.)
10. Cover diaphragm valve exhaust ports with a piece of adhesive masking tape.
11. Open compressed air supply to headers, these valves should be opened as quickly as possible, so as to seat the diaphragm. Failure to do so may cause the diaphragm to flutter, and air will leak past the diaphragm seat.
12. Re-energize the electrical supply to the timer, and allow module to pulse through a cycle.
13. With air and power off, examine each diaphragm valve exhaust port. The pieces of masking tape should be blown away from the valve exhaust ports. Any valve with masking tape in place should be checked for malfunction, including it's solenoid valve. See Dwg. RAV-1
14. Reset timer back to an off-time setting of approximately 45 seconds.
15. Adjust header compressed air supply to 90 psig.

***THE COLLECTOR IS NOW READY FOR OPERATION.***

## INITIAL SYSTEM START-UP

1. Start mechanical dust handling system. Screw conveyor(s) and/or rotary air lock valves.
2. Insure compressed air is open to header system at a pressure of 90 PSIG except for units equipped with Gore-Tex filter bags, in which case the header pressure should not exceed 70 PSIG.
3. Start exhaust fan in dampered condition.

**NOTE:** On process systems such as dryers, coolers or kilns, etc., where water vapour or other condensibles are present, it is necessary to preheat the system so that the module skin temperature of the complete dust control system is above the dew point temperatures. Instrumentation should be adjusted to maintain the gas temperature above the dew point of the condensibles and below the maximum limit of the filter media.

4. Note and record the magnehelic reading. The system should be allowed to operate in the "throttled" position until the magnehelic reading reaches 4" to 5" W.G.
5. At this point, start the pulse cleaning system. The timer off-time setting should be adjusted for 45 sec pulse frequency and should be increased or decreased if the differential pressure begins to climb or fall.
6. Slowly, and in small increments, open the fan damper. Observe differential pressure reading for the effect on resistance. Increase or decrease the timer setting to pulse as required to maintain a manometer reading between 4" and 5" W.G.
7. Continue over the next few hours to open the fan damper until design volume is reached.
8. With the collector operating at design volume, the pulse frequency should ideally be set for the fewest pulses/minute while holding the pressure differential across the filter at a stable condition in the 4.0" to 6" range.

**NOTE:** During some conditions, the differential pressure may creep beyond 6" W.G. due to surge grain loadings, moisture in air, etc. This can also be considered normal, providing the differential pressure can be regained after the surge.

For prolonged periods of work stoppage when the system is not required to handle dust laden air it is recommended that the timer be shut down. This will prevent over cleaning of the filter.

## DUST COLLECTOR SYSTEM SHUT DOWN

1. Stop exhaust fan (by stop switch, NOT main disconnect switch).
2. Allow the pulse cleaning system to remain operating for between 5 to 15 minutes after fan has stopped rotating. (This is to ensure that all the remaining dust has been removed from the dust bags).
3. Allow the dust removal and disposal equipment (rotary valves, screw conveyors, etc.) to operate for approximately 10 to 15 minutes after pulsing to allow material to be fully discharged from the hoppers.

This procedure must be followed to ensure that all remaining dust is removed from the system to prevent "cementing" of the dust which causes plugging.

**NOTE:** On certain process systems it is essential that heat continually be introduced into the dust collecting system at a reduced rate to dry all metal surfaces and filter media. Heat can be removed only after all surfaces are free of the danger of condensation.

If you have any doubt as to these procedures, do not hesitate to contact your local Wheelabrator Representative or Wheelabrator Canada Customer Service.

## TROUBLE SHOOTING

### 1.0 VISIBLE STACK EMISSIONS

#### 1.1 Improperly installed Bags

Check bag snap bands to insure proper seating into tubesheet. Bag should be flush or slightly below the top of tubesheet.

#### 1.2 Torn or Punctured Bags

Inspect filter bags for tears or punctures caused by mechanical damage during installation. Abrasion, thermal or chemical attack and broken cages can also cause failures.

- NOTES:**
- Dust usually accumulates around the area of broken bags. Replace bags as required.
  - If cage wires are broken or split, replace cages immediately. Do not put new bags on broken cages.

#### 1.3 Dirty Clean Air Plenum

After bag failure or during routine filter change-outs, dust will accumulate in dead air zones.

Always clean tubesheet when dust accumulation is present.

### 2.0 HIGH DIFFERENTIAL PRESSURE

#### 2.1 Over Volume

Check fan and motor speeds and V-belt drive ratio if applicable. Reset fan damper to handle collector design volume.

#### 2.2 System Resistance Static Is Too Low

Recalculate ductwork design to insure proper static losses. If too low, reduce fan speed or add system resistance.

#### 2.3 Fugitive Air Entrainment.

Check all doors and cover plates for proper sealing. Check all ductwork flanges for air tight seals. Apply gasketing or re-tighten fasteners.

**2.4 Lack of Compressed Air:**

Check pulsing system for compressed air leakage - repair as required.

Check compressor output to assure it exceeds pulse cleaning system usage - add extra volume as required.

Compressed air pressure too low - increase line pressure from regulator-compressor.

Check clogged feed lines. Replace line filter or check for debris in line.

On larger runs of piping, make sure the diameter is of sufficient size so as not to cause abnormal pressure drop.

**2.5 Malfunctioning Timer.**

Check timer outputs to insure all terminals are firing. If timer is faulty, return to Wheelabrator for repair.

**2.6 Dust Re-Entrainment.**

Check dust removal system for worn or faulty seals - repair or replace as required.

Check mating flanges - apply gasketing and/or re-tighten fasteners as required.

Dust disposal system plugged or jammed - clean and check disposal system for unloading capacity.

**2.7 Dust on Clean Air Side.**

Check tubesheet floor and clean as necessary to prevent dust from entering bags from clean air side.

Check inside of bags for dust and empty as required. Dust in bag will cause stack emissions on a cycle synchronized with pulse blasts.

**2.8 Bag Blinding.**

Check system so that no condensation or free moisture is occurring on bags. Add auxiliary heat by changing process procedure and eliminate water seepage in to unit.

Check fan to insure collector was started under throttled conditions. Extra high speed impingement of fine particles can permanently blind filter media.

**3.0 INADEQUATE SYSTEM VOLUME.**

**3.1 Fan Rotating Backwards.**

Check and correct if necessary, rotation of fan.

**3.2 High Differential Pressure**

See Section 2.0 above.

### 3.3 **Fan RPM Too Low.**

Check drive ratio between fan and motor. Check drive for slippage - re-tighten or replace as required.

Fan damper improperly adjusted. Check damper position and adjust to maintain collector design volumes.

### 3.4 **System in Leakage**

Check all ducting and flanges to and from collector for leaks. Re-gasket and tighten fasteners as required.

Check hopper dust disposal equipment for leaking seals. Adjust or replace as required.

### 3.5 **System Resistance Static Too High.**

Recalculate ductwork design to insure proper static losses. If too high, increase fan speed or lower system resistance. Check ductwork for material build-up or blockages. Clear and re-design if necessary.

### 3.6 **Blinded Bags**

Inspect bags for possible blinding. Blinded bags result in high pressure drop.

Clean bags with fan off, if differential pressure is still high, have filter bags laundered or install new bags.

See 5.0 - Filter Bag Problems.

## **LOW COMPRESSED AIR AT HEADER.**

### 4.1 **Sticking Solenoid Valves.**

Check solenoid plungers for dirt. Clean or replace as required.

Short circuit in wiring may cause one or more solenoids to remain open - check wiring and repair or replace as required.

Short circuit in timer relays - check and repair if possible. Replace timer if required.

### 4.2 **"Pulse On time" Is Too Long.**

Adjust "on time" for 1/20 (50 m/s) second maximum. (This is factory preset and normally should not be adjusted.)

### 4.3 **Sticking Diaphragm Valves** - check for torn or damaged diaphragms. Replace as required.

### 4.4 **Debris in Diaphragm Valves.**

Check for dirt or ice on diaphragm wafer. Clean or replace as required. If ice, install dryer on compressed air to eliminate moisture.

**4.5 Leaks in Compressed Air Piping.**

Inspect compressed air line run for leaks.

**4.6 Insufficient Supply of Compressed Air.**

Check capacity for air compressor to insure proper sizing. See detail or Order to determine demand of unit. Also check for undesigned branch-offs in compressed air run. Add extra capacity or independent source.

**4.7 Header/Air Valve Connection is Faulty.**

Inspect connection and repair as required.

**5.0 FILTER BAG PROBLEMS (POOR LIFE)**

5.1 Check system operating temperature against filter media rating. Lower temperature of system or rebag with media suitable to higher temperatures encountered.

5.2 Check system physical and chemical characteristics against filter media rating. Adjust system gas stream or install new media compatible with gas stream.

5.3 Check abrasion patterns on bag, collector walls, etc. Evaluate duct design.

5.4 Check material build-up in hopper. Inspect dust disposal equipment for proper operation. Repair as required.  
Check hopper bridging. Install vibrators, rappers, etc., or enlarge discharge opening.

**5.5 Incorrectly Installed Bags.**

Check for proper seating of bag into tubesheet. Make sure bags are hanging straight and not touching walls or each other.

5.6 Inspect cages for broken or bent wires which can puncture or tear bags. Repair or replace cages(s).

**5.7 Dirty Clean Air Plenum.**

Inspect tubesheet floor for dust accumulations. Dust on tubesheet floor can be entrained into inside of bag by cleaning system. This can cause blinding or abrasion by impregnating bags from the reverse direction.

**5.8 Rough Handling of Bags At Time of Installation.**

Handle bags with care as any small cut or abrasion can cause total bag failure.

## **STORAGE OF FILTERBAGS**

Proper storage of filterbags is essential in maintaining maximum collecting efficiency of your air pollution control unit.

Store filterbags in the crate(s) in which they were shipped in a cool dry place, (preferably on pallets covered with plastic, in a warehouse, where physical damage to the crates will not occur).

# IMS DAILY INSPECTION SHEET

1 Photohelic Gauge Reading

Range set

HIGH

LOW

AMPS

2 Fan Amperage Reading

3 Cleaning Cycle Working?

YES

NO

4 Compressed Air (Mill Incoming)

psi

5 Dust Discharge Working?

YES

NO

6 Dust Discharged?

YES

NO

7 Visual Inspection

YES

NO

8a Excessive Noise?

YES

NO

8b If Yes, What?

INSPECTED BY:

DATE:

COMMENTS:



# INTERNATIONAL MILL SERVICE MONTHLY INSPECTION OF BAGHOUSE

	OK	REPLACE	COMMENTS	CHAMBER
A BAG SEATING CONDITION				
B MOVING PARTS ON SHAKER				
C FAN CORROSION & BLADE WEAR				
D HOSE & CLAMPS				
E HOLES OR LEAKS IN BAGS				
F BAG HOUSING FOR CORROSION				

INSPECTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

COMMENTS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# INTERNATIONAL MILL SERVICE QUARTERLY INSPECTION OF BAGHOUSE

	OK	REPLACE	COMMENTS	CHAMBER
A BAGS				
B DUCTS FOR BUILD UP OF DUST DAMPER VALVES				
C FOR PROPER SEATING				
D DOOR GASKETS				
E BAFFLE PLATE FOR WEAR				

INSPECTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

COMMENTS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# INTERNATIONAL MILL SERVICE ANNUAL INSPECTION OF BAGHOUSE

- WELDS ON STRUCTURE
- A BOLTS ON STRUCTURE
  
- B HOPPERS FOR WEAR
  
- C CLEANING PARTS FOR WEAR

OK	REPLACE	COMMENTS	CHAMBER

INSPECTED BY:

DATE:

COMMENTS:

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

Addendum to the  
Technical Support Document for  
a Part 70 (Title V) Operating Permit Renewal

<b>Source Name:</b>	Tube City IMS, LLC
<b>Source Location:</b>	One North Broadway, Gary, Indiana 46402
<b>County:</b>	Lake
<b>SIC Code:</b>	Primary Operation (steel mill): 3398 Contractor Operation (business services): 7389
<b>Permit Renewal No.:</b>	T089-29892-00132
<b>Permit Reviewer:</b>	APT

On October 11, 2011, the Office of Air Quality (OAQ) had a notice published in the Times in Munster and The Post Tribune in Merrillville, Indiana stating that Tube City IMS, LLC had applied for a Part 70 Operating Permit Renewal for a stationary slag processing and metal recovery operation as a contractor at US Steel - Gary Works. The notice also stated that OAQ proposed to issue a permit renewal for this operation and provided information on how the public could review the proposed permit renewal and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit renewal should be issued as proposed.

Changes to the permit are noted as follows: ~~struck~~ language has been deleted; **bold** language has been added. If necessary, the Table of Contents will be modified to reflect these changes.

Necessary changes will be noted in this addendum only, as no changes will be made to the TSD.

**Permit T089-29892-00132**

Comments on the proposed Part 70 permit renewal were received on November 10, 2011 from Charles Ochola, representing Tube City IMS, LLC. Comments will be addressed in the order that the permit will be affected.

**Comment #1**

Condition D.1.5 it states that records should be maintained showing fulfillment of conditions D.1.2 (a) and (b) and D.1.3. Please note there are no conditions D.1.2 (a) and (b), I believe this should be D.1.1 (a) and (b).

**Response to Comment #1**

The following changes have been made to the Record Keeping and Reporting Requirements in Section D.1:

**Change No. 1:** The condition number referenced in the following Record Keeping and Reporting requirement has been corrected and the type of analysis used for compliance has been modified to be consistent with the Compliance Determination Requirements of the permit:

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

#### D.1.5 Record Keeping Requirements

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- (a) To document the compliance status with Conditions D.1.21(a) and (b) and D.1.3, the Permittee shall maintain records as needed of the ~~chemical~~ **gravimetric** analysis of the metallurgical material.

\* \* \*

#### Additional Changes

The IDEM, OAQ has made the following changes to the permit during the course of the public comment period for this Title V Permit Renewal:

**Change No. 2:** In order to be consistent and clear, the moisture content limit has been added to the limitations in Condition D.2.1, the condition number references have been updated or corrected in the Compliance Determination Requirements, and the requirement to maintain records of the gravimetric analysis on an "as needed" basis have been included into the Record Keeping and Reporting Requirements:

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

##### D.2.1 Emission Offset Minor Particulate Limit [326 IAC 2-3]

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Pursuant to CP 089-4337-00132, issued on March 31, 1995,

- (a) the input of raw material to the slag processing plant, identified as M057, shall be less than 2.3 million tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (b) the PM shall not exceed 0.387 pound per ton of raw material; ~~and~~
- (c) the PM<sub>10</sub> shall not exceed 0.038 pound per ton of raw material; ~~and~~
- (d) the moisture content of the slag processed shall not be less than 0.55%.**

Compliance with these limits shall limit the emissions of PM to less than twenty-five (25) tons and the emissions of PM<sub>10</sub> to less than fifteen (15) tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the slag processing plant.

#### Compliance Determination Requirements

##### D.2.3 Particulate Control [326 IAC 2-3]

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In order to ensure compliance with Condition D.42.1, the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the PM, PM<sub>10</sub> emissions from the screens and the conveyors at slag processing plant, identified as M057. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.2.1 ~~(d)(a) and (b)~~. If weather conditions preclude the use of wet suppression, the Permittee shall perform ~~chemical~~ **gravimetric** analysis on the metallurgical material to ensure it has a moisture content of at least 0.55 percent of the process stream by weight or greater. The Permittee shall submit to IDEM, OAQ the method for moisture content analysis for approval.

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

##### D.2.5 Record Keeping Requirements

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- (a) To document the compliance status with Condition D.2.1(a), the Permittee shall maintain records of the raw material input for the slag processing plant identified as M057.

- (b) To document the compliance status with Condition D.2.1(d), the Permittee shall maintain records as needed of the gravimetric analysis of the metallurgical material.**
- (bc)** To document the compliance status with Condition D.2.4, the Permittee shall maintain records of visible emission notations of the screens, conveyor transfer points and crusher exhaust stacks once per day. The Permittee shall include in its daily record when visible emission notations are not taken and the reason for the lack of visible emission notations, (i.e. the process did not operate that day).
- (cd)** Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

**Change No. 3:** Upon further review IDEM, OAQ has changed the wordings 'Part 70 Operating Permit Renewal' to 'Part 70 Administrative Operating Permit Renewal ' on the cover page of the permit.

**Cover Page**

## **Part 70 Administrative Operating Permit Renewal** **OFFICE OF AIR QUALITY**

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

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

**Source Background and Description**

<b>Source Name:</b>	Tube City IMS, LLC
<b>Source Location:</b>	One North Broadway, Gary, Indiana 46402
<b>County:</b>	Lake
<b>SIC Code:</b>	Primary Operation (steel mill): 3398 Contractor Operation (business services): 7389
<b>Permit Renewal No.:</b>	T089-29892-00132
<b>Permit Reviewer:</b>	APT

The Office of Air Quality (OAQ) has reviewed the Part 70 operating permit renewal application from Tube City IMS, LLC, relating to the operation of a slag processing and metal recovery operation as a contractor at US Steel - Gary Works. On November 18, 2010, Tube City IMS submitted an application to the OAQ requesting to renew its operating permit. Tube City IMS was issued its first Part 70 Operating Permit on August 17, 2006.

**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, located at One North Broadway, Gary, IN 46402; and
- (b) Tube City IMS, 089-00132, an on-site contractor, located at One North Broadway, Gary, IN 46402.

IDEM has determined that Tube City IMS is under the common control of US Steel - Gary Works. These two plants are considered one source due to contractual control. Therefore, the term "source" in the Part 70 documents refers to both US Steel - Gary Works and Tube City IMS as one source.

Separate Part 70 Operating permits have been issued to US Steel - Gary Works (T089-7663-00121) and Tube City IMS (T089-5630-00132), solely for administrative purposes.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units:

- (a) One (1) kish iron crushing operation, identified as M029, constructed in October 1990, with a maximum capacity of 125 tons per hour, with emissions controlled by building enclosure, kish iron pre-watering and use of water sprays consisting of the following:
  - (1) One (1) jaw crusher;
  - (2) One (1) hammer mill;
  - (3) Two (2) screens;

- (4) Sixteen (16) conveyers;
  - (5) Storage piles, four-tenths (0.4) acre with storage capacity of 6,000 tons; and
  - (6) Unpaved haul road traffic.
- (b) One (1) slag processing plant, identified as M057, constructed on October 6, 1995, with a maximum capacity of 1,000 tons per hour, with emissions controlled by slag pre-watering and water sprays consisting of the following:
- (1) Five (5) screen stations;
  - (2) Eighteen (18) conveyers;
  - (3) Storage piles, nine-tenths (0.9) acre with storage capacity of 16,000 tons;
  - (4) One (1) VSI crusher, constructed October 1997;
  - (5) Four (4) conveyers, constructed October 1997; and
  - (6) Unpaved haul road traffic; and
  - (7) Material transfers.
- (c) One (1) steel slab scarfing plant, constructed in August 1991, with a maximum capacity of 180 tons per hour, controlled by a baghouse, ducted to the Scarfing Stack, using a 1.5 MMBtu per hour natural gas flame.
- (d) Oxygen lancing of metal, with a maximum capacity of 50 tons per hour, controlled by building enclosure.
- (e) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity of 21,000 gallons, and an approximate throughput of 230,000 gallons per month.
- (1) One (1) diesel fuel storage tank, identified as 1, with a maximum capacity of 250 gallons.
  - (2) Two (2) diesel fuel storage tanks, identified as 19, with a maximum capacity of 10,000 gallons, each.
  - (3) One (1) low sulfur diesel fuel storage tank, identified as 21, with a maximum capacity of 500 gallons.

<b>Insignificant Activities</b>
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The source also consists of the following insignificant activities:

- (a) Gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons. [326 IAC 8-9-1]
- (b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs equal to or less than 12,000 gallons. [326 IAC 8-9-1]
- (c) Vessels storing the following: lubricating oils, hydraulic oils, machining oils, or machining fluids.

**Existing Approvals**

Since the issuance of Part 70 Operating Permit No. 089-5630-00132 on August 17, 2006, the source has constructed or has been operating under the following additional approvals:

- (a) Review Request No. 089-16366-00132, issued on September 20, 2004; and
- (b) Significant Permit Modification No. 089-23679-00132, issued on April 19, 2010.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Part 70 Operating Permit No. 089-5630-00132 included the description of a chip plant, identified as M059, to be constructed within eighteen (18) months of the issuance of the permit. However, the chip plant, identified as M059, was never constructed. All references to the chip plant, including all enforceable permit requirements, have been removed from this Part 70 Operating Permit Renewal.

All references to 326 IAC 6.8 (Particulate Matter Limitations For Lake County) have been removed from the D Sections of the permit because the requirements of this rule are outlined in the C Section of the permit.

**Enforcement Issue**

There are no enforcement actions pending related to this renewal.

**Emission Calculations**

Part 70 permit level was determined in a previous approval. Therefore, the potential to emit was not recalculated for this source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM*	Greater than 250
PM <sub>10</sub>	Greater than 250
PM <sub>2.5</sub>	Greater than 100
SO <sub>2</sub>	Greater than 250
VOC	Greater than 250
CO	Greater than 250
NO <sub>x</sub>	Greater than 250
GHG	Greater than 100,000
Single HAP	Greater than 10
Total HAP	Greater than 25

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

**County Attainment Status**

The source is located in Lake County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148 <sup>th</sup> 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 <sub>3</sub>	Attainment effective May 11, 2010, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.

<sup>1</sup>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.

Basic nonattainment designation effective federally April 5, 2005, for PM<sub>2.5</sub>.

- (a) **Ozone Standards**  
 Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) 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<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Lake County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
  
- (b) **PM<sub>2.5</sub>**  
 U.S. EPA, in the Federal Register Notice 70 FR 943, dated January 5, 2005, has designated Lake Count as nonattainment for PM<sub>2.5</sub>. On March 7, 2005, the Indiana Attorney General's Office, on behalf of IDEM, filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM<sub>2.5</sub> promulgated on May 8, 2008. These rules became effective on July 15, 2008. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
  
- (c) **Other Criteria Pollutants**  
 Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

**Fugitive Emissions**

Since this source is classified as an iron and steel mill plant, it is considered one (1) of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2 or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Nonattainment New Source Review and Part 70 Permit applicability.

**Unrestricted Potential Emissions**

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	Greater than 250
PM <sub>10</sub>	Greater than 250
PM <sub>2.5</sub>	Greater than 100
SO <sub>2</sub>	Greater than 250
VOC	Greater than 250
CO	Greater than 250
NO <sub>x</sub>	Greater than 250
GHG	Greater than 100,000
Single HAP	Greater than 10
Total HAP	Greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, VOC, CO and NO<sub>x</sub>, is equal to or greater than 100 tons per year; and the potential to emit GHG is greater than 100,000 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

**Actual Emissions**

The following table shows the actual emissions as reported by the source. This information reflects the 2009 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	Not Reported
PM <sub>10</sub>	4.00
PM <sub>2.5</sub>	2.00
SO <sub>2</sub>	Not Reported
VOC	Not Reported
CO	Not Reported
NO <sub>x</sub>	Not Reported
HAP	Not Reported

**Part 70 Permit Conditions**

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

**Potential to Emit After Issuance**

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

Process/ Emission Unit	Potential To Emit of Tube City IMS After Issuance of Renewal (tons/year)									
	PM	PM <sub>10</sub> *	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHG	Total HAP	Worst Single HAP
Kish Iron Crushing Operation	61.20	22.60	21.91	0.00	0.00	0.00	0.00	< 75,000	0.00	0.00
Slag Processing Plant**	<25	<15	<10	0.00	0.00	0.00	0.00		0.00	0.00
Steel Slab Scarfing**	<25	<15	<10	0.004	0.66	0.04	0.55		0.012	0.011 Hexane
Oxygen Lancing	24.00	24.00	24.00	0.00	0.00	0.00	0.00		0.00	0.00
Petroleum Fuel Dispensing Facility	0.00	0.00	0.00	0.00	0.00	< 97	0.00		< 25	<10
Insignificant Storage Tanks	0.00	0.00	0.00	0.00	0.00	< 2.73	0.00		< 2.5	<1
<b>Total PTE of Tube City IMS</b>	<b>&gt; 100</b>	<b>&lt; 100</b>	<b>&lt; 100</b>	<b>0.004</b>	<b>0.66</b>	<b>&lt; 100</b>	<b>0.55</b>		<b>&lt; 25</b>	<b>&lt; 10</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO <sub>2</sub> e	25	10
PSD Major Source Thresholds	100	100	NA	100	100	100	100	100,000 CO <sub>2</sub> e	NA	NA
Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA	NA
Modification Significance Level	25	15	10	NA	NA	NA	NA	75,000	NA	NA
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM <sub>10</sub> ), not particulate matter (PM), is considered as a "regulated air pollutant". ** The Slag Processing Plant was added under CP 089-4337-00132, issued March 31, 1995, and renders 326 IAC 2-3 not applicable. The Steel Slab Scarfing was added under CP 089-2092-00132, issued September 13, 1991 and renders 326 IAC 2-3 not applicable.										

- (a) This existing stationary source is major for PSD because the emissions of at least one (1) criteria pollutant are greater than one hundred (>100) tons per year, and it is in one (1) of the twenty-eight (28) listed source categories.
- (b) This existing stationary source is major for Nonattainment NSR because the emissions of the nonattainment pollutant PM<sub>2.5</sub> are greater than one hundred (100) tons per year.

<b>Federal Rule Applicability</b>
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- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:
  - (1) has a potential to emit before controls equal to or greater than the 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.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Kish Iron Crushing Operation/PM	Wet Suppression	Y	61.20	<61.20	100	N	N
Kish Iron Crushing Operation/PM <sub>10</sub>			22.60	<22.60	100	N	N
Kish Iron Crushing Operation/PM <sub>2.5</sub>			21.91	<21.91	100	N	N
Slag Processing Plant/PM	Wet Suppression	Y	840.52	<23.20	100	N	N
Slag Processing Plant/PM <sub>10</sub>			298.331	<2.30	100	N	N
Slag Processing Plant/PM <sub>2.5</sub>			297.91	<2.30	100	N	N
Steel Slab Scarfing/PM/PM <sub>10</sub> /PM <sub>2.5</sub>	Baghouse	Y	676	<13.52	100	Y	N
Chip Plant/PM	Water Suppression	Y	40.73	<40.73	100	N	N
Chip Plant/PM <sub>10</sub> /PM <sub>2.5</sub>	Water Suppression	Y	14.32	<14.32	100	N	N
Petroleum Fuel Dispensing Facility/VOC	None	N	<100	<100	100	N	N
Storage Tanks/VOC	None	N	<2.73	<2.73	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64 (CAM) are applicable to the Steel Slab Scarfing operating for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> upon issuance of the Title V Renewal. A CAM plan will be incorporated into this Part 70 permit renewal.

The wet suppression system used to control fugitive particulate emissions from the slag process plant to comply with particulate emission limitations pursuant to 326 IAC 6.8-10 is not considered a control device under CAM.

(b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

(1) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60, Subpart Kb, are not included in the permit for the petroleum fuel dispensing facility or the storage tanks because the capacity of each tank is less than 75 m<sup>3</sup> (19,800 gallons).

(2) The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO, are not included in the permit for the kish iron crushing, slag processing and chip plant because these emission units do not process nonmetallic minerals.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

(1) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), 40 CFR 63, Subpart R, are not included in the permit for the petroleum fuel dispensing facility. The fuel dispensing facility is not located at a bulk gasoline terminal.

(2) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Integrated Iron and Steel Manufacturing Facilities, 40 CFR 63, Subpart FFFFF, are not included in the permit for the slag processing and metal recovery operation. The source is part of an integrated iron and steel manufacturing facility, which is also a major source of HAP; however, the slag processing and metal recovery operation does not consist of the affected facilities listed in 40 CFR 63.7782.

(3) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, 40 CFR 63, Subpart BBBB, are not included in the permit for the petroleum fuel dispensing facility. The fuel dispensing facility is not located at a gasoline distribution bulk terminal, bulk plant and/or pipeline facility.

<b>State Rule Applicability - Entire Source</b>
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**326 IAC 1-6-3 (Preventive Maintenance Plan)**

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

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

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

**326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset)**

In order to render the modification minor under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset), the potential to emit particulate matter (PM and PM<sub>10</sub>) for the kish iron crushing operation should have been limited to less than twenty-five (25) tons (PM) and fifteen (15) tons (PM<sub>10</sub>) per year in 1990, when this operation was added to the major source, US Steel - Gary Works, (089-00121). Therefore, this limit is being added to ensure that the potential to emit PM is less than

twenty-five (25) and PM<sub>10</sub> is less than fifteen (15) tons per year. This is a Title 1 Change because an emission limitation is being changed to keep the status of a modification minor under PSD.

Pursuant to 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset), The nonfugitive particulate emissions from the one (1) kish iron crushing operation, identified as M029 shall be limited to:

(a) The following pound per ton rates:

<b>Emission Units</b>	<b>PM Emissions (lb/ton)</b>	<b>PM<sub>10</sub> / PM<sub>2.5</sub> Emissions (lb/ton)</b>
Each Crusher	0.0012	0.00054
Each Screen	0.0036	0.0022
Each conveyor transfer point	0.00014	0.000046

(b) The moisture content of the kish iron processed shall not be less than 0.55%.

Compliance with the above limits combined with the controlled potential emissions from the fugitive sources of the kish iron operation, shall limit the PM and PM<sub>10</sub> from the kish iron operation to less than twenty-five (25) tons of PM and less than fifteen (15) tons of PM<sub>10</sub> per twelve (12) consecutive month period and render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable to this modification.

### **326 IAC 2-3 (Emission Offset) and 326 IAC 2-1.1-5 (Nonattainment New Source Review)**

- (a) The slag processing plant, identified as M057, was permitted when Lake County was designated as nonattainment for the PM<sub>10</sub> standard. Particulate emissions were limited pursuant to CP 089-4337-00132, issued on March 31, 1995. Therefore, the input of raw material to the slag processing plant M057 shall be less than 2.3 million tons per twelve (12) consecutive month period with compliance determined at the end of each month, the PM emissions shall not exceed 0.387 pound per ton of raw material, and the PM<sub>10</sub> emissions shall not exceed 0.038 pound per ton of raw material.
- (b) The steel slab scarfing plant was permitted when Lake County was designated nonattainment for the PM<sub>10</sub> standard. Particulate emissions were limited pursuant to CP 089-2092-00132, issued on September 13, 1991. Therefore, the particulate matter emissions from the scarfing operation shall not exceed 0.004 gr/dscf at an actual flow of 90,000 cfm. The baghouse shall be in operation and control particulate emissions from the scarfing plant at all times the unit is in operation.

Compliance with these limits shall limit the emissions of PM to less than twenty-five (25) tons and the emissions of PM<sub>10</sub> to less than fifteen (15) tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the slag processing plant and the steel slab scarfing plant.

### **326 IAC 2-6 (Emission Reporting)**

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is located in Lake County and its emissions of VOC and NOx are greater than twenty-five (25) tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted by July 1, 2011, and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

### **326 IAC 5-1 (Opacity Limitations)**

This source is subject to the opacity limitations specified in 326 IAC 5-1-2(2).

### **326 IAC 6-4 (Fugitive Dust Emissions)**

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

### **326 IAC 6-5 (Fugitive Particulate Matter Emissions)**

This source is located in Lake County and has fugitive particulate emissions greater than twenty-five (25) tons. Pursuant to 326 IAC 6-5-1(a), this source is not subject to the requirements of 326 IAC 6-5 because it is located in Lake County.

### **326 IAC 6.5 (PM Limitations Except Lake County)**

This source is not subject to 326 IAC 6.5 because it is not located in one (1) of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

### **326 IAC 6.8 (PM Limitations for Lake County)**

This source is subject to 326 IAC 6.8 because it is located in Lake County, its PM PTE is equal to or greater than 100 tons per year or actual emissions are greater than ten (10) tons per year. However, this source is not one (1) of the sources specifically listed in 326 IAC 6.8-2. Therefore, 326 IAC 6.8-1-2(a) applies.

<b>State Rule Applicability – Individual Facilities</b>
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### **326 IAC 6-3 (Particulate Emissions Limitations for Manufacturing Sources)**

This source is located in Lake County and is subject to 326 IAC 6.8. Pursuant to 326 IAC 6-3-1(b)(3), this source is exempt from the requirements of 326 IAC 6-3.

### **326 IAC 6.8 (Particulate Matter Limitations for Lake County)**

Pursuant to 326 IAC 6.8-1-2(a), the particulate from the steel slab scarfing plant shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

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

Pursuant to 326 IAC 6.8, the kish iron crushing operation, identified as M029, the slag processing plant, identified as M057, and the oxygen lancing metal plant, shall comply with the following:

- (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 percent (0%) 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 percent (0%) 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<sub>10</sub> 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<sub>10</sub> 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.

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

The petroleum fuel dispensing facilities (Tanks 1, 19 and 21), the gasoline fuel transfer and dispensing operation (Tank 20) and the storage tanks are located in Lake County, used to store volatile organic liquids and have maximum capacities less than 39,000 gallons each. Pursuant to 326 IAC 8-9-1(b), these volatile organic liquid storage vessels are subject to the reporting and record keeping provisions of 326 IAC 8-9-6(a) and (b). The source shall maintain the following records pursuant to 326 IAC 8-9-6(a) and (b) for the life of the vessel:

- (1) The vessel identification number,
- (2) The vessel dimensions, and
- (3) The vessel capacity.

<b>Compliance Determination and Monitoring Requirements</b>
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Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the

requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

- (a) The kish iron crushing operation has applicable compliance monitoring conditions as specified below:
- (1) Visible emission notations of the exhausts from the jaw crusher, hammer mill, screens and conveyors transfer points exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
  - (2) 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.
  - (3) 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.
  - (4) 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.
  - (5) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C- Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

These monitoring conditions are necessary to ensure compliance with 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)

- (b) The slag processing plant, identified as M057, has applicable compliance monitoring conditions as specified below:
- (1) Visible emission notations of the screens, conveyor transfer points, and crusher exhaust stacks 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.
  - (2) 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.
  - (3) 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.

- (4) 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.
- (5) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C- Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter) and 326 IAC 2-7 (Part 70).

- (c) The steel slab scarfing plant has applicable compliance monitoring conditions as specified below:

- (1) Visible Emissions Notations

- (A) Visible emission notations of the scarfing operations stack 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. Section C- Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

- (2) Parametric Monitoring

- (A) The Permittee shall record the pressure drop across the baghouse used in conjunction with the scarfing process, at least once per day when the scarfing process is in operation. When for any one (1) reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or 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.

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.

(3) Broken or Failed Bag Detection

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

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

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

These monitoring conditions are necessary because the baghouse for the steel slab scarfing plant must operate properly to ensure compliance with 326 IAC 2-3 (Emission Offset), 326 IAC 6.8-1 (Particulate Matter Limitations for Lake County), 40 CFR 64 (CAM), and 326 IAC 2-7 (Part 70).

<b>Recommendation</b>
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The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on November 18, 2010.

<b>Conclusion</b>
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The operation of this slag processing and metal recovery operation as a contractor at US Steel - Gary Works shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No.089-29892-00132.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Angela Taylor 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, by telephone at (317) 234-6543 or toll free at 1-800-451-6027, extension 4-6543.
- (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](http://www.idem.in.gov).



**Appendix A: Emissions Calculations  
Particulate from Crushing, Screening, and Conveying - Kish Iron - M029  
Uncontrolled Potential Emissions**

**Company Name:** Tube City IMS, LLC  
**Address City IN Zip:** One North Broadway, Gary, Indiana 46402  
**County:** Lake  
**SIC Code:** 3398 and 7389  
**Permit Renewal No.:** T089-29892-00132  
**Reviewer:** APT  
**Date:** 08/17/11

Type of unit	Emission Unit - New Name:	Capacity (tons / hour)	326 IAC 6-3-2 PM limit (lb/hr)	EPA emission factor - PM <sub>10</sub> (lb/ton)	Potential emissions PM <sub>10</sub> (lb/hour)	EPA emission factor - PM (lb/ton)	Potential emissions PM (lb/hour)	Total PM <sub>10</sub> Emissions (tons/yr)	Total PM Emissions (tons/yr)
<b>Crushers</b>									
Tertiary	Jaw crusher	125	53.55	0.0024	0.3	0.0054	0.675	1.314	2.9565
Tertiary	Hammer mill	125	53.55	0.0024	0.3	0.0054	0.675	1.314	2.9565
<b>Conveyors</b>									
	conveyor 1	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 2	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 3	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 4	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 5	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 6	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 7	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 8	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 9	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 10	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 11	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 12	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 13	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 14	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 15	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
	conveyor 16	125	53.55	0.0011	0.1375	0.003	0.375	0.60225	1.6425
<b>Screens</b>									
Tertiary	Screen 1	125	53.55	0.072	9	0.3	37.5	39.42	164.25
Tertiary	Screen 2	125	53.55	0.072	9	0.3	37.5	39.42	164.25
<b>Total Uncontrolled Emissions</b>									
	<b>Crushing</b>	<b>Conveying</b>	<b>Screening</b>	<b>Total Potential Emissions Before Controls</b>					
<b>PM<sub>10</sub></b>	2.63	9.636	78.84	<b>PM<sub>10</sub></b>	<b>91.10</b>				
<b>PM</b>	5.91	26.28	328.50	<b>PM</b>	<b>360.69</b>				

**Emission Factors**

Emission Factors from AP-42 Ch.11.19.2, Table 11.19.2-2 (English Units). EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS (lb/Ton) (Fifth edition, 8/2004)

**Methodology**

Emission (tons/yr) = [Capacity (tons/hr) x Emission Factor (lb/ton)] x 8760 hr/yr / 2,000 lb/ton

**Appendix A: Emissions Calculations**

**articulate from Crushing, Screening, and Conveying - Kish Iron - M029  
Controlled Potential Emissions**

**Company Name:** Tube City IMS, LLC  
**Address City IN Zip:** One North Broadway, Gary, Indiana 46402  
**County:** Lake  
**SIC Code** 3398 and 7389  
**Permit Renewal No.:** T089-29892-00132  
**Reviewer:** APT  
**Date:** 08/17/11

Type of unit	Emission Unit - New Name:	Capacity (tons / hour)	EPA emission factor - PM <sub>10</sub> (lb/ton)	Potential emissions PM <sub>10</sub> (lb/hour)	EPA emission factor - PM (lb/ton)	Potential emissions PM (lb/hour)	Total Controlled PM <sub>10</sub> Emissions (tons/yr)	Total Controlled PM Emissions (tons/yr)
<b>Crushers</b>								
Tertiary	MI0104	125	0.00054	0.0675	0.0012	0.15	0.29565	0.657
Tertiary	MI0106	125	0.00054	0.0675	0.0012	0.15	0.29565	0.657
<b>Conveyors</b>								
	conveyor 1	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 2	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 3	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 4	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 5	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 6	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 7	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 8	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 9	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 10	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 11	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 12	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 13	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 14	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 15	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
	conveyor 16	125	0.00046	0.00575	0.00014	0.0175	0.025185	0.07665
<b>Screens</b>								
Tertiary	Screen 1	125	0.0022	0.275	0.0036	0.45	1.2045	1.971
Tertiary	Screen 2	125	0.0022	0.275	0.0036	0.45	1.2045	1.971
<b>Total Controlled Emissions</b>								
	<b>Crushing</b>	<b>Conveying</b>	<b>Screening</b>	<b>Total Potential Emissions After Controls</b>				
<b>PM<sub>10</sub></b>	0.59	0.40	2.41	<b>PM<sub>10</sub></b>	<b>3.40</b>			
<b>PM</b>	1.31	1.23	3.94	<b>PM</b>	<b>6.48</b>			

**Emission Factors**

Emission Factors from AP-42 Ch.11.19.2, Table 11.19.2-2 (English Units). EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS (lb/Ton) (Fifth edition, 8/2004)

**Methodology**

Emission (tons/yr) = [Capacity (tons/hr) x Emission Factor (lb/ton)] x 8760 hr/yr / 2,000 lb/ton

**Appendix A: Emission Calculations  
Stone Processing - Transport and Loading**

**Company Name:** Tube City IMS, LLC  
**Address City IN Zip:** One North Broadway, Gary, Indiana 46402  
**County:** Lake  
**SIC Code:** 3398 and 7389  
**Permit Renewal No.:** T089-29892-00132  
**Reviewer:** APT  
**Date:** 08/17/11

Vehicle Type	Vehicle weight unloaded	Vehicle Weight Loaded	Avg. Vehicle Weight
Euclid R50 Rock Truck	38.5	88.5	63.5
Kawasaki 115Z Wheel Loader	48	63	55.5

Euclid R50 Rock Truck

**PM emissions before controls**

unpaved roads

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

$$\begin{aligned}
 & 2.5 \text{ total trip/hr} \times \\
 & 0.14204545 \text{ miles/round trip} \times \\
 & 8,760 \text{ hr/yr} = \qquad \qquad \qquad 3,111 \text{ miles per year}
 \end{aligned}$$

**PM Emissions**

$$\begin{aligned}
 E_f &= k \cdot [(s/12)^{0.7}] \cdot [(W/3)^b] \\
 &= 14.95 \text{ lb/mile} \\
 \text{where } k &= 4.9 \text{ (particle size multiplier for PM)} && (k=1.5 \text{ for PM-10}) \\
 s &= 8.3 \text{ mean \% silt content of haul roads} \\
 b &= 0.45 \text{ Constant for PM-10 and PM-30 or TSP} \\
 W &= 63.50 \text{ tons average vehicle weight} \\
 E &= \frac{14.95 \text{ lb/mi} \times 3,111 \text{ mi/yr}}{2,000 \text{ lb/ton}} = 23.25 \text{ tons/yr}
 \end{aligned}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot [(365-p)/365] = \boxed{15.29 \text{ tons/yr}}$$

where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

**PM-10 Emissions**

$$\begin{aligned}
 E_f &= k \cdot [(s/12)^{0.9}] \cdot [(W/3)^b] \\
 &= 4.25 \text{ lb/mile} \\
 \text{where } k &= 1.5 \text{ (particle size multiplier for PM-10)} && (k=4.9 \text{ for PM-30 or TSP}) \\
 s &= 8.3 \text{ mean \% silt content of haul roads in combination with plant roads} = (8.3\% + 10\%) / 2 \\
 b &= 0.45 \text{ Constant for PM-10 and PM-30 or TSP} \\
 W &= 63.50 \text{ tons average vehicle weight} \\
 E &= \frac{4.25 \text{ lb/mi} \times 3,111 \text{ mi/yr}}{2,000 \text{ lb/ton}} = 6.61 \text{ tons/yr}
 \end{aligned}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot [(365-p)/365] = \boxed{4.35 \text{ tons/yr}}$$

where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

**Controlled Transport**

Pollutant	Potential Emissions	Control Efficiency	After Control Potential Emissions
PM	15.29	50%	7.65
PM10	4.35	50%	2.17

The following calculations determine the amount of emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 13.2.4 (Fifth edition, 1/95).

Loading & Unloading

**Capacity (tons/hr)** 50  
**Potential Emissions (tons/yr)** 3.79

$$\begin{aligned}
 E_f &= k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4} \\
 &= 0.0173 \text{ lb/ton} \\
 \text{where } k &= 0.74 \text{ (particle size multiplier)} \\
 U &= 10 \text{ mile/hr mean wind speed} \\
 M &= 0.92 \text{ \% material moisture content}
 \end{aligned}$$

Euclid R50 Rock Truck

Total Fugitive Emissions (PM)=	19.08
Total Controlled Fugitive Emissions (PM) =	11.43
Total Fugitive Emissions (PM10)=	8.14
Total Controlled Fugitive Emissions (PM10) =	5.96

**Methodology**

PTE (tons/yr) = Capacity (ton/hr) x EF (lb/ton) x 2000 (lb/ton) x 8760 (hr/yr).

**Appendix A: Emission Calculations  
Stone Processing - Transport and Loading**

**Company Name:** Tube City IMS, LLC  
**Address City IN Zip:** One North Broadway, Gary, Indiana 46402  
**County:** Lake  
**SIC Code:** 3398 and 7389  
**Permit Renewal No.:** T089-29892-00132  
**Reviewer:** APT  
**Date:** 08/17/11

Vehicle Type	Vehicle weight unloaded	Vehicle Weight Loaded	Avg. Vehicle Weight
Euclid R50 Rock Truck	38.5	88.5	63.5
Kawasaki 115Z Wheel Loader	48	63	55.5

Kawasaki 115Z Wheel Loader

**PM emissions before controls**

unpaved roads

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

$$8.3 \text{ total trip/hr} \times 0.017045455 \text{ miles/round trip} \times 8,760 \text{ hr/yr} = 1,239 \text{ miles per year}$$

**PM Emissions**

$$E_f = k \cdot \left[ \frac{s}{12} \right]^{0.7} \cdot \left[ \frac{W}{3} \right]^b$$

= 14.07 lb/mile

where k = 4.9 (particle size multiplier for PM) (k=1.5 for PM-10)  
s = 8.3 mean % silt content of haul roads  
b = 0.45 Constant for PM-10 and PM-30 or TSP  
W = 55.50 tons average vehicle weight

$$E = \frac{14.07 \text{ lb/mi} \times 1,239 \text{ mi/yr}}{2,000 \text{ lb/ton}} = 8.72 \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot \left[ \frac{365-p}{365} \right] = 5.73 \text{ tons/yr}$$

where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

**PM-10 Emissions**

$$E_f = k \cdot \left[ \frac{s}{12} \right]^{0.9} \cdot \left[ \frac{W}{3} \right]^b$$

= 4.00 lb/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)  
s = 8.3 mean % silt content of haul roads in combination with plant roads = (8.3% + 10%) / 2  
b = 0.45 Constant for PM-10 and PM-30 or TSP  
W = 55.50 tons average vehicle weight

$$E = \frac{4.00 \text{ lb/mi} \times 1,239 \text{ mi/yr}}{2,000 \text{ lb/ton}} = 2.48 \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot \left[ \frac{365-p}{365} \right] = 1.63 \text{ tons/yr}$$

where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

**Controlled Transport**

Pollutant	Potential Emissions	Control Efficiency	After Control Potential Emissions
PM	5.73	50%	2.87
PM10	1.63	50%	0.82

The following calculations determine the amount of emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 13.2.4 (Fifth edition, 1/95).

Loading & Unloading

**Capacity (tons/hr)** 15  
**Potential Emissions (tons/yr)** 1.14

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

= 0.0173 lb/ton

where k = 0.74 (particle size multiplier)  
U = 10 mile/hr mean wind speed  
M = 0.92 % material moisture content

Total Fugitive Emissions (PM)=	6.87
Total Controlled Fugitive Emissions (PM) =	4.00
Total Fugitive Emissions (PM10)=	2.77
Total Controlled Fugitive Emissions (PM10) =	1.95

**Methodology**

PTE (tons/yr) = Capacity (ton/hr) x EF (lb/ton) x 2000 (lb/ton) x 8760 (hr/yr).

**Appendix A: Emission Calculations  
Stone Quarry and Processing - Storage**

**Company Name:** Tube City IMS, LLC  
**Address City IN Zip:** One North Broadway, Gary, Indiana 46402  
**County:** Lake  
**SIC Code** 3398 and 7389  
**Permit Renewal No.:** T089-29892-00132  
**Reviewer:** APT  
**Date:** 08/17/11

**Fugitive Emissions Kish Iron Operation**

Storage emissions, which result from wind erosion, are determined by the following calculations:

Storage pile emissions, which result from wind erosion, are determined by the following calculations:

$$E_f = 1.7 (s/1.5) * (365-p) / 235 * (f/15) = 1.85 \text{ lb/ac/day}$$

where: s = 1.6 % silt content of material  
p = 125 days of rain greater than or equal to 0.01 inches  
f = 15 % of wind greater than or equal to 12 mph

Storage capacity (SC) of site (tons) = (# acres)\*(43560 sqft/acre)\*(25 ft high)\*(1/40 ton/cuft)  
Storage capacity (SC) of site (tons) = 10,890

$$\text{Potential PM Emissions (tpy)} = E_f * SC * (40 \text{ cuft/ton}) * 365 \text{ day/yr} / (2000 \text{ lb/ton} * 43560 \text{ sqft/acre} * 25 \text{ ft})$$

**Potential PM Emissions (tpy) = 0.14 tpy**  
**Potential PM10 Emissions (tpy) = 0.14 tpy**

**Total fugitive PM emissions from Storage:**

	<u>Uncontrolled PTE</u>		<u>Controlled PTE</u>
<b>Storage</b>	<b>0.14 tons/yr x</b>	<b>10% emitted after controls =</b>	<b>0.01 tons/yr</b>

**Total fugitive PM-10 emissions from Storage:**

	<u>Uncontrolled PTE</u>		<u>Controlled PTE</u>
<b>Storage</b>	<b>0.14 tons/yr x</b>	<b>10% emitted after controls =</b>	<b>0.01 tons/yr</b>

# What if you are not satisfied with this decision and you want to file an appeal?

## **Who may file an appeal?**

The decision described in the accompanying Notice of Decision may be administratively appealed. Filing an appeal is formally known as filing a “Petition for Administrative Review” to request an “administrative hearing.”

If you object to this decision issued by the Indiana Department of Environmental Management (IDEM) and are: 1) the person to whom the decision was directed, 2) a party specified by law as being eligible to appeal, or 3) aggrieved or adversely affected by the decision, you are entitled to file an appeal. (An aggrieved or adversely affected person is one who would be considered by the court to be negatively impacted by the decision. If you file an appeal because you feel that you are aggrieved, it will be up to you to demonstrate in your appeal how you are directly impacted in a negative way by the decision).

The Indiana Office of Environmental Adjudication (OEA) was established by state law – see Indiana Code (IC) 4-21.5-7 – and is a separate state agency independent of IDEM. The jurisdiction of the OEA is limited to the review of environmental pollution concerns or any alleged technical or legal deficiencies associated with the IDEM decision making process. Once your request has been received by OEA, your appeal may be considered by an Environmental Law Judge.

## **What is required of persons filing an appeal?**

Filing an appeal is a legal proceeding, so it is suggested that you consult with an attorney. Your request for an appeal must include your name and address and identify your interest in the decision (Or, if you are representing someone else, his or her name and address and their interest in the decision). In addition, please include a photocopy of the accompanying Notice of Decision or list the permit number and name of the applicant, or responsible party, in your letter.

Before a hearing is granted, you must identify the reason for the appeal request and the issues proposed for consideration at the hearing. You also must identify the permit terms and conditions that, in your judgment, would appropriately satisfy the requirements of law with respect to the IDEM decision being appealed. That is, you must suggest an alternative to the language in the permit (or other order, or decision) being appealed, and your suggested changes must be consistent with all applicable laws (See Indiana Code 13-15-6-2) and rules (See Title 315 of the Indiana Administrative Code, or 315 IAC).

The effective date of this agency action is stated on the accompanying Notice of Decision (or other IDEM decision notice). If you file a “Petition for Administrative Review” (appeal), you may wish to specifically request that the action be “stayed” (temporarily halted) because most appeals do not allow for an automatic “stay.” If, after an evidentiary hearing, a “stay” is granted, the IDEM-approved action may be halted altogether, or only allowed to continue in part, until a final decision has been made regarding the appeal. However, if the action is not “stayed” the IDEM-approved activity will be allowed to continue during the appeal process.

*(See reverse side)*

### **Where can you file an appeal?**

If you wish to file an appeal, you must do so in writing. There are no standard forms to fill out and submit, so you must state your case in a letter (called a petition for administrative review) to the Indiana Office of Environmental Adjudication (OEA). Do not send the original copy of your appeal request to IDEM. Instead, send or deliver your letter to:

The Indiana Office of Environmental Adjudication  
100 North Senate Ave.  
Indiana Government Center North  
Room N501E  
Indianapolis, IN 46204

If you file an appeal, also please send a copy of your appeal letter to the IDEM contact person identified in the Notice of Decision, and to the applicant (person receiving an IDEM permit, or other approval).

Your appeal (petition for administrative review) must be received by the Office of Environmental Adjudication in a timely manner. Different types of permit approvals have different deadlines for filing an appeal. The accompanying Notice of Decision (NOD) explains how to determine the due date for filing an appeal for this particular permit decision. To ensure that you meet this filing requirement, your appeal request must be:

- 1) Delivered in person to the OEA by the close-of-business on the due date. (If the due date falls on a day when the Office of Environmental Adjudication (OEA) is closed for the weekend or for a state holiday, then your petition will be accepted on the next business day on which OEA is open.); or
- 2) Given to a private carrier who will deliver it to the OEA on your behalf, (and from whom you must obtain a receipt dated on or before the due date); or
- 3) For those appeal requests sent by U.S. Mail, your letter must be postmarked by no later than midnight of the due date; or
- 4) Faxed to the OEA at 317/233-9372 before the close-of-business of the due date, provided that the original signed "Petition for Administrative Review" is also sent, or delivered, to the OEA in a timely manner.

### **What are the costs associated with filing an appeal?**

The OEA does not charge a fee for filing documents for an administrative review or for the use of its hearing facilities. However, OEA does charge a fifteen cent (\$.15) per page fee for copies of any documents you may request. Another cost that could be associated with your appeal would be for attorney's fees. Although you have the option to act as your own attorney, the administrative review and associated hearing are complex legal proceedings; therefore, you should consider whether your interests would be better represented by an experienced attorney.

### **What can you expect from the Office of Environmental Adjudication (OEA) after you file for an appeal?**

The OEA will provide you with notice of any prehearing conferences, preliminary hearings, hearings, "stays," or orders disposing of the review of this decision. In addition, you may contact the OEA by phone at 317/232-8591 with any scheduling questions. However, technical questions should be directed to IDEM at the number indicated on the Notice of Decision.

Do not expect to discuss details of your case with the OEA other than in a formal setting such as a prehearing conference, a formal hearing, or a settlement conference. The OEA is not allowed to discuss a case without all sides being present. All parties to the proceeding are expected to appear at the initial prehearing conference.



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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

*Thomas W. Easterly*  
**Commissioner**

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

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

**TO:** Mike Connolly  
Tube City IMS, LLC  
1155 Business Center  
Horsham, PA 19044

**DATE:** December 5, 2011

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

**SUBJECT:** Final Decision  
Title V - Renewal  
089-29892-00132

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:  
David Schoffman (VP – Tube City IMS, LLC)  
General Manager (US Steel)  
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



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

December 5, 2011

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: Tube City IMS, LLC**  
**Permit Number: 089-29892-00132**

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

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

TO: Interested Parties / Applicant

DATE: December 5, 2011

RE: Tube City IMS, LLC / 089-29892-00132

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](mailto:PPEAR@IDEM.IN.GOV).*

Enclosures  
CD Memo.dot 11/14/08

# Mail Code 61-53

IDEM Staff	MIDENNEY 12/5/2011 Tube City IMS LLC 089-29892-00132 (final)		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	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		

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		Mike Connolly Tube City IMS LLC 1155 Business Center Dr Horsham PA 19044-3454 (Source CAATS) via confirm delivery										
2		David Schoffman VP Tube City IMS LLC 1155 Business Center Dr Horsham 19044-3454 (RO CAATS)										
3		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 (Local Official)										
4		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 (Affected Party)										
5		Gary Mayors Office 401 Broadway # 203 Gary IN 46402 (Local Official)										
6		Gary Public Library 220 W 5th Avenue Gary IN 46402 (Library)										
7		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 (Health Department)										
8		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 (Affected Party)										
9		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)										
10		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)										
11		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 (Affected Party)										
12		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 (Affected Party)										
13		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)										
14		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)										
15		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)										

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 <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
<b>14</b>			

# Mail Code 61-53

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Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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		Northwestern In Regional Planning Com (NIRPC) 6100 Southport Road Portage IN 46368 (Affected Party)										
2		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)										
3		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)										
4		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 (Affected Party)										
5		General Manager US Steel One North Broadway Gary IN 46402 (Source ? addl contact)										
6		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 (Affected Party)										
7		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)										
8		Gary City Council 401 Broadway # 209 Gary IN 46402 (Local Official)										
9		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 (Affected Party)										
10		Gitte Laasby Post Tribune 1433 E. 83rd Ave Merrillville IN 46410 (Affected Party)										
11		Susan Severtson City of Gary Law Dept. 401 Broadway 4th Floor Gary IN 46402 (Local Official)										
12		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
13												
14												
15												

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