



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: November 17, 2008

RE: ArcelorMittal Indiana Harbor, LLC / 089-26477-00318

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Mr. James Flannery
ArcelorMittal Indiana Harbor, LLC
3001 Dickey Road, Mail Station 001
East Chicago, IN 46312

November 17, 2008

Re: 089-26477-00318
Significant Source Modification to:
Part 70 Operating Permit No. T089-7099-00318

Dear Mr. Flannery:

ArcelorMittal Indiana Harbor, LLC was issued Part 70 Operating Permit T089-7099-00318 on December 7, 2004 for an integrated steel mill. An application to modify the source was received on April 30, 2008. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (a) One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:
 - (1) Receiving:
 - (A) Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;
 - (B) Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;
 - (C) Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;
 - (D) Coal Truck Haul Roads, identified as CF01, using water flushing and sweeping as control, exhausting to the atmosphere;
 - (E) One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (F) One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;

- (G) One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (H) One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (I) One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (J) One (1) Coal Storage Pile Area, approved for construction in 2008, identified as CF02, covering a nominal maximum area of 116,000 square feet, exhausting to the atmosphere;
 - (K) Front end wheel loaders with each having a minimum of an eight (8) cubic yard bucket and a vehicle weight of 100,000 lbs traveling on paved and unpaved roads, such that the use of any larger capacity wheel loader would be acceptable since it would reduce vehicle miles traveled and fugitive emissions; and
 - (L) Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and
- (2) Grinding & Drying Plant:
- (A) Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01-S;
 - (B) Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02-S;
 - (C) Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and
 - (D) Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04-S.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

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

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, and ask for John Haney or extension 4-5328, or dial (317) 234-5328.

Sincerely/Original Signed By:

Donald F. Robin, P.E., Section Chief
Permits Branch
Office of Air Quality

Attachments

DFR/jeh

cc: File – Lake County
U.S. EPA, Region V
Lake County Health Department
Northwest Regional Office
Air Compliance Section Inspector
Compliance Data Section
Permits Administration and Support



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PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

**ArcelorMittal Indiana Harbor, LLC
3001 Dickey Road
East Chicago, Indiana 46312**

(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 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 70.6, IC 13-15 and IC 13-17.

Second Significant Source Modification: 089-26477-00318	
Issued by/Original Signed By: Donald F. Robin, P.E., Section Chief Permits Branch Office of Air Quality	Issuance Date: November 17, 2008

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- D.6.5 Particulate Matter (PM) [326 IAC 6.8-1-2]
- D.6.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.6.7 Testing Requirements [40 CFR 63.1161] [40 CFR 63.1162]

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

- D.6.8 Monitoring Requirements [40 CFR 63.1162]

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

- D.6.9 Record Keeping Requirements
- D.6.10 Reporting Requirements [40 CFR 63.1164]

D.7 FACILITY OPERATION CONDITIONS – Utilities

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

- D.7.1 Lake County: PM₁₀ Emission Requirements [326 IAC 6.8-2-21]
- D.7.2 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]
- D.7.3 PSD and Emissions Offset Credit Limits [326 IAC 2-2 and 326 IAC 2-3]
- D.7.4 Nitrogen Oxide Reduction program for Specific Source Categories [326 IAC 10-3]
- D.7.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.7.6 Nitrogen Oxide Reduction program for Specific Source Categories [326 IAC 10-3]
- D.7.7 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]

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

- D.7.8 Record Keeping Requirements
- D.7.9 Reporting Requirements

D.8 FACILITY OPERATION CONDITIONS – Shops

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

- D.8.1 Gasoline Storage Tank Requirements [326 IAC 8-4-6]
- D.8.2 Gasoline Dispensing Facility Requirements [326 IAC 8-4-6]
- D.8.3 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

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

- D.8.4 Gasoline Dispensing Facility Monitoring Requirements [326 IAC 8-4-6]

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

- D.8.5 Record Keeping Requirements

D.9 FACILITY OPERATION CONDITIONS – Storage Vessels

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

- D.9.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]
- D.9.2 NESHAP Operational and equipment standards [40 CFR 63.63.1159, Subpart CCC]

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

- D.9.3 Monitoring Requirements [40 CFR 63.1162]

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

- D.9.4 Record Keeping Requirements

D.10 FACILITY OPERATION CONDITIONS – Pulverized Coal Injection (PCI) System

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

- D.10.1 PSD and Nonattainment NSR Minor Limit [326 IAC 2-2] [326 IAC 2-1.1-5]
- D.10.2 Particulate Matter (PM) [326 IAC 6.8-1-2]
- D.10.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.10.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 6.8-1-2]
- D.10.5 Particulate Control

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

- D.10.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.10.7 Bag Filter Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.10.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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

- D.10.9 Record Keeping Requirements
- D.10.10 Reporting Requirements

D.11 FACILITY OPERATION CONDITIONS – Insignificant Activities

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

- D.11.1 Particulate Matter (PM) [326 IAC 6.8-1-2]
- D.11.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-1]
- D.11.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
- D.11.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

Compliance Determination Requirements

D.11.5 Particulate Control

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

D.11.6 Record Keeping Requirements

D.11.7 Volatile Organic Compounds (VOC) [326 IAC 8-3-8] (Material requirements for cold cleaning degreasers)

D.12 FACILITY OPERATION CONDITIONS – Fugitives

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

D.12.1 Particulate Matter (PM) [326 IAC 6.8-10]

Compliance Determination Requirements

D.12.2 Particulate Matter (PM)

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

D.12.3 Record Keeping Requirements

D.12.4 Reporting Requirements

E.1 EMISSIONS UNIT OPERATION CONDITIONS

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1]
[40 CFR 60, Subpart A]

E.1.2 New Source Performance Standards for Coal Preparation Plants [40 CFR 60, Subpart Y]
[326 IAC 12]

Certification

Emergency Occurrence Report

Quarterly Report (Raw Coal Truck Unloading System)

Quarterly Report (Thaw Shed Heater)

Semi-Annual Natural Gas Fired Boiler Certification

Quarterly Deviation and Compliance Monitoring Report

Attachment A - New Source Performance Standards for Coal Preparation Plants

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)]

The Permittee owns and operates a stationary integrated steel mill and finishing facility.

Source Name:	ArcelorMittal Indiana Harbor, LLC
Source Address:	3001 Dickey Road, East Chicago, Indiana 46312
Mailing Address:	3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312
General Source Phone Number:	(219) 391-2571
SIC Code:	3312
County Location:	Lake County
Source Location Status:	Nonattainment for PM _{2.5} Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD, Emission Offset, and Nonattainment NSR Rules Major Source, under Section 112 of the Clean Air Act 1 of 28 Source Categories under PSD, Emission Offset, and Nonattainment NSR Rules

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

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

- (a) ArcelorMittal Indiana Harbor, LLC (Plant ID 089-00318), the primary operation, is located at 3001 Dickey Road, East Chicago, Indiana; and
- (b) Oil Tech, Inc (Plant ID 089-00375), the on-site contractor (a used oil recycling facility), is located at 3001 Dickey Road, East Chicago, Indiana;
- (c) International Mill Service (Plant ID 089-00353), the on-site contractor (a steel slab scarfer) is located at 3001 Dickey Road, East Chicago, Indiana;
- (d) Edward Levy (Plant ID 089-00339), the on-site contractor (a slag processing facility), is located at 3001 Dickey Road, East Chicago, Indiana;
- (e) Ironside Energy, LLC (Plant ID 089-00448), the on-site contractor (an industrial steam and electric power cogeneration plant), is located at 3001 Dickey Road, East Chicago, Indiana; and
- (f) Heckett Multiserv (Plant ID 089-00341), the on-site contractor (a slag and kish processing plant), is located at 3001 Dickey Road, East Chicago, Indiana.

IDEM has determined that ArcelorMittal Indiana Harbor, LLC and each of the on-site contractors are under the common control of ArcelorMittal Indiana Harbor, LLC. These plants are considered one source due to contractual control. Therefore, the term "source" in the Part 70 documents refers to both ArcelorMittal Indiana Harbor, LLC and the on-site contractors as one source.

Separate Part 70 permits will be issued to ArcelorMittal Indiana Harbor, LLC and each on-site contractor, solely for administrative purposes.

Company Name	TV Permit Number
ArcelorMittal Indiana Harbor, LLC	089-7099-00318
Oil Technology	089-7517-00375
International Mill Service	089-7562-00353
Edward Levy	089-6260-00339
Ironside Energy	089-11557-00448
Heckett Multiserv	089-7066-00341

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

ArcelorMittal Indiana Harbor, LLC consists of the following permitted emission units and pollution control devices:

(a) Two (2) Blast Furnaces, designated as Blast Furnace No. 3 and Blast Furnace No. 4, comprised of the following facilities, process equipment, and operational practices:

- (1) No. 3 Blast Furnace, with a maximum capacity of 4,555,200 tons raw material per year, including an integral gas cleaning system consisting of a dust catcher, separator, two scrubbers (primary and secondary) and one cooling tower, with excess gas exhausting through a flare at stack (S1E); installed in 1953.
- (2) No. 3 Blast Furnace Stoves, designated as stoves 31, 32, and 33, exhausting to the combustion stack (S1A) with a heat input rate of 441 MMBtu/hr and installed in 1953.
- (3) No. 3 Blast Furnace Casthouse with Passive Emission Control (PEC) to suppress fumes in the casthouse, consisting of slag and iron runner covers along with natural gas flame suppression exhausting to the No. 3 Blast Furnace Casthouse Roof Monitor (V1A).
- (4) No. 4 Blast Furnace, with a maximum capacity of 5,490,836 tons raw material per year, including an integral gas cleaning system consisting of a dust catcher, separator, two scrubbers (primary and secondary) and one cooling tower with excess gas exhausting through a flare at stack-(S1D); installed in 1967.
- (5) No. 4 Blast Furnace Stoves, designated as stoves 41, 42, and 43, exhausting to the combustion stack (S1C) with a heat input rate of 486 MMBtu/hr and installed in 1967.
- (6) No. 4 Blast Furnace Casthouse with Passive Emission Control (PEC) to suppress fumes in the casthouse, consisting of slag and iron runner covers along with natural gas flame suppression exhausting to the No. 4 Blast Furnace Casthouse Roof Monitor (V1B).
- (7) No. 4 Blast Furnace Casthouse Baghouse used to control emissions from the casthouse with an airflow rate of 147,000 acfm exhausting at stack (S1B) when operating one (1) fan. No. 4 Blast Furnace Casthouse Baghouse has an air flow rate of 240,000 acfm when operating two (2) fans.
- (8) Miscellaneous equipment for handling of raw materials, including but not limited to, coke, iron ore pellets, limestone, slag and sinter.

(b) One (1) Sinter Plant, installed in 1958, with a maximum raw material usage rate of 2,592,782 tons per year and a maximum annual production capacity of 2,119,920

tons of sinter per year, comprised of the following facilities, fugitive sources, process equipment, and operational practices:

- (1) Raw material handling area consisting of material feeders (storage bins), conveyors, a pug mill and hearth layer returns from screening that combines these raw materials to create a uniform mixed burden that is deposited on the sinter strand.
- (2) One (1) natural gas fired ignition furnace used to ignite the surface of the mixed burden deposited on the sinter strand.
- (3) One (1) sinter plant main windbox, with twenty-one (21) vacuum chambers and emissions controlled by drop- out boxes, multi-cyclones (6 units), settling chamber and a wet venturi scrubber (containing chevrons) having a flow rate of 335,000 acfm, exhausting to stack (S2A).
- (4) One (1) sinter plant discharge end (breaker), with a hood to capture light dust and controlled by a wet venturi scrubber having a flow rate of 100,400 acfm, exhausting to stack (S2B).
- (5) One (1) Sinter Cooler and sinter product screening station.

(c) Basic Oxygen Furnace (BOF) Shop, comprised of the following facilities, process equipment, and operational practices:

- (1) One (1) Hot Metal Reladle/Desulf Complex consisting of two (2) reladle stations, two (2) desulfurization stations and two (2) slag skimming stations, installed in 1982, having a maximum capacity of 5,630,208 tons per year of hot metal and sulfur scavenger. Emissions from all stations are controlled by a baghouse, designated as Baghouse No. 1 with captured emissions exhausting to stack (S3B) and uncaptured/fugitive emissions exhausting through a roof monitor (V3B).
- (2) One (1) Basic Oxygen Furnace (BOF) Complex, consisting of two (2) basic oxygen furnaces, designated as No. 1 and No. 2 Furnace, installed in 1968, having a combined maximum capacity of 7,456,512 tons of hot metal, flux, alloys, and scrap per year. Emissions from furnace operations such as charging, oxygen blowing and tapping are controlled by an electrostatic precipitator, with captured emissions exhausting to stack S3A and uncaptured/fugitive emissions exhausting through a roof monitor at vent V3A.
- (3) One (1) Ladle Metallurgical Facility (LMF), installed in 1988, consisting of (2) heating stations, having a combined maximum capacity of 5,606,400 tons of hot metal, flux and alloys per year. Emissions from LMF operations such as argon stirring, heating, and alloy addition, are controlled by a baghouse, designated as Baghouse No. 5 (LMF), with captured emissions exhausting to stack (S3C) and uncaptured/fugitive emissions exhausting through a roof monitor at vent (V3C).
- (4) One (1) Vacuum Degassing Facility (decarbonization), installed in 1988, with carbon monoxide (CO) emissions controlled by an integral CO scrubber and exhausting to the flare at stack (S3D).
- (5) One (1) Continuous Casting Complex consisting of two (2) single-strand slab casting machines, each with its own ladle turrent, tundish and mold. Molten steel from the LMF is directed into the turrent than cooled in the mold to begin the solidification process. The steel continues to solidify as it passes through the water spray cooling system to produce slabs that are finally cut to length using an acetylene torch-cutting machine. Emissions from water-cooling are directed to stacks (S3E/F).

- (6) Lime handling operations including trailer unloading and lime handling from silos with emissions captured by single compartment, 16 bag filter vents.
 - (7) Miscellaneous dust removal process consisting of recovered BOF ESP dust, baghouse dust, handling and conditioning equipment, silos and pug mill; (fugitives).
 - (8) Miscellaneous natural gas combustion consisting of ladle preheat, ladle drying, space heaters, tundish preheat and drying, tundish nozzle preheat, ladle shroud preheat, and slab torch cutting.
 - (9) Miscellaneous material handling.
 - (10) One (1) pneumatic conveyance system, equipped with a bin vent filter (identified as BV3D), exhausting at stack ID V3D, having a control efficiency of ninety-nine percent (99%), used for lime injection into one (1) existing steel ladle metallurgy furnace (LMF) facility (identified as LMF).
- (d) 84 Inch Hot Strip Mill, comprising the following facilities, process equipment, and operational practices:**
- (1) Three (3) Reheat Furnaces identified as Nos. 1, 2 and 3, installed in 1968, having a heat input rate of 427 MMBtu per hour each.
 - (A) No. 1 Reheat Furnace, having the ability to burn natural gas and fuel oil with emissions exhausting through stack S4A.
 - (B) No. 2 Reheat Furnace, having the ability to burn natural gas and fuel oil with emissions exhausting through stack S4B.
 - (C) No. 3 Reheat Furnace, having the ability to burn natural gas and fuel oil with emissions exhausting through stack S4C.
 - (2) One (1) Hot Rolling Mill, where steel slabs from the reheat furnaces are converted to hot bands (steel coils). The mill consists of scale breakers, six (6) roughing stands, a crop shear, seven (7) finishing stands, a cooling table, and three (3) downcoilers. The mill fugitive emissions from these processes vent inside the building (V4A).
 - (3) One (1), two (2) stand temper mill.
 - (4) Twenty-eight (28) natural gas space heaters having a combined heat input rate of 84 MMBtu/hr.
- (e) One (1) Sheet Mill Finishing operation, designated as No. 2 Sheet Mill, having a maximum capacity of 1,404,929 tons per year, comprised of the following facilities, process equipment, and operational practices:**
- (1) No. 1 Galvanizing and Aluminizing Line consisting of:
 - (A) Flame Furnace installed in 1959 having heat input rate of 18 MMBtu/hr with uncontrolled emissions exhausting through vent (V5A) to No. 2 Sheet Mill shop.
 - (B) Galvanizing and Aluminizing furnace installed in 1959 having a heat input rate of 37 MMBtu/hr with uncontrolled emissions exhausting through vent (V5A) to No. 2 Sheet Mill shop.

- (C) Coating pot installed in 1959 with uncontrolled fugitive emissions exhausting into the No. 2 Sheet Mill shop.
 - (D) Chromic Acid Bath installed in 1959 with water vapor exhausting into the No. 2 Sheet Mill shop.
 - (E) Hot air dryer installed in 1959 exhausting to No. 2 Sheet Mill shop.
 - (F) One (1) caustic cleaning system, constructed in 2006, and approved for modification and burner replacement in 2008, with a fume exhaust system and mist eliminator serving Stages #1 and #2, exhausting through stack (S5G), a fume exhaust system and mist eliminator serving Stage #3, exhausting through stack (S5D), and equipped with a 8.25 MMBtu/hr natural gas burners exhausting uncontrolled through stack (S5E).
 - (G) One (1) pre-melt furnace, constructed in 2006, having a heat input rate of 3 MMBtu/hour with uncontrolled emissions exhausting through stack (S5F).
- (2) No. 2 Galvanizing Line, installed in 1988, consisting of:
- (A) Flame Furnace having heat input rate of 150 MMBtu/hr with uncontrolled emissions exhausting through stack S5B.
 - (B) Galvanizing furnace having a heat input rate of 49.65 MMBtu/hr from sixty (60) "Phase 1" recuperative burners with a total heat input rate of 27.26 MMBtu/hr and sixty-two (62) ultra-low NOx recuperative burners with a total heat input rate of 22.39 MMBtu/hr in the radiant tube section with uncontrolled emissions exhausting through vent (V5A) to No. 2 Sheet Mill shop.
 - (C) One (1) natural gas fired Edge Flame Burner on line No. 2, with uncontrolled emissions venting into the No. 2 Sheet Mill shop
 - (D) Coating pot with uncontrolled fugitive emissions exhausting into the No. 2 Sheet Mill shop.
 - (E) One (1) natural gas fired Selas Furnace, with uncontrolled emissions venting through vent (V5A) to No. 2 Sheet Mill shop.
 - (F) Hot air dryers exhausting to No. 2 Sheet Mill shop.
 - (G) Chromic Acid Bath with water vapor exhausting into the No. 2 Sheet Mill shop.
 - (H) Temper Mill.
- (3) Seven (7) space heaters, installed in 1968, having a combined heat input of 17.5 MMBtu per hour, with uncontrolled emissions exhausting to vent (V5B) to No. 2 Sheet Mill shop.
- (f) One (1) Sheet Mill Finishing operation, designated as No. 3 Sheet Mill, having a maximum capacity of 2,156,537 tons per year, comprised of the following facilities, process equipment, and operational practices:**
- (1) Seven (7) Single Stack Batch Annealing Furnaces (1-7) (installed in 1965), having a combined heat input of 24.5 MMBtu per hour, with uncontrolled emissions exhausting inside the building to vent (V6A).

- (2) Eleven (11) Four-Stack Batch Annealing Furnaces (1-11) (installed in 1966), having a combined heat input of 176 MMBtu per hour, with uncontrolled emissions exhausting inside the building to vent (V6A).
- (3) One (1) Four-Stack Batch Annealing Furnace (13) (installed in 1998) with a heat input capacity of 10 MMBtu per hour, with uncontrolled emissions exhausting inside the building to vent (V6A).
- (4) One (1) Pickle Line consisting of four (4) HCl process tanks and one (1) water rinse tank (installed in 1964), with acid fumes controlled by a scrubber system (14,000 acfm) comprised of tank hoods and ductwork connected to two (2) scrubbers (in series) exhausting through scrubber stack (S6A).
- (5) One (1) Shot Blaster, used to put a matte finish on the surface of reconditioned rolls. Emissions are controlled by a small baghouse exhausting through vent (V6B) outside the building.
- (6) One (1) tempering operation consisting of a 2-Stand Temper Mill with fugitive emissions exhausting inside the building.
- (7) One (1) steel coil cold reduction operation consisting of one (1) 5- Stand Tandem Mill where steel coil thickness is reduced to final specification, with emissions exhausting through stack (S6B).
- (8) Miscellaneous activities include two (2) steel sheet edge slitters, electrostatic oiling space heating and portable heating (to prevent equipment freezing).

(g) Utilities comprised of the following facilities, process equipment, and operational practices:

- (1) No. 5 Boiler, with a heat input rate of 454 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stacks S8C/D, installed in 1952.
- (2) No. 6 Boiler, with a heat input rate of 454 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stack S8E, installed in 1956.
- (3) No. 7 Boiler, with a heat input rate of 454 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stack S8F, installed in 1956.
- (4) No. 8 Boiler, with a heat input rate of 1090 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stack S8G, installed in 1967.

(h) Shops*

- (1) Machine Shop
- (2) Refrigeration Shop
- (3) Electrical Shop
- (4) Bridge Shop
- (5) Pipe Shop
- (6) Line Shop
- (7) Fabrication Shop
- (8) Carpenter Shop

- (9) Paint Shop and Paint Building
- (10) Mason Shop
- (11) Transportation Shop
 - (A) Gasoline Dispensing Facility with 10,000 gallon capacity Storage Tank (T4A22) (162,504 gal/yr throughput), installed in 1988.
 - (B) Two (2) Diesel Fuel Storage Tanks (T-4A7 & T-4A8) each with a 10,000 gallon storage capacity.
- (12) Locomotive Shop including Railcar and Yard Storage.

*Activities performed in the shops are listed in the insignificant activities

(i) Storage Vessels: (all tanks installed before 1975)

- (1) One (1) 400,000 gallon storage tank containing #6 fuel oil (T4F24).
- (2) One (1) 70,000 gallon storage tank containing #6 fuel oil (T4A1).
- (3) One (1) 25,000 gallon diesel fuel storage tank (T4A13)
- (4) One (1) 2,000,000 gallon storage tank containing #6 fuel oil (T4A4).
- (5) One (1) 200,000 gallon storage tank containing #6 fuel oil (T4A5).
- (6) One (1) 3,400,000 gallon storage tank containing #6 fuel oil (T4C9).
- (7) One (1) 3,400,000 gallon storage tank containing #6 fuel oil (T4A C10).
- (8) Three (3) 5,000 gallon bleach storage tanks (TR-05, TR-06, TR-07).
- (9) Two (2) 5,000 gallon storage tanks containing hydrochloric acid (HCl) (TR-22, TR-23).
- (10) One (1) 5,000 gallon storage tank containing ethylene glycol (T4E15).
- (11) Two (2) 30,000 gallon storage tank containing hydrochloric acid (HCl) (T-238, T-239).
- (12) One (1) 8,000 gallon diesel fuel tank (T-4F95).

(j) One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:

- (1) Receiving:
 - (A) Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;
 - (B) Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;

- (C) Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;
 - (D) Coal Truck Haul Roads, identified as CF01, using water flushing and sweeping as control, exhausting to the atmosphere;
 - (E) One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (F) One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (G) One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (H) One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (I) One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (J) One (1) Coal Storage Pile Area, approved for construction in 2008, identified as CF02, covering a nominal maximum area of 116,000 square feet, exhausting to the atmosphere;
 - (K) Front end wheel loaders with each having a minimum of an eight (8) cubic yard bucket and a vehicle weight of 100,000 lbs traveling on paved and unpaved roads, such that the use of any larger capacity wheel loader would be acceptable since it would reduce vehicle miles traveled and fugitive emissions; and
 - (L) Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and
- (2) Grinding & Drying Plant:
- (A) Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01-S;
 - (B) Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02-S;
 - (C) Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and
 - (D) Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04-S.

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

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month. [326 IAC 8-9-1]
- (b) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons. [326 IAC 8-9-1]
- (c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6.8-1-2]
- (e) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6.8-1-2]

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, T089-7099-00318, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

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

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

B.4 Enforceability [326 IAC 2-7-7]

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

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

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

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

B.8 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

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

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]

- (a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-7-16]

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

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

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

Telephone Number: 317-233-0178 (ask for Compliance Section)

Facsimile Number: 317-233-6865

Northwest Regional Office Telephone Number: 219-757-0265

Northwest Regional Office Facsimile Number: 219-757-0267

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

Indiana Department of Environmental Management

Compliance Branch, Office of Air Quality

100 North Senate Avenue

MC61-53 IGCN 1003

Indianapolis, Indiana 46204-2251

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

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

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

The notification, which shall be submitted by the Permittee, does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

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

B.13 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 in 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.14 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 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 permit.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this

permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-4]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
MC61-53 IGCN 1003
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b), (c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
 - (2) The date on which the change will occur;
 - (3) Any change in emissions; and
 - (4) Any permit term or condition that is no longer applicable as a result of the change. The notification, which shall be submitted, is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c). The notification requirement per (a)(4) of this condition does not apply to emission trades of SO₂ or NO_x under 326 IAC 21 or 326 IAC 10-4.
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

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

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application, which shall be submitted by the Permittee, does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for Billing, Licensing, and Training Section (BLT)), to determine the appropriate permit fee.

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

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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

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

(a) Pursuant to 326 IAC 6.8-10 (formerly 326 IAC 6-1-11.1) (Lake County: Fugitive Particulate Matter), the particulate matter emissions from source wide activities shall meet the following requirements:

- (1) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (2) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (3) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%). 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 326 IAC 6.8-10-2 or material transfer for transportation within or outside the source property including, but not limited to, the following:
 - (i) Transfer of slag product for use by asphalt plants:
 - (A) From a storage pile to a front end loader; and

- (B) From a front end loader to a truck.
- (ii) Transfer of sinter blend for use at the sinter plant:
 - (A) From a storage pile to a front end loader;
 - (B) From a front end loader to a truck; and
 - (C) From a truck to the initial processing point
- (iii) Transfer of coal for use at a coal processing line:
 - (A) From a storage pile to a front end loader; and
 - (B) From a front end loader to the initial hopper of a coal processing line.

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

- (4) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (5) Wind erosion from storage piles and exposed areas.
The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average. These limitations may not apply during periods when applications of fugitive particulate control measures are either ineffective or unreasonable due to sustained very high wind speeds. During such periods, the Permittee must continue to implement all reasonable fugitive particulate control measures and maintain records documenting the application of measures and the basis for a claim that meeting the opacity limitation was not reasonable given prevailing wind conditions.
- (6) There shall be a zero (0) percent frequency of visible emission observations of a material during the in-plant transportation of material by truck or rail at any time. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the in-plant transportation requirement.
- (7) 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%).
- (8) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
- (9) The PM₁₀ emissions from building vents shall not exceed twenty-two-thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (10) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (11) Any facility or operation not specified in 326 IAC 6.8-10-3(9) shall meet a twenty percent (20%), three (3) minute average opacity standard.
- (12) PM₁₀ emissions from each material processing stack shall not exceed 0.022 grains per dry standard cubic foot and ten percent (10%) opacity

- (13) Fugitive particulate matter from the material processing facilities except at a crusher in which a capture system is not used shall not exceed ten percent (10%) opacity.
- (14) Fugitive particulate matter from a crusher in which a capture system is not used shall not exceed fifteen percent (15%) opacity.
- (15) 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(3).

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

Opacity shall be determined by the procedures identified in 326 IAC 6.8-10-3. The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on December 15, 1993 and revised on August 15, 2002.

- (b) The source is subject to 326 IAC 6.8-11 (Lake County: Particulate Matter Contingency Measures) because it is subject to the requirements of 326 IAC 6.8-10 and 326 IAC 6.8-2. Pursuant to this rule, the source shall comply with 326 IAC 6.8-11-4, 6.8-11-5, and 6.8-11-6.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4 and 326 IAC 1-7-5 (a), (b) and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

C.8 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

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

- (c) Pursuant to 326 IAC 6.8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP, if required, is a violation of 326 IAC 6.8.

C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment where required by this permit as well as a state or federal rule or regulation.
- (b) All continuous opacity monitoring systems shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (c) In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (d) Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, compliance with the applicable opacity limits shall be demonstrated by the following:
 - (1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.
 - (A) 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.
 - (B) If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.
 - (C) VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.
 - (2) If a COM is not online within twenty-four (24) hours of shutdown or malfunction of the primary COM, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
 - (A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
 - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
 - (C) Method 9 readings may be discontinued once a COM is online.
 - (D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
 - (3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Observation of abnormal emissions that do not violate an

applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 326 IAC 6.8-5, 40 CFR 60 and/or 40 CFR 63, Subpart FFFFF.

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate 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.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within ninety (90) days after the date of issuance of this Part 70 Operating Permit No. T089-7099-00318.

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

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.

[326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.17 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
- (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
- (1) monitoring results;
 - (2) review of operation and maintenance procedures and records;
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM,

OAQ that retesting in one hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

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

The response action documents submitted pursuant to this condition do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

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

(a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants (as defined by 326 IAC 2-7-1(32)) (“Regulated pollutant which is used only for purposes of Section 19 of this rule”) from the source, for purposes of Part 70 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
MC61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-1.1-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, other than projects at a source with Plant-wide 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)) 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(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) 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.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-1.1-5]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ.
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
 - (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C- General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

Stratospheric Ozone Protection

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

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

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

SECTION D.1

FACILITY OPERATION CONDITIONS

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

- (a) **Two (2) Blast Furnaces, designated as Blast Furnace No. 3 and Blast Furnace No. 4, comprised of the following facilities, process equipment, and operational practices:**
- (1) No. 3 Blast Furnace, with a maximum capacity of 4,555,200 tons raw material per year, including an integral gas cleaning system consisting of a dust catcher, separator, two scrubbers (primary and secondary) and one cooling tower, with excess gas exhausting through a flare at stack (S1E); installed in 1953.
 - (2) No. 3 Blast Furnace Stoves, designated as stoves 31, 32, and 33, exhausting to the combustion stack (S1A) with a heat input rate of 441 MMBtu/hr and installed in 1953
 - (3) No. 3 Blast Furnace Casthouse with Passive Emission Control (PEC) to suppress fumes in the casthouse, consisting of slag and iron runner covers along with natural gas flame suppression exhausting to the No. 3 Blast Furnace Casthouse Roof Monitor (V1A);
 - (4) No. 4 Blast Furnace, with a maximum capacity of 5,490,836 tons raw material per year, including an integral gas cleaning system consisting of a dust catcher, separator, two scrubbers (primary and secondary) and one cooling tower with excess gas exhausting through a flare at stack-(S1D); installed in 1967
 - (5) No. 4 Blast Furnace Stoves, designated as stoves 41, 42, and 43, exhausting to the combustion stack (S1C) with a heat input rate of 486 MMBtu/hr and installed in 1967
 - (6) No. 4 Blast Furnace Casthouse with Passive Emission Control (PEC) to suppress fumes in the casthouse, consisting of slag and iron runner covers along with natural gas flame suppression exhausting to the No. 4 Blast Furnace Casthouse Roof Monitor (V1B)
 - (7) No. 4 Blast Furnace Casthouse Baghouse used to control emissions from the casthouse with an airflow rate of 147,000 acfm exhausting at stack (S1B) when operating one (1) fan. No. 4 Blast Furnace Casthouse Baghouse has an air flow rate of 240,000 acfm when operating two (2) fans.
 - (8) Miscellaneous equipment for handling of raw materials, including but not limited to, coke, iron ore pellets, limestone, slag and sinter.

(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.1.1 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]
[Table 4 to 40 CFR 63, Subpart FFFFF]

- (a) The provisions of 40 CFR 63, Subpart A- General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the affected sources, No. 3 Blast Furnace and No. 4 Blast Furnace, except when otherwise specified by Table 4 to 40 CFR 63, Subpart FFFFF. The Permittee must comply with these requirements on and after May 20, 2003.
- (b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition, except as otherwise provided in this condition. The permit shield applies to Condition D.1.17 National Emission Standards for

Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Reporting Requirements for Blast Furnaces. [40 CFR 63.7835] [40 CFR 63.7840]

D.1.2 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Emission Limitations for Blast Furnaces [40 CFR 63, Subpart FFFFF] The Permittee must comply with these requirements on and after May 22, 2006.

- (a) The provisions of 40 CFR 63, Subpart FFFFF (National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing) apply to the affected sources, No. 3 Blast Furnace and No. 4 Blast Furnace. The Permittee shall comply with the applicable requirements on and after May 22, 2006.
- (b) The following Blast Furnace emissions points are subject to 40 CFR 63, Subpart FFFFF:
 - (1) No. 3 Blast Furnace Casthouse Roof Monitor (V1A);
 - (2) No. 4 Blast Furnace Casthouse Roof Monitor (V1B); and
 - (3) No. 4 Blast Furnace Casthouse Baghouse (S1B)
- (c) The definitions of 40 CFR 63, Subpart FFFFF are applicable to these processes in 40 CFR 63.7852.
- (d) The Permittee shall meet each emission limitation in 40 CFR 63.7790 that applies to the No. 3 Blast Furnace Casthouse Roof Monitor (V1A), No. 4 Blast Furnace Casthouse Roof Monitor (V1B) and No. 4 Blast Furnace Casthouse Baghouse (S1B).
- (e) The Permittee shall meet each operation and maintenance requirement in 40 CFR 63.7800 that applies to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse and required capture and control equipment.
- (f) The Permittee shall develop and implement a written startup, shutdown, and malfunction plan in accordance with 40 CFR 63.7810(c). During periods of startup, shutdown, or malfunction, the Permittee shall operate in accordance with the plan and 40 CFR 63.7835(b).
- (g) The Permittee shall meet each monitoring requirement in 40 CFR 63.7830 that applies to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse and required capture and control equipment.
- (h) The Permittee shall meet each requirement in 40 CFR 63.7831 regarding installation, operation, and maintenance of monitoring systems for each monitoring system required by 40 CFR 63, Subpart FFFFF, that applies to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse and required capture and control equipment.

D.1.3 Lake County PM₁₀ Emission Requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21, the PM₁₀ emissions from No.3 and No. 4 Blast Furnaces shall not exceed the following:

- (a) PM₁₀ emissions from the stack serving No. 3 Blast Furnace Stoves (S1A) shall not exceed 0.027 lbs/MMBtu and 11.73 pounds per hour.
- (b) PM₁₀ emissions from the stack serving No. 4 Blast Furnace Stoves (S1C) shall not exceed 0.027 lbs/MMBtu and 12.93 pounds per hour.

Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility descriptions notes "stack serving", and to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

D.1.4 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, No. 3 Blast Furnace Casthouse Roof Monitor (V1A), No. 4 Blast Furnace Casthouse Roof Monitor (V1B) and No. 4 Blast Furnace Casthouse Baghouse (S1B) shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.1.5 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]

- (a) Pursuant to 326 IAC 7-4.1-10(a)(4)(A), the SO₂ emissions from the stack serving No. 3 Blast Furnace Stoves (S1A) shall not exceed 0.290 lbs/MMBtu and 127.89 pounds per hour.
- (b) Pursuant to 326 IAC 7-4.1-10(a)(4)(B), the SO₂ emissions from the stack serving No. 4 Blast Furnace Stoves (S1C) shall not exceed 0.290 lbs/MMBtu and 140.94 pounds per hour.
- (c) Pursuant to 326 IAC 7-4.1-10(a)(6), the SO₂ emissions from the stack serving No. 4 Blast Furnace Casthouse Baghouse (S1B) shall not exceed 0.18 pounds per ton feed material and 69.9 pounds per hour.

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.1.7 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Compliance Requirements for Blast Furnaces [40 CFR 63.7810(a)] [40 CFR 63.7825] [40 CFR 63.7826] [40 CFR 63.7832] The Permittee must comply with these requirements on and after May 22, 2006.

- (a) Pursuant to 40 CFR 63.7810(a), the Permittee shall be in compliance with the emission limitations and operation and maintenance requirements in Condition D.1.2 at all times, except during periods of startup, shutdown, and malfunction as defined in 40 CFR 63.2, which is incorporated by reference in 326 IAC 20-1-3.
- (b) The Permittee shall demonstrate initial compliance with the emission limitations that apply to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse in accordance with 40 CFR 63.7825.
- (c) The Permittee shall demonstrate initial compliance with the operation and maintenance requirements that apply to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse in accordance with 40 CFR 63.7826.
- (d) The Permittee shall monitor and collect data to demonstrate continuous compliance with 40 CFR 63, Subpart FFFFFF in accordance with 40 CFR 63.7832.
- (e) The Permittee shall demonstrate continuous compliance with the emission limitations of 40 CFR 63, Subpart FFFFFF that apply to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse and required capture and control equipment in accordance with 40 CFR 63.7833.
- (f) The Permittee shall demonstrate continuous compliance with the operation and maintenance requirements of 40 CFR 63, Subpart FFFFFF that apply to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse and required capture and control equipment in accordance with 40 CFR 63.7834.

D.1.8 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Testing Requirements for Blast Furnaces [40 CFR 63.7820 through 63.7824] The Permittee must comply with these requirements on and after May 22, 2006.

- (a) The Permittee shall conduct performance tests and other initial compliance demonstrations that apply to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse in accordance with 40 CFR 63.7820.
- (b) The Permittee shall conduct subsequent performance tests that apply to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse in accordance with 40 CFR 63.7821.
- (c) The Permittee shall use the test methods and other procedures in 40 CFR 63.7822 when demonstrating compliance with the emission limits for particulate matter for the No. 3 Blast Furnace Casthouse Roof Monitor (V1A), No. 4 Blast Furnace Casthouse Roof Monitor (V1B) and No. 4 Blast Furnace Casthouse Baghouse (S1B).
- (d) The Permittee shall use the test methods and other procedures in 40 CFR 63.7823 when demonstrating compliance with the opacity limits for the No. 3 Blast Furnace Casthouse Roof Monitor (V1A), No. 4 Blast Furnace Casthouse Roof Monitor (V1B) and No. 4 Blast Furnace Casthouse Baghouse (S1B).
- (e) The Permittee shall use the test methods and other procedures in 40 CFR 63.7824 to establish and demonstrate initial compliance with operating limits for the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse and required capture and control equipment.

D.1.9 Control Device Operation

- (a) The No. 3 Blast Furnace shall be equipped with an excess gas bleeder flare. The pilot flame for the flare shall be present at all times the Blast Furnace is in operation in order to minimize CO emissions.
- (b) The No. 4 Blast Furnace shall be equipped with an excess gas bleeder flare. The pilot flame for the flare shall be present at all times the Blast Furnace is in operation in order to minimize CO emissions.
- (c) The No. 4 Blast Furnace Casthouse Baghouse shall be in operation at all times when the No. 4 Blast Furnace is casting.
- (d) In order to minimize PM emissions to comply with D.1.4:
 - (1) The iron and slag runners shall be equipped with covers and natural gas fired lances placed in appropriate areas at the No. 3 Blast Furnace for fume suppression during the cast.
 - (2) The iron and slag runners shall be equipped with covers and natural gas fired lances placed in appropriate areas at the No. 4 Blast Furnace for fume suppression during the cast.
 - (3) The iron and slag runner covers can be removed during a cast for required maintenance/malfunction and shall be promptly returned in position.
 - (4) At No. 3 and No. 4 Furnace, the trough hood (cover) shall be placed over the iron trough as soon as practical after drilling the taphole and remain in place during the cast until just prior to taphole closing. The hood may be removed during the cast only for required maintenance/malfunction and be promptly returned to position.

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

D.1.10 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the No. 4 Blast Furnace Casthouse Baghouse (S1B) exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.1.11 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the baghouse used in conjunction with the No. 4 Blast Furnace Casthouse Baghouse (S1B), at least once per day when the above processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal ranges as specified in the table below or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A reading that is outside the ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances, shall be considered a deviation of this permit.

No. 4 Blast Furnace Casthouse Baghouse (S1B)	
Number of Fans Operational	Pressure Drop Range (inches of water)
One (1)	1.0 – 6.0
Two (2)	6.0 – 14.0

D.1.12 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (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 line. 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.

D.1.13 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]

Pursuant to 326 IAC 7-4.1-2, and in order to comply with condition D.1.5, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

- (a) A description of planned procedures for sampling of sulfur-bearing fuels and materials for analysis of sulfur content, and for any planned direct measurement of sulfur dioxide emissions vented to the atmosphere.
- (b) The protocol shall specify the frequency of sampling, analysis and/or measurement for each fuel and materials for each facility. The department shall incorporate the protocol into the source's operation permit per procedures specified in 326 IAC 2.

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

D.1.14 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Record Keeping Requirements for Blast Furnaces [40 CFR 63.7810(b)] [40 CFR 63.7] The Permittee shall comply with these requirements on or after May 22, 2006.

- (a) During the period between May 22, 2006 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, the Permittee shall maintain a log detailing the operation and maintenance of the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse process and control equipment in accordance with 40 CFR 63.7810(b).
- (b) The Permittee shall keep the records required by 40 CFR 63.7842(a).
- (c) If a Continuous Opacity Monitoring System (COMS) is used to comply with an opacity standard, the Permittee shall keep the records specified in 40 CFR 63.7842(b).
- (d) The Permittee shall keep the records required in 40 CFR 63.6(h)(6) for visible observations in accordance with 40 CFR 63.7842(c).
- (e) The Permittee shall keep the records required in 40 CFR 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to the No. 3 Blast Furnace Casthouse and No. 4 Blast Furnace Casthouse in accordance with 40 CFR 63.7842(d).
- (f) The Permittee shall keep the records required by 40 CFR 63, Subpart FFFFF in accordance with 40 CFR 63.7843 and the General Record Keeping Requirements in Section C of this permit.

D.1.15 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.5 and D.1.13, the Permittee shall maintain the following records:
 - (1) Records of the total coke oven gas, blast furnace gas, fuel oil, and natural gas usage for each day at the No. 3 and No. 4 Blast Furnaces.
 - (2) Records of the average sulfur content and heating value for each day for each fuel type used during the calendar quarter.
 - (3) Records of any compliance emissions calculations.

- (b) To document compliance with Condition D.1.10, the Permittee shall maintain records of once per day visible emission notations of the No. 4 Blast Furnace Casthouse Baghouse (S1B) exhaust stack. The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.1.11, the Permittee shall maintain records, once per day of the pressure drop across the No.4 Blast Furnace Casthouse Baghouse (S1B) and the number of fans in operation when venting to the atmosphere. The Permittee shall include in its records when a daily pressure drop notation is not taken and the reason for the lack of daily pressure drop notation (e.g. the process did not operate that day).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.16 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Reporting Requirements for Blast Furnaces [40 CFR 63.7835] [40 CFR 63.7840]

- (a) The Permittee shall report each deviation in the Quarterly Deviation and Compliance Monitoring Report required by Section C of this permit, in accordance with 40 CFR 63.7835(a), 40 CFR 63.7841(d), 326 IAC 2-1.1-11, and 326 IAC 2-7-5(3).
- (b) The Permittee shall submit the notifications required by 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4), and 40 CFR 63.9(b) through (h) that apply by the dates specified in those sections in accordance with 40 CFR 63.7840(a).
- (c) The Permittee shall submit an initial notification no later than 120 days after May 20, 2003, in accordance with 40 CFR 63.9(b) and 40 CFR 63.7840. The initial notification shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (d) The Permittee shall submit a notification of compliance status in accordance with 40 CFR 63.9(h)(2)(ii) and 40 CFR 63.7840(e).
 - (1) For each initial compliance demonstration that does not include a performance test, the Permittee shall submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.
 - (2) For each initial compliance demonstration that does include a performance test, the Permittee shall submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to 40 CFR 63.10(d)(2).

- (3) The notification of compliance status shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notification of compliance status requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) The Permittee shall submit semiannual compliance reports in accordance with 40 CFR 63.7841(a) and (b).
- (f) If a startup, shutdown, or malfunction occurred during the semiannual reporting period that was not consistent with the startup, shutdown, and malfunction plan, the Permittee shall submit an immediate startup, shutdown, and malfunction report according to the requirements in 40 CFR 63.10(d)(5)(ii) and 40 CFR 63.7841(c).

**D.1.17 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12]
[326 IAC 2-7-5]**

The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information from the notification of compliance status in the Part 70 Operating Permit.

- (a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 Operating Permit the applicable requirements of 40 CFR 63, Subpart FFFFF, a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
- (b) The significant permit modification application shall be submitted no later than nine (9) months prior to May 22, 2006 or the date that the notification of compliance status is submitted, whichever is later.
- (c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

D.1.18 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO₂ emission rate in lb/MMBtu for each facility for each day in quarter, total fuel usage for each type at each facility each day and any violations of limit 326 IAC 7-4-1.1(c)(14)(D), in order to document compliance with Conditions D.1.5 and D.1.15 (a). The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.2

FACILITY OPERATION CONDITIONS

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

(b) One (1) Sinter Plant, installed in 1958, with a maximum raw material usage rate of 2,592,782 tons per year and a maximum annual production capacity of 2,119,920 tons of sinter per year, comprised of the following facilities, fugitive sources, process equipment, and operational practices:

- (1) Raw material handling area consisting of material feeders (storage bins), conveyors, a pug mill and hearth layer returns from screening that combines these raw materials to create a uniform mixed burden that is deposited on the sinter strand.
- (2) One (1) natural gas fired ignition furnace used to ignite the surface of the mixed burden deposited on the sinter strand.
- (3) One (1) sinter plant main windbox, with twenty-one (21) vacuum chambers and emissions controlled by drop- out boxes, multi-cyclones (6 units), settling chamber and a wet venturi scrubber (containing chevrons) having a flow rate of 335,000 acfm, exhausting to stack-(S2A)
- (4) One (1) sinter plant discharge end (breaker), with a hood to capture light dust and controlled by a wet venturi scrubber having a flow rate of 100,400 acfm, exhausting to stack (S2B)
- (5) One (1) Sinter Cooler and sinter product screening station

(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.2.1 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A] [Table 4 to 40 CFR 63, Subpart FFFFF]

- (a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the affected source, Sinter Plant, except when otherwise specified by Table 4 to 40 CFR 63, Subpart FFFFF. The Permittee shall comply with these requirements on and after May 20, 2003.
- (b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition, except as otherwise provided in this condition. The permit shield applies to Condition D.2.23 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Reporting Requirements for Sinter Plants [40 CFR 63.7835][40 CFR 63.7640]

D.2.2 National Emissions Standards for Hazardous Air pollutants from Integrated Iron and Steel Manufacturing - Emission Limitations for Sinter Plants [40 CFR 63, Subpart FFFFF] The Permittee must comply with these requirements on and after May 22, 2006.

- (a) The provisions of 40 CFR 63, Subpart FFFFF (National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing) apply to this source. The Permittee shall comply with these requirements on or after May 22, 2006 for the affected source, the Sinter Plant.
- (b) The following Sinter Plant emission points are subject to 40 CFR 63, Subpart FFFFF: main windbox (S2A), sinter plant discharge (S2B) and sinter cooler.

- (c) The definitions of 40 CFR 63, Subpart FFFFF are applicable to these processes in 40 CFR 63.7852.
- (d) The Permittee shall meet the each emission limitation in 40 CFR 63.7790 that applies to main windbox (S2A), sinter plant discharge (S2B) and sinter cooler.
- (e) The Permittee shall meet each operation and maintenance requirements in 40 CFR 63.7800 that applies to Sinter Plant and required capture and control equipment.
- (f) The Permittee shall develop and implement a written start-up, shutdown and malfunction plan in accordance with 40 CFR 63.7810(c). During periods of start-up, shutdown or malfunction, the Permittee shall operate in accordance with the plan and 40 CFR 63.7835(b).
- (g) The Permittee shall meet each monitoring requirement in 40 CFR 63.7830 that applies to the Sinter Plant and required capture and control equipment.
- (h) The Permittee shall meet each requirement in 40 CFR 63.7831 regarding installation, operation and maintenance of monitors for each monitor required by 40 CFR 63, Subpart FFFFF, that applies to the Sinter Plant and required capture and control equipment.

D.2.3 Lake County: PM₁₀ Emission Requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21, TSP emissions from the Sinter Plant operations shall not exceed the following:

- (a) TSP emissions from the main windbox exhausting to stack (S2A) (identified in 326 IAC 6.8-2-21, formerly 326 IAC 6-1-10.1(d), as "stack 08") shall not exceed 0.02 grains per dry standard cubic foot of exhaust air and 49.70 pounds per hour.
- (b) TSP emissions from the sinter plant discharge end (breaker) exhausting to stack (S2B) shall not exceed 0.02 grains per dry standard cubic foot of exhaust air and 18.05 pounds per hour.

Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility descriptions notes "stack serving", and to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

D.2.4 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]

Pursuant to 326 IAC 7-4.1-10(a)(3), the SO₂ emissions from the Sinter Plant main windbox (S2A) shall not exceed 240 pounds per hour.

D.2.5 Sinter Plant Volatile Organic Compounds (VOCs) [326 IAC 8-13-3]

Pursuant to 326 IAC 8-13-3(b) and (c), sinter plant main windbox exhaust gas VOC emissions shall be limited as follows:

- (a) During the period of May 1 through September 30, the total VOC (the seasonal cap) emission limit is calculated and shall not exceed 143,973.0 lbs of VOC per ozone season
- (b) Except as provided in 326 IAC 8-13-3(b)(3), on any day from May 1 through September 30, the sinter plant main windbox exhaust gas VOC emissions (the maximum daily limit) limit is calculated and shall not exceed 1001.3 lbs of VOC per day.
- (c) On any day from May 1 through September 30 when ozone levels in Lake, Porter or LaPorte Counties are expected to exceed the national ambient air quality standard for ozone, the sinter plant main windbox exhaust gas VOC emissions (the lower daily limit) limit is calculated and shall not exceed 941.0 lbs of VOC per day.

A high ozone level day shall be predicted by the Permittee in accordance with a high ozone day action plan developed by the source and submitted to the IDEM, OAQ as part of the report required by 326 IAC 8-13-4(b).

- (d) Pursuant to 326 IAC 8-13-4(b)(8) and an Ozone Action Plan Approval letter date stamped September 7, 1999, the Permittee shall do the following:
- (1) The Permittee will comply with the emissions limits in 326 IAC 8-13 by monitoring sinter burden oil and grease content.
 - (2) The Permittee will limit the oil content of the major oil bearing components (mill scale and filter cake) of the sinter plant feed materials to 0.5%.
 - (3) Based on the compliance demonstrations and limit calculations submitted in a letter dated March 12, 1999:
 - (A) The value of the operating parameter oil content (pounds) determined using the procedure per 326 IAC 8-13-5(d)(10) is 42.2 lbs oil.
 - (B) The operating parameter value that corresponds to the emission rates expressed in pounds of VOC per ton of sinter produced adjusted to the VOC emission limit rates specified in 326 IAC 8-13-3 is calculated as:
 - (i) Ozone Season = 93.06 lbs of oil
 - (ii) Non-ozone season = 134.00 lbs of oil
 - (C) Sinter oil and grease content value in pounds equivalent to one-hundredth (0.01) pound of VOC/ton of sinter produced that is used to determine compliance with 326 IAC 8-13-6 is 2.86 lbs oil for every 0.01 lbs VOC/ton sinter
 - (4) The Permittee shall follow the alternative test procedure submitted to IDEM for oil and grease analysis to meet the requirements of 326 IAC 8-13-5(e)(2).
 - (5) The Permittee shall monitor sinter production by using conveyor belt scales per the procedure identified in the Ozone Action plan.
 - (6) The Permittee will follow the sampling frequency as described in 326 IAC 8-13-6(c)(3)(A).
 - (7) When practical, routine maintenance outages may be rescheduled to coincide with an ozone alert day. Rescheduling is dependant upon the availability of manpower to perform the maintenance.
 - (8) The Permittee shall use IDEM's "Partners for Clean Air" ozone action day notification to predict high ozone days.

D.2.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.2.7 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Compliance Requirements for Sinter Plants [40 CFR 63.7810(a)] [40 CFR 63.7825] [40 CFR 63.7826] [40 CFR 63.7832] The Permittee shall comply with these requirements on or after May 22, 2006.

- (a) Pursuant to 40 CFR 63.7810(a), the Permittee shall be in compliance with the emission limitations and operation and maintenance requirements in Condition D.2.2 at all times, except during periods of start-up, shutdown and malfunction as defined in 40 CFR 63.2, which are incorporated by reference in 326 IAC 20-1-3.
- (b) The Permittee shall demonstrate initial compliance with the emission limitations that apply to the Sinter Plant in accordance with 40 CFR 63.7825.
- (c) The Permittee shall demonstrate initial compliance with the operation and maintenance requirements that apply to the Sinter Plant, in accordance with 40 CFR 63.7826.
- (d) The Permittee shall monitor and collect data to demonstrate continuous compliance with 40 CFR 63, Subpart FFFFF, in accordance with 40 CFR 63.7832.
- (e) The Permittee shall demonstrate continuous compliance with the emissions limitations of 40 CFR 63, Subpart FFFFF that apply to the Sinter Plant and required capture and control equipment in accordance with 40 CFR 63.7833.
- (f) The Permittee shall demonstrate continuous compliance with the operation and maintenance requirements of 40 CFR 63, Subpart FFFFF that apply to the Sinter Plant and required capture and control equipment in accordance with 40 CFR 63.7834.

D.2.8 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing -Testing Requirements [40 CFR 63.7820 through 63.7824] The Permittee shall comply with these requirements on or after May 22, 2006.

- (a) The Permittee shall conduct performance tests and other initial compliance demonstrations that apply to the Sinter Plant, in accordance with 40 CFR 63.7821.
- (b) The Permittee shall conduct subsequent performance tests that apply to the Sinter Plant, in accordance with 40 CFR 63.7821.
- (c) The Permittee shall use the test methods and other procedures in 40 CFR 63.7822 when demonstrating compliance with the emission limits for particulate matter for the main windbox (S2A), sinter plant discharge end (S2B) and sinter cooler.
- (d) The Permittee shall use the test methods and other procedures in 40 CFR 63.7823 when demonstrating compliance with the opacity limits for the main windbox (S2A), sinter plant discharge end (S2B) and sinter cooler.
- (e) The Permittee shall use the test methods and other procedures in 40 CFR 63.7824 to establish and demonstrate initial compliance with operating limits for the Sinter Plant and required capture and control equipment.

D.2.9 Testing Requirements [326 IAC 2-7-6(1), (6)]

Within thirty (30) months of issuance of this permit, or the date of the last valid compliance test or an alternative date as determined by IDEM, OAQ, Compliance Data Section, the Permittee shall perform TSP and SO₂ testing on the sinter plant windbox exhaust (S2A) using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.2.3 and D.2.4. Testing shall be performed using a test method that is listed in 326 IAC 6.8-4-1 and is approved by the Commissioner. These tests shall be repeated at least once every two and a one half (2.5) years from the date of this valid compliance demonstration. In addition to these

requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.2.10 Particulate Matter (PM)

In order to demonstrate compliance with D.2.3, the multi-cyclones and wet venturi scrubbers for particulate matter control shall be in operation and control emissions from the main windbox exhaust stack (S2A) and sinter plant discharge end exhaust stack (S2B) at all times that the sinter plant is in operation.

D.2.11 Windbox Exhaust Gas VOC [326 IAC 8-13-4]

Pursuant to 326 IAC 8-13-4(g), the Permittee of a sintering operation who elects to change the control measure after the most recent compliance test shall do the following:

- (a) Notify the IDEM at least twenty-one (21) days before implementing the change. Notification shall include the following:
 - (1) A description of the control measure and the appropriate operating parameter.
 - (2) The date the change will be implemented.
 - (3) The plan to comply with Condition D.2.5 with the changed control measure.
- (b) Perform a compliance test within sixty (60) days of implementing the change according to procedures in 326 IAC 8-13-8 or according to the procedures that follow:
 - (1) Follow the source sampling procedures in 326 IAC 3-6-2.
 - (2) Follow the applicable test procedures.
 - (3) Calculate the operating parameter value that demonstrates compliance with the emission limit during the compliance test.
 - (4) Submit the compliance test results according to procedures in 326 IAC 8-13-4(d)(4).
- (c) Maintain the value of the operating parameter within the specified boundaries after the date that the compliance test is complete.
- (d) The Permittee who elects to change compliance demonstration procedures, for example, from sinter burden oil and grease content monitoring to a CEM, shall notify the IDEM, OAQ at least thirty (30) days prior to making the change.

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

D.2.12 Windbox Exhaust Gas VOC Emissions Monitoring [326 IAC 8-13-6]

After the date of the initial or subsequent compliance test pursuant to Condition D.2.11, the Permittee shall comply with the following requirements:

- (a) Following procedures in 326 IAC 8-13-5, analyze at least one (1) sample during each of the following operating periods of an operating day:
 - (1) 00:00 - 08:00
 - (2) 08:00 - 16:00
 - (3) 16:00 - 24:00.

- (b) The Permittee may composite a number of grab samples taken within each operating period. If sinter is produced for less than a total of sixty (60) minutes in any operating period, the Permittee is not required to sample for oil and grease content during that operating period.

- (c) Compliance with the oil and grease content requirements shall be determined in one (1) of the following ways:
 - (1) If the Permittee takes one (1) sample per operating period, the sample may be a composite of multiple samples taken within the operating period. The three (3) values shall be averaged over the day; and
 - (A) The daily average value may exceed the operating parameter on not more than five (5) days per month by an oil amount not to exceed one-hundredth (0.01) pound of VOC per ton of sinter produced as determined by the initial or subsequent compliance test;
 - (B) The daily average of the samples taken the day after the day in which the excursion occurred must be in compliance with the operating parameter;
 - (C) An excursion greater than the specified percentage in excess of the operating parameter shall be considered a violation of the rule; and
 - (D) More than five (5) excursions in a single month shall be considered a violation of this rule.
 - (2) If the Permittee analyzes four (4) or more samples per operating period and determines the daily average oil and grease content values, then:
 - (A) The daily average oil and grease content shall not exceed the operating parameter determined in 326 IAC 8-13-5(d)(10) or 326 IAC 8-13-5(d)(11);
 - (B) An exceedance of the operating parameter is a violation of the rule; and
 - (C) No excursions are allowed since the greater number of samples should decrease the sampling variation.
 - (3) Owners or operators of a sintering process that meet the emission limits in 326 IAC 8-13-3 (Condition D.2.5) by means other than those specified in 326 IAC 8-13-6 (b) or (c) shall describe the following:
 - (A) Operation and maintenance of the control measure;
 - (B) The process parameter or parameters and the value and range of the process parameter or parameters that indicate compliance with the emission limit; and
 - (C) The operating records that will be maintained.

D.2.13 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Sinter Plant main windbox scrubber stack (S2A), and the discharge end scrubber stack (S2B) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Response to Excursions or Exceedances for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances, shall be considered a deviation of this permit.

D.2.14 Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across to the main windbox scrubber used in conjunction with sinter plant operations, at least once per day when the main windbox (S2A) is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the main windbox scrubber is outside the normal range of 15 to 55 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C--Response to Excursions or Exceedances. The Permittee shall record the water flow rate to the main windbox scrubber used in conjunction with the sinter plant operations, at least once per day when the main windbox is in operation when venting to the atmosphere. When for any one reading, the water flow rate of the main windbox scrubber is below the minimum rate of 1800 gpm or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A reading that is outside the ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances, shall be considered a deviation of this permit.
- (b) The Permittee shall record the pressure drop across the sinter plant discharge end (breaker) scrubber (S2B) used in conjunction with the sinter plant operations, at least once per day when the breaker is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the discharge end (breaker) scrubber is outside the normal range of 6.0 and 13.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C--Response to Excursions or Exceedances. The Permittee shall record the water flow rate to the sinter plant discharge end (breaker) scrubber used in conjunction with the sinter plant operations, at least once per day when the breaker is in operation when venting to the atmosphere. When for any one reading, the water flow rate of the discharge end (breaker) scrubber is below the minimum rate of 200 gpm or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A reading that is outside the ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances, shall be considered a deviation of this permit.

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

D.2.15 Scrubber Failure Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation of this permit.

D.2.16 Cyclone Failure Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation of this permit.

D.2.17 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]

Pursuant to 326 IAC 7-4.1-2, and in order to comply with condition D.2.4, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

- (a) A description of planned procedures for sampling of sulfur-bearing fuels and materials for analysis of sulfur content, and for any planned direct measurement of sulfur dioxide emissions vented to the atmosphere.
- (b) The protocol shall specify the frequency of sampling, analysis and/or measurement for each fuel and materials for each facility. The department shall incorporate the protocol into the source's operation permit per procedures specified in 326 IAC 2.

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

D.2.18 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing- Record Keeping Requirements for Sinter Plants [40 CFR 63.7810(b)]
[40 CFR 3 Sinter Plant process and control equipment in accordance with 40 CFR 63.7810(b)]
[40 CFR 63.7]

The Permittee shall comply with these requirements on or after May 22, 2006.

- (a) During the period between May 22, 2006 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, the Permittee shall maintain a log detailing the operation and maintenance of the Sinter Plant process and control equipment in accordance with 40 CFR 63.7810(b).
- (b) The Permittee shall keep the records required by 40 CFR 63.7842(a).
- (c) If a Continuous Opacity Monitoring System (COMS) is used to comply with an opacity standard, the Permittee shall keep the records specified in 40 CFR 63.7842(b).
- (d) The Permittee shall keep the records required in 40 CFR 63.6(h)(6) for visible observations in accordance with 40 CFR 63.7842(c).
- (e) The Permittee shall keep the records required in 40 CFR 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to the Sinter Plant in 40 CFR 63.7842(d).
- (f) The Permittee shall keep the records required by 40 CFR 63, FFFFF in accordance with 40 CFR 63.7843 and the General Record Keeping Requirements in Section C of this permit.

D.2.19 Record Keeping Requirements [326 IAC 8-13-3]

- (a) To document compliance with the limit in Condition D.2.5, the Permittee shall maintain the following records:

- (1) Applicable operating parameter value and actual operating parameter values;
- (2) Sinter produced in tons each operating day;
- (3) Material sampled;
- (4) Sampling date and time;
- (5) Oil content values;
- (6) For the period of May 1 through September 30, the following records shall be maintained:
 - (A) The VOC emitted in pounds each operating day.
 - (B) The cumulative total of VOC emitted.
 - (C) VOC emission rate in pounds per ton of sinter produced.

D.2.20 Record Keeping Requirements

- (a) To document compliance with Condition D.2.13, the Permittee shall maintain records of once per day visible emission notations of the sinter plant stack exhausts. The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with Condition D.2.14, the Permittee shall maintain the following:
 - (1) Once per day records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Pressure drop across the venturi scrubber
 - (B) Water flow rate

The Permittee shall include in its records when a daily parameter notation is not taken and the reason for the lack of daily parameter notation (e.g. the process did not operate that day).
- (c) To document compliance with Conditions D.2.4 and D.2.17, the Permittee shall maintain the following records:
 - (1) Records of the total coke oven gas, blast furnace gas, fuel oil, and natural gas usage for each day at the Sinter Plant windbox.
 - (2) Records of the average sulfur content and heating value for each day for each fuel type used during the calendar quarter.
 - (3) Records of any compliance emissions calculations.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.21 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel
Manufacturing- Reporting Requirements for Sinter Plants [40 CFR 63.7835] [40 CFR 63.7640]

- (a) The Permittee shall report each deviation in the Quarterly Deviation and Compliance Monitoring Report required by Section C of this permit in accordance with 40 CFR 63.7835(a), 40 CFR 63.7841(d), 326 IAC 2-1.1-11 and 326 IAC 2-7-5(3).
- (b) The Permittee shall submit the notifications required by 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and 40 CFR 63.9(b) through (h) that apply by the dates specified in those sections in accordance with 40 CFR 63.7840(a).
- (c) The Permittee shall submit an initial notification no later than 120 days after May 20, 2003 in accordance with 40 CFR 63.9(b) and 40 CFR 63.7840. The initial notification shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The initial notification does require the certification by the “responsible official” as defined in 326 IAC 2-7-1(34).

- (d) The Permittee shall submit a notification or compliance status in accordance with 40 CFR 63.9(h)(2)(ii) and 40 CFR 63.7840(e).
 - (1) For each initial compliance demonstration that does not include a performance test, the Permittee shall submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.
 - (2) For each initial compliance demonstration that does include a performance test, the Permittee shall submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to 40 CFR 63.10(d)(2).
 - (3) The notification of compliance status shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 Jackson Boulevard
Chicago, Illinois 60604-3590

The notification of compliance status requires the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (e) The Permittee shall submit semiannual compliance reports in accordance with 40 CFR 63.7841(a) and (b).

- (f) If a start-up, shutdown or malfunction occurred during the semiannual reporting period that was not consistent with the start-up, shutdown or malfunction plan, the Permittee shall submit an immediate start-up, shutdown and malfunction report according to the requirements in 40 CFR 63.10(d)(5)(ii) and 40 CFR 63.7841(c).

D.2.22 Requirements to Submit a Significant Permit Application [326 IAC 2-7-12] [326 IAC 2-7-5]

The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information from the notification of compliance status in the Part 70 Operating permit.

- (a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient to IDEM, OAQ to incorporate into the Part 70 Operating permit the applicable requirements of 40 CFR 63, Subpart FFFFF, a description of the affected source and activities subject to the standard and a description of how the Permittee will meet the applicable requirements of the standard.
- (b) The significant permit modification application shall be submitted no later than nine (9) months prior to May 22, 2006 or the date that the notification of compliance status is submitted, which ever is later.
- (c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

D.2.23 Reporting Requirements

The Permittee shall submit to the IDEM, OAQ, within thirty (30) days of the end of each calendar quarter the calculated sulfur dioxide emission rate in pounds per million Btu for each facility for each day during the calendar quarter and the total fuel usage for each type at each facility for each day. The summary of the information to document compliance with Condition D.2.20 (c), shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION D.3

FACILITY OPERATION CONDITIONS

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

(c) Basic Oxygen Furnace (BOF) Shop, comprised of the following facilities, process equipment, and operational practices:

- (1) One (1) Hot Metal Reladle/Desulf Complex consisting of two (2) reladle stations, two (2) desulfurization stations and two (2) slag skimming stations, installed in 1982, having a maximum capacity of 5,630,208 tons per year of hot metal and sulfur scavenger. Emissions from all stations are controlled by a baghouse, designated as Baghouse No. 1 with captured emissions exhausting to stack (S3B) and uncaptured/fugitive emissions exhausting through a roof monitor (V3B)
- (2) One (1) Basic Oxygen Furnace (BOF) Complex, consisting of two (2) basic oxygen furnaces, designated as No. 1 and No. 2 Furnace, installed in 1968, having a combined maximum capacity of 7,456,512 tons of hot metal, flux, alloys, and scrap per year. Emissions from furnace operations such as charging, oxygen blowing and tapping are controlled by an electrostatic precipitator, with captured emissions exhausting to stack S3A and uncaptured/fugitive emissions exhausting through a roof monitor at vent V3A;
- (3) One (1) Ladle Metallurgical Facility (LMF), installed in 1988, consisting of (2) heating stations, having a combined maximum capacity of 5,606,400 tons of hot metal, flux and alloys per year. Emissions from LMF operations such as argon stirring, heating, and alloy addition, are controlled by a baghouse, designated as Baghouse No. 5 (LMF), with captured emissions exhausting to stack (S3C) and uncaptured/fugitive emissions exhausting through a roof monitor at vent (V3C)
- (4) One (1) Vacuum Degassing Facility (decarbonization), installed in 1988, with carbon monoxide (CO) emissions controlled by an integral CO scrubber and exhausting to the flare at stack (S3D)
- (5) One (1) Continuous Casting Complex consisting of two (2) single-strand slab casting machines, each with its own ladle turrent, tundish and mold. Molten steel from the LMF is directed into the turrent than cooled in the mold to begin the solidification process. The steel continues to solidify as it passes through the water spray cooling system to produce slabs that are finally cut to length using an acetylene torch-cutting machine. Emissions from water-cooling are directed to stacks (S3E/F).
- (6) Lime handling operations including trailer unloading and lime handling from silos with emissions captured by single compartment, 16 bag filter vents;
- (7) Miscellaneous dust removal process consisting of recovered BOF ESP dust, baghouse dust, handling and conditioning equipment, silos and pug mill; (fugitives)
- (8) Miscellaneous natural gas combustion consisting of ladle preheat, ladle drying, space heaters, tundish preheat and drying, tundish nozzle preheat, ladle shroud preheat, and slab torch cutting; and
- (9) Miscellaneous material handling.
- (10) One (1) pneumatic conveyance system, equipped with a bin vent filter (identified as BV3D), exhausting at stack ID V3D, having a control efficiency of ninety-nine percent (99%), used for lime injection into one (1) existing steel ladle metallurgy furnace (LMF) facility (identified as LMF).

(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 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A] [Table 4 to 40 CFR 63, Subpart FFFFF]

- (a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the affected source, Basic Oxygen Process Furnace (BOPF), except when otherwise specified by Table 4 to 40 CFR 63, Subpart FFFFF. The Permittee shall comply with these requirements on and after May 20, 2003.
- (b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition, except as otherwise provided in this condition. The permit shield applies to Condition D.3.18 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Reporting Requirements for Basic Oxygen Process Furnace (BOPF) [40 CFR 63.7835] [40 CFR 63.7640]

D.3.2 National Emissions Standards for Hazardous Air pollutants from Integrated Iron and Steel Manufacturing - Emission Limitations for Basic Oxygen Process Furnace (BOPF) [40 CFR 63, Subpart FFFFF]

The Permittee shall comply with these requirements on and after May 20, 2003.

The provisions of 40 CFR 63, Subpart FFFFF (National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing) apply to this source. The Permittee shall comply with these requirements on or after May 22, 2006 for the affected source, the Basic Oxygen Process Furnace (BOPF). The following emission units comprise the affected source that is subject to specific requirements of 40 CFR 63, Subpart FFFFF: Basic Oxygen Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex (reladling, desulfurization and slag skimming), Ladle Metallurgy Facility and BOPF roof monitor (V3A).

- (a) The definitions of 40 CFR 63, Subpart FFFFF are applicable to these processes in 40 CFR 63.7852.
- (b) The Permittee shall meet the each emission limitation in 40 CFR 63.7790 that applies to: Basic Oxygen Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex (reladling, desulfurization and slag skimming), Ladle Metallurgy Facility and BOPF roof monitor (V3A).
- (c) The Permittee shall meet each operation and maintenance requirements in 40 CFR 63.7800 that applies to Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility and required capture and control equipment.
- (d) The Permittee shall develop and implement a written start-up, shutdown and malfunction plan in accordance with 40 CFR 63.7810(c). During periods of start-up, shutdown or malfunction, the Permittee shall operate in accordance with the plan and 40 CFR 63.7835(b).
- (e) The Permittee shall meet each monitoring requirement in 40 CFR 63.7830 that applies to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility and required capture and control equipment.
- (f) The Permittee shall meet each requirement in 40 CFR 63.7831 regarding installation, operation and maintenance of monitors for each monitor required by 40 CFR 63, Subpart FFFFF, that applies to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility and required capture and control equipment.

D.3.3 Lake County: PM₁₀ Emission Requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21 (Lake County: PM₁₀ Emission Requirements), PM₁₀ emissions from the Basic Oxygen Furnace operations shall not exceed the following:

- (a) PM₁₀ emissions from the Reladle/desulfurization baghouse (Baghouse No.1) exhausting to stack (S3B) shall not exceed 0.008 grains PM₁₀ per dry standard cubic foot of exhaust air and 10.49 pounds PM₁₀ emitted per hour.
- (b) PM₁₀ emissions from the electrostatic precipitator exhausting to stack (S3A) (BOF main stack) shall not exceed 0.018 grains PM₁₀ per dry standard cubic foot of exhaust air and 69.40 pounds PM₁₀ emitted per hour.
- (c) PM₁₀ emissions from the ladle metallurgical station baghouse (LMF Baghouse) exhausting to stack (S3C) shall not exceed 0.004 grains PM₁₀ per dry standard cubic foot of exhaust air and 3.630 pounds PM₁₀ emitted per hour.

Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility descriptions notes "stack serving", and to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

D.3.4 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, the Hot Metal Reladle/Desulf Roof Monitor (V3B), BOF Roof Monitor (V3A), LMF Roof Monitor (V3C), and the pneumatic conveying system equipped with a bin vent filter (BV3D) shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.3.5 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]

Pursuant to 326 IAC 7-4.1-10(a)(5), the SO₂ emissions from the stack serving Reladling and Desulfurization Baghouse No. 1 (S3B) shall not exceed 0.057 pounds per ton feed material and 30.40 pounds per hour.

D.3.6 Opacity [326 IAC 6.8-2-21(b)]

Pursuant to 326 IAC 6.8-2-21(b), the following opacity limits shall be complied with and shall take precedence over those in 326 IAC 5-1-2 with which they conflict. The opacity limits for the BOF operations shall be as follows:

- (a) Visible emissions from the reladle/desulfurization baghouse (stack S3B) shall not exceed five percent (5%) opacity, three (3) minute average.
- (b) Visible emissions from the basic oxygen furnace main electrostatic precipitator stack (stack S3A) shall not exceed twenty percent (20%) opacity, six (6) minute average.
- (c) Visible emissions from the basic oxygen furnace roof monitor (vent V3A) shall not exceed twenty percent (20%) opacity, three (3) minute average.
- (d) Visible emissions from the ladle metallurgical facility (LMF) baghouse (stack S3C) shall not exceed five percent (5%) opacity, three (3) minute average.

D.3.7 Minor Source Modifications [326 IAC 2-7-10.5(d)(4)(C)]

Pursuant to 326 IAC 2-7-10.5(d)(4)(C) (Minor Source Modifications), the bin vent filter (identified as BV3D) to be used in conjunction with the one (1) pneumatic conveyance system for the steel ladle metallurgy furnace (LMF) will limit the PM and PM₁₀ emissions from this process to less than twenty-five (25) tons per year and will comply with the following limits:

- (a) Operate with a control efficiency of at least 99%; and
- (b) Have no visible emissions (i.e. zero opacity).

D.3.8 Particulate Matter (PM and PM₁₀) [326 IAC 2-2] [326 IAC 2-1.1-5]

The PM and PM₁₀ emissions from one (1) pneumatic conveyance system for the steel ladle metallurgy furnace (LMF) shall be limited to less than 5.70 and 3.42 pounds per hour, respectively. Compliance with these limits shall ensure that the increase in emissions from this modification remains below 25 tons per year and below 15 tons of per year for PM and PM₁₀, respectively, rendering the provisions of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable.

D.3.9 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.3.10 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing - Compliance Requirements for Basic Oxygen Process Furnace (BOPF) [40 CFR 63.7810(a)] [40 CFR 63.7825] [40 CFR 63.7826] [40 CFR 63.7832]

The Permittee shall comply with these requirements on or after May 22, 2006:

- (a) Pursuant to 40 CFR 63.7810(a), the Permittee shall be in compliance with the emission limitations and operation and maintenance requirements in Condition D.5.2 at all times, except during periods of start-up, shutdown and malfunction as defined in 40 CFR 63.2, which incorporated by reference in 326 IAC 20-1-3.
- (b) The Permittee shall demonstrate initial compliance with the emission limitations that apply to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility in accordance with 40 CFR 63.7825.
- (c) The Permittee shall demonstrate initial compliance with the operation and maintenance requirements that apply to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility in accordance with 40 CFR 63.7826.
- (d) The Permittee shall monitor and collect data to demonstrate continuous compliance with 40 CFR 63, Subpart FFFFF, in accordance with 40 CFR 63.7832.
- (e) The Permittee shall demonstrate continuous compliance with the emissions limitations of 40 CFR 63, Subpart FFFFF that apply to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility and required capture and control equipment in accordance with 40 CFR 63.7833.
- (f) The Permittee shall demonstrate continuous compliance with the operation and maintenance requirements of 40 CFR 63, Subpart FFFFF that apply to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility and required capture and control equipment in accordance with 40 CFR 63.7834.

D.3.11 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing -Testing Requirements [40 CFR 63.7820 through 63.7824]

The Permittee shall comply with these requirements on or after May 22, 2006

- (a) The Permittee shall conduct performance tests and other initial compliance demonstrations that apply to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility, in accordance with 40 CFR 63.7821.

- (b) The Permittee shall conduct subsequent performance tests that apply to the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility, in accordance with 40 CFR 63.7821.
- (c) The Permittee shall use the test methods and other procedures in 40 CFR 63.7822 when demonstrating compliance with the emission limits for particulate matter for Basic Oxygen Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex (reladling, desulfurization and slag skimming), Ladle Metallurgy Facility and BOPF roof monitor (V3A).
- (d) The Permittee shall use the test methods and other procedures in 40 CFR 63.7823 when demonstrating compliance with the opacity limits for the Basic Oxygen Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex (reladling, desulfurization and slag skimming), Ladle Metallurgy Facility and BOPF roof monitor (V3A).
- (e) The Permittee shall use the test methods and other procedures in 40 CFR 63.7824 to establish and demonstrate initial compliance with operating limits for the Basic Oxygen Process Furnace (BOF) Complex, Hot Metal Reladle/Desulfurization Complex and Ladle Metallurgy Facility and required capture and control equipment.

D.3.12 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

Within thirty (30) months of issuance of this permit, or the date of the last valid compliance test or an alternative date as determined by IDEM, OAQ, Compliance Data Section, the Permittee shall perform PM₁₀ testing on the BOF electrostatic precipitator main stack (S3A) utilizing a testing method approved by the Commissioner in accordance with Section C - Performance Testing. PM₁₀ shall be measured by the appropriate method as listed in 326 IAC 6.8-4-1. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.3.13 Particulate Matter (PM) & Carbon Monoxide (CO)

The reladle/desulfurization baghouse, designated as Baghouse No. 1, the ladle metallurgical facility (LMF) baghouse, designated as Baghouse No. 5, the main electrostatic precipitator, the CO scrubber, and flare at stack (S3D) shall be in operation at all times when associated processes are in operation.

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

D.3.14 Opacity Continuous Emission Monitoring [326 IAC 6.8-2-21(c)]

Pursuant to 326 IAC 6.8-2-21(c), the main basic oxygen furnace electrostatic precipitator stack shall be equipped with a Continuous Emission Monitor (COM) for opacity. The COM shall comply with the maintenance, operating procedures, quality assurance procedures, and performance specifications in 326 IAC 3-5.

D.3.15 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the reladle/desulfurization baghouse stack (S3B) and the ladle metallurgical facility (LMF) baghouse stack (S3C) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation of this permit.

D.3.16 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the baghouse used in conjunction with the reladle/desulfurization operations (S3B), and the ladle metallurgical facility (LMF) operations (S3C) at least once per day when the associated processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 to 14.0 inches of water or a range established during the latest stack test, for the reladle/desulfurization operations (S3B) and 4.0 to 9.0 inches of water or a range established during the latest stack test for the ladle metallurgical facility (LMF) operations (S3C), the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A reading that is outside the ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation of 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.3.17 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (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 line. 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.

D.3.18 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]

Pursuant to 326 IAC 7-4.1-2, and in order to comply with condition D.3.5, the Permittee shall submit a sampling and analysis protocol to IDEM by July 1, 2006. The protocol shall contain the following:

- (a) A description of planned procedures for sampling of sulfur-bearing fuels and materials for analysis of sulfur content, and for any planned direct measurement of sulfur dioxide emissions vented to the atmosphere.
- (b) The protocol shall specify the frequency of sampling, analysis and/or measurement for each fuel and materials for each facility. The department shall incorporate the protocol into the source's operation permit per procedures specified in 326 IAC 2.

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

D.3.19 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing- Record Keeping Requirements for Basic Oxygen Process Furnace (BOPF) [40 CFR 63.7810(b)] [40 CFR 3 Basic Oxygen Process Furnace (BOPF) Process and Control Equipment in Accordance with 40 CFR 63.7810(b)] [40 CFR 63.7] The Permittee shall comply with these requirements on or after May 22, 2006

- (a) During the period between May 22, 2006 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, the Permittee shall maintain a log detailing the operation and maintenance of the Basic Oxygen Process Furnace (BOPF) process and control equipment in accordance with 40 CFR 63.7810(b).
- (b) The Permittee shall keep the records required by 40 CFR 63.7842(a).
- (c) If a Continuous Opacity Monitoring System (COMS) is used to comply with an opacity standard, the Permittee shall keep the records specified in 40 CFR 63.7842(b).
- (d) The Permittee shall keep the records required in 40 CFR 63.6(h)(6) for visible observations in accordance with 40 CFR 63.7842(c).
- (e) The Permittee shall keep the records required in 40 CFR 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to the Basic Oxygen Process Furnace (BOPF) in 40 CFR 63.7842(d).
- (f) The Permittee shall keep the records required by 40 CFR 63, FFFFF in accordance with 40 CFR 63.7843 and the General Record Keeping Requirements in Section C of this permit.

D.3.20 Record Keeping Requirements

- (a) In order to document compliance with Condition D.3.15, the Permittee shall maintain records of once per day visible emission notations of the reladle/desulfurization baghouse stack (S3B) and the ladle metallurgical facility (LMF) baghouse stack (S3C). The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).
- (b) In order to document compliance with Condition D.3.16, the Permittee shall maintain records of once per day pressure drop notations across the reladle/desulfurization baghouse and the ladle metallurgical facility (LMF) baghouse when venting to the atmosphere. The Permittee shall include in its records when a daily pressure drop notation is not taken across the reladle/desulfurization baghouse stack (S3B) and/or the ladle metallurgical facility (LMF) baghouse and the reason for the lack of daily pressure drop notation across either of the above baghouses (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.21 Reporting Requirements

The Permittee shall submit a quarterly excess emissions report based on the continuous opacity monitor (COM) required in condition D.3.14 data for opacity, pursuant to 326 IAC 3-5-7. These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

D.3.22 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing- Reporting Requirements for Basic Oxygen Process Furnace (BOPF)
[40 CFR 63.7835] [40 CFR 63.7640]

- (a) The Permittee shall report each deviation in the Quarterly Deviation and Compliance Monitoring Report required by Section C of this permit in accordance with 40 CFR 63.7835(a), 40 CFR 63.7841(d), 326 IAC 2-1.1-11 and 326 IAC 2-7-5(3).
- (b) The Permittee shall submit the notifications required by 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e) and (f)(4) and 40 CFR 63.9(b) through (h) that apply by the dates specified in those sections in accordance with 40 CFR 63.7840(a).
- (c) The Permittee shall submit an initial notification no later than 120 days after May 20, 2003 in accordance with 40 CFR 63.9(b) and 40 CFR 63.7840. The initial notification shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (d) The Permittee shall submit a notification or compliance status in accordance with 40 CFR 63.9(h)(2)(ii) and 40 CFR 63.7840(e).
 - (1) For each initial compliance demonstration that does not include a performance test, the Permittee shall submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.
 - (2) For each initial compliance demonstration that does include a performance test, the Permittee shall submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to 40 CFR 63.10(d)(2).
 - (3) The notification of compliance status shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 Jackson Boulevard
Chicago, Illinois 60604-3590

The notification of compliance status requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) The Permittee shall submit semiannual compliance reports in accordance with 40 CFR 63.7841(a) and (b).

- (f) If a start-up, shutdown or malfunction occurred during the semiannual reporting period that was not consistent with the start-up, shutdown or malfunction plan, the Permittee shall submit an immediate start-up, shutdown and malfunction report according to the requirements in 40 CFR 63.10(d)(5)(ii) and 40 CFR 63.7841(c).

D.3.23 Requirements to Submit a Significant Permit Application [326 IAC 2-7-12] [326 IAC 2-7-5]

The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information from the notification of compliance status in the Part 70 Operating permit.

- (a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient to IDEM, OAQ to incorporate into the Part 70 Operating permit the applicable requirements of 40 CFR 63, Subpart FFFFF, a description of the affected source and activities subject to the standard and a description of how the Permittee will meet the applicable requirements of the standard.
- (b) The significant permit modification application shall be submitted no later than nine (9) months prior to May 22, 2006 or the date that the notification of compliance status is submitted, which ever is later.
- (c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

SECTION D.4

FACILITY OPERATION CONDITIONS

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

- (d) **84 Inch Hot Strip Mill, comprising the following facilities, process equipment, and operational practices:**
- (1) Three (3) Reheat Furnaces identified as Nos. 1, 2 and 3, installed in 1968, having a heat input rate of 427 MMBtus per hour each.
 - (A) No. 1 Reheat Furnace, having the ability to burn natural gas and fuel oil with emissions exhausting through stack S4A.
 - (B) No. 2 Reheat Furnace, having the ability to burn natural gas and fuel oil with emissions exhausting through stack S4B.
 - (C) No. 3 Reheat Furnace, having the ability to burn natural gas and fuel oil with emissions exhausting through stack S4C.
 - (2) One (1) Hot Rolling Mill, where steel slabs from the reheat furnaces are converted to hot bands (steel coils). The mill consists of scale breakers, six (6) roughing stands, a crop shear, seven (7) finishing stands, a cooling table and three (3) downcoilers. The mill fugitive emissions from these processes vent inside the building (V4A).
 - (3) One (1), two (2) stand temper mill.
 - (4) Twenty-eight (28) natural gas space heaters having a combined heat input rate of 84 MMBtu/hr.

(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 Lake County: PM₁₀ Emission Requirements [326 IAC 6.8-2-21]

- (a) Pursuant to 326 IAC 6.8-2-21, the PM₁₀ emissions from each of the stacks serving the three (3) natural gas/fuel oil furnaces (S4A, S4B and S4C) shall not exceed 0.086 lbs/MMBtu and 36.56 pounds PM₁₀ emitted per hour.
- (b) Pursuant to 326 IAC 6.8-2-21, the twenty-eight (28) natural gas space heater (V4A) shall fire natural gas only.

Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility descriptions notes "stack serving", and to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

D.4.2 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]

Pursuant to 326 IAC 7-4.1-10(a)(2), the SO₂ emissions from each of the stacks serving the three (3) natural gas/fuel oil furnaces (S4A, S4B and S4C) shall not exceed 1.254 lbs/MMBtu and 535.1 pounds per hour.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

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

D.4.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the three (3) natural gas/fuel oil furnaces stacks (S4A, S4B and S4C) shall be performed once per day during normal daylight operations when exhausting to the atmosphere and using fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.4.5 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]

Pursuant to 326 IAC 7-4.1-2, and in order to comply with condition D.4.2, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

- (a) A description of planned procedures for sampling of sulfur-bearing fuels and materials for analysis of sulfur content, and for any planned direct measurement of sulfur dioxide emissions vented to the atmosphere.
- (b) The protocol shall specify the frequency of sampling, analysis and/or measurement for each fuel and materials for each facility. The department shall incorporate the protocol into the source's operation permit per procedures specified in 326 IAC 2.

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

D.4.6 Record Keeping Requirements

- (a) To document compliance with Condition D.4.1(b), the Permittee shall maintain records of natural gas use at the hot strip space heaters.
- (b) To document compliance with Condition D.4.4, the Permittee shall maintain records of once per day visible emission notations of the three (3) natural gas/fuel oil furnaces stacks (S4A, S4B and S4C), when using fuel oil. The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day, the furnaces not using fuel oil).
- (c) To document compliance with Conditions D.4.1 and D.4.5, the Permittee shall maintain the following records:
 - (1) Records of the total fuel oil and natural gas usage for each day at the No. 1, 2 and 3 Reheat Furnaces.
 - (2) Records of the average sulfur content and heating value for each day for each fuel type used at No. 1, 2, and 3 Reheat Furnaces during the calendar quarter.
 - (3) Records of any compliance emissions calculations.

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

D.4.7 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO₂ emission rate in pounds per MMBtu for each facility for each day, total fuel usage for each type at each facility each day, and any violations of 326 IAC 7-4.1-10(a)(2), in order to document compliance with Condition D.4.6(c). The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5

FACILITY OPERATION CONDITION

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

(e) One (1) Sheet Mill Finishing operation, designated as No. 2 Sheet Mill, having a maximum capacity of 1,404,929 tons per year, comprised of the following facilities, fugitive sources, process equipment, and operational practices:

- (1) No. 1 Galvanizing and Aluminizing Line consisting of:
 - (A) Flame Furnace installed in 1959 having heat input rate of 18 MMBtu/hr with uncontrolled emissions exhausting through vent (V5A) to No. 2 Sheet Mill shop
 - (B) Galvanizing and Aluminizing furnace installed in 1959 having a heat input rate of 37 MMBtu/hr with uncontrolled emissions exhausting through vent (V5A) to No. 2 Sheet Mill shop
 - (C) Coating pot installed in 1959 with uncontrolled fugitive emissions exhausting into the No. 2 Sheet Mill shop
 - (D) Chromic Acid Bath installed in 1959 with water vapor exhausting into the No. 2 Sheet Mill shop
 - (E) Hot air dryer installed in 1959 exhausting to No. 2 Sheet Mill shop
 - (F) One (1) caustic cleaning system, constructed in 2006, and approved for modification and burner replacement in 2008, with a fume exhaust system and mist eliminator serving Stages #1 and #2, exhausting through stack (S5G), a fume exhaust system and mist eliminator serving Stage #3, exhausting through stack (S5D), and equipped with a 8.25 million British thermal units per hour (MMBtu/hr) natural gas burners exhausting uncontrolled through stack (S5E).
 - (G) One (1) pre-melt furnace, to be constructed in 2006, having a heat input rate of 3 MMBtu/hour with uncontrolled emissions exhausting through stack (S5F)
- (2) No. 2 Galvanizing Line (installed in 1988) consisting of:
 - (A) Flame Furnace having heat input rate of 150 MMBtu/hr with uncontrolled emissions exhausting through stack S5B.
 - (B) Galvanizing furnace having a heat input rate of 49.65 MMBtu/hr from sixty (60) "Phase 1" recuperative burners with a total heat input rate of 27.26 MMBtu/hr and sixty-two (62) ultra-low NOx recuperative burners with a total heat input rate of 22.39 MMBtu/hr in the radiant tube section with uncontrolled emissions exhausting through vent (V5A) to No. 2 Sheet Mill shop.
 - (C) One (1) natural gas fired Edge Flame Burner on line No. 2, with uncontrolled emissions venting into the No. 2 Sheet Mill shop
 - (D) Coating pot with uncontrolled fugitive emissions exhausting into the No. 2 Sheet Mill shop
 - (E) One (1) natural gas fired Selas Furnace, with uncontrolled emissions venting through vent (V5A) to No. 2 Sheet Mill shop
 - (F) Hot air dryers exhausting to No. 2 Sheet Mill shop
 - (G) Chromic Acid Bath with water vapor exhausting into the No. 2 Sheet Mill shop

(H) Temper Mill

- (3) Seven (7) space heaters (installed in 1968) having a combined heat input of 17.5 MMBtu per hour, with uncontrolled emissions exhausting to vent (V5B) to No. 2 Sheet Mill shop.

(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.5.1 Lake County: PM₁₀ Emission Requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21, the No. 1 Galvanizing and Aluminizing Line Flame Furnace, the No. 2 Galvanizing Line Flame Furnace, the No. 1 Galvanizing and Aluminizing Line Galvanizing and Aluminizing Furnace, and the No. 2 Galvanizing Line Galvanizing Furnace at the No. 2 Sheet Mill shall fire natural gas only.

D.5.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, the caustic cleaning system and the pre-melt furnace shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.5.3 Opacity

Pursuant to Construction Permit PC (45) 1702, issued August 4, 1988, the visible emissions from the No. 2 Galvanizing Line Flame Furnace (S5B) shall not exceed 5% opacity, 6-minute average.

D.5.4 Emission Offset [326 IAC 2-3]

Pursuant to Construction Permit PC (45) 1702, issued August 4, 1988, in order to make requirements of 326 IAC 2-2 not applicable the following shall apply:

- (a) NO_x emissions from the No. 2 Galvanizing Line Flame Furnace (S5B) shall be limited to 550 pounds per MMCF of natural gas and 361.35 tons per year.
- (b) The permanent shutdown in 1984 of 10 soaking pit sets, No. 2 slab mill, rated at 90 MMBtu/hr per set, and actual 1983 emissions based on 2,446 million cubic feet per year of natural gas.
- (c) The permanent shutdown in 1984 of the No. 2 High pressure boiler, rated at 190 MMBtu/hr and actual 1984 emissions based on 449 million cubic feet per year of natural gas and 86,000 gallon per year No. 6 fuel oil.

D.5.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

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

D.5.6 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.5.3 shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b) Reports shall be submitted in accordance with Section C - General Reporting Requirements of this permit.

SECTION D.6 FACILITY OPERATION CONDITIONS

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

(f) One (1) Sheet Mill Finishing operation, designated as No. 3 Sheet Mill, having a maximum capacity of 2,156,537 tons per year, comprised of the following facilities, fugitive sources, process equipment, and operational practices:

- (1) Seven (7) Single Stack Batch Annealing Furnaces (1-7) (installed in 1965), having a combined heat input of 24.5 MMBtu per hour, with uncontrolled emissions exhausting inside the building to vent (V6A)
- (2) Eleven (11) Four-Stack Batch Annealing Furnaces (1-11) (installed in 1966), having a combined heat input of 176 MMBtu per hour, with uncontrolled emissions exhausting inside the building to vent (V6A)
- (3) One (1) Four-Stack Batch Annealing Furnace (13) (installed in 1998) with a heat input capacity of 10 MMBtu per hour, with uncontrolled emissions exhausting inside the building to vent (V6A)
- (4) One (1) Pickle Line consisting of four (4) HCl process tanks and one (1) water rinse tank (installed in 1964), with acid fumes controlled by a scrubber system (14,000 acfm) comprised of tank hoods and ductwork connected to two (2) scrubbers (in series) exhausting through scrubber stack (S6A)
- (5) One (1) Shot Blaster, used to put a matte finish on the surface of reconditioned rolls. Emissions are controlled by a small baghouse exhausting through vent (V6B) outside the building.
- (6) One (1) tempering operation consisting of a 2-Stand Temper Mill with fugitive emissions exhausting inside the building.
- (7) One (1) steel coil cold reduction operation consisting of one (1) 5- Stand Tandem Mill where steel coil thickness is reduced to final specification, with emissions exhausting through stack (S6B)
- (8) Miscellaneous activities include two (2) steel sheet edge slitters, electrostatic oiling space heating and portable heating (to prevent equipment freezing).

(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.6.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the emission units described in this section except when otherwise specified in 40 CFR 63, Subpart CCC.

D.6.2 National Emission Standards for Hazardous Air Pollutants for Steel Pickling - HCl Process Facilities and Hydrochloric Acid Regeneration Plants [40 CFR 63, Subpart CCC] [40 CFR 63.1157]

Pursuant to 40 CFR 63, Subpart CCC, the Pickling Line (S6A) shall comply with the following requirements:

- (a) The Permittee shall not cause or allow to be discharged into the atmosphere from the affected pickling line:
 - (1) Any gases that contain HCl in a concentration in excess of 18 ppmv; or

- (2) HCl at a mass emission rate that corresponds to a collection efficiency of less than 97 percent.

D.6.3 NESHAP Maintenance Requirements [40 CFR 63.1160, Subpart CCC]

The Permittee shall comply with the operation and maintenance requirements of 40 CFR 63.6(e) (Subpart A, General Provisions) at the Pickling Line (S6A). Additionally, the Permittee shall prepare an operation and maintenance plan for each emission control device to be implemented no later than the compliance date. The plan shall be incorporated by reference into the source's Part 70 Operating Permit. All such plans must be consistent with good maintenance practices and, for a scrubber emission control device, must at a minimum:

- (a) Require monitoring and recording the pressure drop across the scrubber once per day while the scrubber is operating in order to identify changes that may indicate a need for maintenance;
- (b) Require the manufacturer's recommended maintenance at the recommended intervals on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to exhaust system and scrubber fans and motors associated with those pumps and fans;
- (c) Require cleaning of the scrubber internals and mist eliminators at intervals sufficient to prevent buildup of solids or other fouling;
- (d) Require an inspection of each scrubber at intervals of no less than 3 months with:
 - (1) Cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;
 - (2) Repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;
 - (3) Repair or replacement of droplet eliminator elements as needed;
 - (4) Repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and
 - (5) Adjustment of damper settings for consistency with the required air flow.
- (e) If the scrubber is not equipped with a view port or access hatch allowing visual inspection, alternate means of inspection approved by the Administrator may be used.
- (f) The Permittee shall initiate procedures for corrective action within 1 working day of detection of an operating problem and complete all corrective actions as soon as practicable. Procedures to be initiated are the applicable actions that are specified in the maintenance plan. Failure to initiate or provide appropriate repair, replacement, or other corrective action is a violation of the maintenance requirement.
- (g) The Permittee shall maintain a record of each inspection, including each item identified in (d) above, that is signed by the responsible maintenance official and that shows the date of each inspection, the problem identified, a description of the repair, replacement, or other corrective action taken, and the date of the repair, replacement, or other corrective action taken.

D.6.4 Lake County: PM₁₀ Emission Requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21, the seven (7) single stack batch annealing furnaces and the eleven (11) multi-stack batch annealing furnaces shall fire natural gas only.

D.6.5 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant 326 IAC 6.8-1-2, the Pickle Line (S6A), Shot Blaster (V6B), 2-Stand Temper Mill (S6B), and 5-Stand Tandem Mill (V6B) shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.6.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.6.7 Testing Requirements [40 CFR 63.1161] [40 CFR 63.1162]

- (a) Within twelve (12) months of permit issuance, the Permittee shall conduct a performance test for the Pickling Line (S6A) to determine and demonstrate compliance with the applicable emission limitation according to the requirements of 40 CFR 63.7 (Subpart A, General Provisions). This initial performance test shall meet the following minimum requirements:
- (1) Following approval of the site-specific test plan, the Permittee shall conduct a performance test for each process or control device to either measure simultaneously the mass flows of HCl at the inlet and the outlet of the control device (to determine compliance with the applicable collection efficiency standard) or measure the concentration of HCl in gases exiting the process or the emission control device (to determine compliance with the applicable emission concentration standards).
 - (2) Compliance with the applicable concentration standard or collection efficiency standard shall be determined by the average of three consecutive runs or by the average of any three of four consecutive runs. Each run shall be conducted under conditions representative of normal process operations.
 - (3) Compliance is achieved if either the average collection efficiency as determined by the HCl mass flows at the control device inlet and outlet is greater than or equal to the applicable collection efficiency standard, or the average measured concentration of HCl exiting the process or the emission control device is less than or equal to the applicable emission concentration standard.
- (b) During the performance test for each emission control device, the Permittee using a wet scrubber to achieve compliance shall establish site-specific operating parameter values for the minimum scrubber makeup water flow rate and, for scrubbers that operate with recirculation, the minimum recirculation water flow rate. During the emission test, each operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every 15 minutes. The Permittee shall determine the operating parameter monitoring values as in the averages of the values recorded during any of the runs for which results are used to establish the emission concentration or collection efficiency per 40 CFR 63.1161(a)(2). A Permittee may conduct multiple performance tests to establish alternative compliant operating parameter values. Also, a Permittee may reestablish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test or tests.
- (c) Conduct performance tests to measure the HCl flows at the control device inlet and outlet or the concentration of HCl exiting the control device according to the procedures described in 40 CFR 63.1161. Performance tests shall be conducted according to an alternative schedule approved by IDEM, OAQ, every two and half (2 .5) years or twice per

Part 70 Operating Permit term. If any performance test shows that the HCl emission limitation is being exceeded, the Permittee is in violation of the emission limit.

- (d) Pursuant to 40 CFR 63.1163(d), the Permittee of an affected source shall notify IDEM, OAQ, in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, to allow IDEM, OAQ, to review and approve the site-specific test plan required under 40 CFR 63.7(c), and, if requested by IDEM, OAQ, to have an observer present during the test.
- (e) The following test methods from Appendix A of 40 CFR 60 shall be used to determine compliance under 40 CFR 63.1157(a);
- (1) Method 1, to determine the number and location of sampling points, with the exception that no sampling traverse point shall be within one inch of the stack or duct wall;
 - (2) Method 2, to determine gas velocity and volumetric flow rate;
 - (3) Method 3, to determine the molecular weight of the stack gas;
 - (4) Method 4, to determine the moisture content of the stack gas; and
 - (5) Method 26A, "Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources – Isokinetic Method," to determine the HCl mass flows at the inlet and outlet of a control device or the concentration of HCl discharged to the atmosphere. If compliance with a collection efficiency standard is being demonstrated, inlet and outlet measurements shall be performed simultaneously. The minimum sampling time for each run shall be 60 minutes and the minimum sample volume 0.85 dry standard cubic meters (dscm) [30 dry standard cubic feet (dscf)]. The concentration of HCl shall be calculated for each run as follows: $C_{HCl(ppmv)} = 0.659 C_{HCl(mg/dscm)}$, where $C_{(ppmv)}$ is concentration in ppmv and $C_{(mg/dscm)}$ is concentration in milligrams per dry standard cubic meter as calculated by the procedure given in Method 26A.
 - (6) The Permittee may use equivalent alternative measurement methods approved by U.S. EPA.

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

D.6.8 Monitoring Requirements [40 CFR 63.1162]

The Permittee shall:

- (a) In addition to conducting performance tests, if a wet scrubber is used as the emission control device, install, operate and maintain systems for the measurement and recording of the scrubber makeup water flow rate and, if required, recirculation water flow rate. These flow rates must be monitored continuously and recorded at least once per day while the scrubber is operating. Operation of the wet scrubber with excursions of scrubber makeup water flow rate and recirculation water flow rate less than the minimum values established during the performance test or tests will require initiation of corrective action as specified by the maintenance requirements in 40 CFR 63.1160(b)(2).
- (b) Failure to record each of the operating parameters in 40 CFR 63.1162(a)(2) is a violation of the monitoring requirements of 40 CFR 63, Subpart CCC.
- (c) Each monitoring device shall be certified by the manufacturer to be accurate to within 5 percent and shall be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.

- (d) The Permittee may develop and implement alternative monitoring requirements subject to approval by U.S. EPA.

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

D.6.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.6.2 and D.6.3, the Permittee shall maintain the following records pursuant to 40 CFR 63.1165:
- (1) The Permittee, as required by 40 CFR 63.10(b)(2) (Subpart A, General Provisions), shall maintain general records for 5 years from the date of each record of:
 - (A) The occurrence and duration of each startup, shutdown, or malfunction of operation;
 - (B) The occurrence and duration of each malfunction of the air pollution control equipment;
 - (C) All maintenance performed on the air pollution control equipment;
 - (D) Actions taken during periods of startup, shutdown, and malfunction and the dates of such actions when these actions are different from the procedures specified in the startup, shutdown, and malfunction plan;
 - (E) All information necessary to demonstrate conformance with the startup shutdown, and malfunction plan when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. This information can be recorded in a checklist or similar form (see 40 CFR 63.10(b)(2)(v))
 - (F) All required measurements needed to demonstrate compliance with the standard and to support data that the source is required to report, including but not limited to, performance test measurements (including initial and any subsequent performance tests) and measurements as may be necessary to determine the conditions of the initial test or subsequent tests.
 - (G) All results of initial or subsequent performance tests;
 - (H) If the Permittee has been granted a waiver from record keeping or reporting requirements under 40 CFR 63.10(f), any information demonstrating whether a source is meeting the requirements for a waiver of record keeping or reporting requirements;
 - (I) If the Permittee has been granted a waiver from the initial performance test under 40 CFR 63.7(h), a copy of the full request and approval or disapproval;
 - (J) All documentation supporting initial notifications and notifications of compliance status required by 40 CFR 63.9; and
 - (K) Records of any applicability determination, including supporting analyses.
 - (2) In addition to the general records required by 40 CFR 63.1165(a), the Permittee shall maintain records for 5 years from the date of each record of:

- (A) Scrubber makeup water flow rate and recirculation water flow rate if a wet scrubber is used;
 - (B) Calibration and manufacturer certification that monitoring devices are accurate to within 5 percent;
 - (C) Each maintenance inspection and repair, replacement, or other corrective action; and
- (3) The Permittee shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by IDEM, OAQ, for the life of the affected source or until the source is no longer subject to the provisions of 40 CFR 63, Subpart CCC. In addition, if the operation and maintenance plan is revised, the Permittee shall keep previous (i.e., superseded) versions of the plan on record to be made available for inspection by IDEM, OAQ, for a period of 5 years after each revision to the plan.
- (b) General records and 40 CFR 63, Subpart CCC records, for the most recent 2 years of operation must be maintained on site for 2 years. Records for the 3 previous years may be maintained off site.
 - (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.10 Reporting Requirements [40 CFR 63.1164]

- (a) As required by 40 CFR 63.10(d)(2), the Permittee of an affected source shall report the results of any performance test as part of the notification of compliance status required in 40 CFR 63.1163.
- (b) The Permittee of an affected source who is required to submit progress reports under 40 CFR 63.6(i), shall submit such reports to IDEM, OAQ by the dates specified in the written extension of compliance.
- (c) Pursuant to 40 CFR 63.6(e), the Permittee of an affected source is required to operate and maintain each affected emission source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the level required by the standard at all time, including during any period of startup, shutdown, or malfunction. Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.
 - (1) Pursuant to 40 CFR 63.6(e)(3), the Permittee shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, or malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard.
 - (2) Pursuant to 40 CFR 63.10(d)(5)(I) if actions taken by a Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan, the Permittee shall state such information in a semiannual report. The report, to be certified by the owner/operator or other responsible official, shall be submitted semiannually and delivered or postmarked by the 30th day following the end of each calendar half; and
 - (3) Any time an action taken by a Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent

with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall comply with all requirements of 40 CFR 63.10(d)(5)(ii).

- (d) Reports shall be submitted in accordance with Section C - General Reporting Requirements of this permit.

SECTION D.7 FACILITY OPERATION CONDITIONS

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

(g) Utilities comprised of the following facilities, process equipment, and operational practices:

- (1) No. 5 Boiler, with a heat input rate of 454 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stacks S8C/D, installed in 1952.
- (2) No. 6 Boiler, with a heat input rate of 454 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stack S8E, installed in 1956.
- (3) No. 7 Boiler, with a heat input rate of 454 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stack S8F, installed in 1956
- (4) No. 8 Boiler, with a heat input rate of 1090 MMBtu/hr fired by blast furnace gas, natural gas and No. 6 fuel oil exhausting through stack S8G, installed in 1967

(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.7.1 Lake County: PM₁₀ Emission Requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21 (Lake County: PM₁₀ Emission Requirements), PM₁₀ emissions from the Utilities operations shall not exceed the following:

- (a) PM₁₀ emissions from Boiler No. 5 (S8C/D) shall not exceed 0.066 lbs/ MMBtu and 25.69 pounds per hour
- (b) PM₁₀ emissions from Boiler No. 6 (S8E) shall not exceed 0.066 lbs/ MMBtu and 25.69 pounds per hour
- (c) PM₁₀ emissions from Boiler No. 7 (S8F) shall not exceed 0.066 lbs/ MMBtu and 25.69 pounds per hour
- (d) PM₁₀ emissions from Boiler No. 8 (S8G) shall not exceed 0.066 lbs/ MMBtu and 61.59 pounds per hour

Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility descriptions notes "stack serving", and to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

D.7.2 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]

Pursuant to 326 IAC 7-4.1-10(a)(1), the sulfur dioxide emission rate from these units shall be limited to the following:

- (a) SO₂ emissions from Boiler No. 5 (S8C/D) shall not exceed 0.594 lbs/MMBtu.
- (b) SO₂ emissions from Boiler No. 6 (S8E) shall not exceed 0.594 lbs/MMBtu.
- (c) SO₂ emissions from Boiler No. 7 (S8F) shall not exceed 0.594 lbs/MMBtu.
- (d) SO₂ emissions from Boiler No. 8 (S8G) shall not exceed 0.594 lbs/MMBtu.
- (e) Combined SO₂ emissions from Boiler No. 5 (S8C/D), Boiler No. 6 (S8E), Boiler No. 7 (S8F), and Boiler No. 8 (S8G) shall not exceed 1,456.5 pounds per hour.

- (f) Total actual heat input from fuel oil usage at all boilers combined shall not exceed two thousand four hundred fifty-two (2,452) MMBtu per hour.
- (g) Boilers shall be fired on fuel oil, blast furnace gas, and natural gas only.
- (h) Fuel oil burned shall not exceed one and three-tenths percent (1.3%) sulfur and one and thirty-five hundredths (1.35) pounds per MMBtu.
- (i) Utility Boilers 5, 6, 7, and 8 in combination with the Ironside Energy, LLC Utility Boiler No. 9 are limited to an annual operating limit of five thousand eight hundred seventy-one and sixty-one hundredths (5,871.61) tons per year.

D.7.3 PSD and Emissions Offset Credit Limits [326 IAC 2-2 and 326 IAC 2-3]

Pursuant to CP089-10842-00448 issued on February 2, 2000 to Ironside Energy, LLC, the existing Boiler No. 4 with a heat input rate of 260 MMBtu per hour, owned and operated by ISG-Indiana Harbor (formerly LTV) shall be permanently removed from service upon commercial operation of Boiler No. 9 to render the requirements of 326 IAC 2-3 (Emission Offset) and 326 IAC 2-2 (PSD) not applicable. Boiler No. 4 was shutdown in 2001.

D.7.4 Nitrogen Oxide Reduction Program for Specific Source Categories [326 IAC 10-3]

Pursuant to 326 IAC 10-3-3, beginning May 31, 2004, and each ozone control period thereafter, the Permittee shall comply with the following NOx emission limits:

- (a) NOx emissions from any affected boiler subject to this rule shall be limited to seventeen-hundreds pound of NOx per million Btu (0.17 lbs/MMBtu) of heat input over the ozone control period, and
- (b) Ensure that fifty percent (50%) of the heat input shall be derived from blast furnace gas averaged over the ozone control period.
- (c) During periods of blast furnace reline, startup, and period of malfunction, the affected boilers shall not be required to meet the requirement to derive fifty percent (50%) of the heat input from blast furnace gas.

D.7.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.7.6 Nitrogen Oxide Reduction Program for Specific Source Categories [326 IAC 10-3]

Beginning May 31, 2004, and each ozone control period thereafter, the Permittee shall meet the monitoring requirements of 326 IAC 10-3-4(c). To comply with Condition D.7.4, for each affected boiler, the Permittee shall monitor fuel usage and the percentage heat input derived from each fuel combusted to demonstrate that greater than fifty percent (50%) of heat input is derived from blast furnace gas.

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

D.7.7 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]

Pursuant to 326 IAC 7-4.1-2, and in order to comply with condition D.7.2, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

- (a) A description of planned procedures for sampling of sulfur-bearing fuels and materials for analysis of sulfur content, and for any planned direct measurement of sulfur dioxide emissions vented to the atmosphere.

- (b) The protocol shall specify the frequency of sampling, analysis and/or measurement for each fuel and materials for each facility. The department shall incorporate the protocol into the source's operation permit per procedures specified in 326 IAC 2.

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

D.7.8 Record Keeping Requirements

- (a) To document compliance with Conditions D.7.2 and D.7.4, the Permittee shall maintain the following records:
 - (1) Records of the total coke oven gas, blast furnace gas, fuel oil, and natural gas usage for each day at the Nos. 5, 6, 7, and 8 Boilers.
 - (2) Records of the average sulfur content and heating value for each day for each fuel type used during the calendar quarter.
 - (3) Records of any compliance emissions calculations.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.7.9 Reporting Requirements

The Permittee shall submit to the IDEM, OAQ, within thirty (30) days of the end of each calendar quarter the calculated sulfur dioxide emission rate in pounds per MMBtu for each facility for each day during the calendar quarter and the total fuel usage for each type at each facility for each day. The summary of the information to document compliance with Condition D.7.8 (a), shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION D.8

FACILITY OPERATION CONDITIONS

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

(h) Shops*

- (1) Machine Shop
- (2) Refrigeration Shop
- (3) Electrical Shop
- (4) Bridge Shop
- (5) Pipe Shop
- (6) Line Shop
- (7) Fabrication Shop
- (8) Carpenter Shop
- (9) Paint Shop and Paint Building
- (10) Mason Shop
- (11) Transportation Shop
 - (A) Gasoline Dispensing Facility with 10,000 gallon capacity Storage Tank (T4A22) (162,504 gal/yr throughput), installed in 1988
 - (B) Two (2) Diesel Fuel Storage Tanks (T-4A7 & T-4A8) each with a 10,000 gallon storage capacity.
- (12) Locomotive Shop including Railcar and Yard Storage

*Activities performed in the shops are listed in the insignificant activities

(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.8.1 Gasoline Storage Tank Requirements [326 IAC 8-4-6]

Pursuant to 326 IAC 8-4-6(b), no owner or operator of a gasoline dispensing facility shall allow the transfer of gasoline between any transport and any storage tank unless such tank is equipped with the following:

- (a) A submerged fill pipe.
- (b) Either a pressure relief valve set to release at no less than seven-tenths (0.7) pounds per square inch or an orifice of five-tenths (0.5) inch in diameter.
- (c) A vapor balance system connected between the tank and the transport, operating according to manufacturer's specifications.

D.8.2 Gasoline Dispensing Facility Requirements [326 IAC 8-4-6]

Pursuant to 326 IAC 8-4-6 (e):

- (a) No owner or operator of a gasoline dispensing facility shall cause or allow the dispensing of motor vehicle fuel at any time unless all motor vehicle fuel dispensing operations are equipped with and utilize a certified vapor collection and control system which is properly installed and operated as follows:
 - (1) No vapor collection and control system shall be installed, used, or maintained unless the system has been certified by CARB and meets the testing requirements specified in 326 IAC 8-4-6 (k)(6).
 - (2) Any vapor collection and control system utilized shall be maintained in accordance to its certified configuration and with the manufacturer's specification and maintenance schedule.
 - (3) No elements or components of a vapor collection and control system shall be modified, removed, replaced, or otherwise rendered inoperative in a manner which prevents the system from performing in accordance with its certification and design specifications.
- (b) One (1) or more operators or employees of the gasoline dispensing facility shall be trained and instructed annually in the proper operation and maintenance of a vapor collection and control system.
- (c) Instructions shall be posted in a conspicuous and visible place within the motor vehicle fuel dispensing area for the system in use at that station. The instructions shall clearly describe how to fuel vehicles correctly with the vapor recovery nozzles utilized at that station. The instructions shall also include a warning that repeated attempts to continue dispensing motor vehicle fuel after the system has indicated that the vehicle fuel tank is full, may result in a spillage of fuel.

D.8.3 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-1, the Permittee is required to keep records on the information in 326 IAC 8-9-6(a)-(b) for the two (2) 10,000 gallon Diesel Fuel Storage Tank (T-4A7 & T-4A8).

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

D.8.4 Gasoline Dispensing Facility Monitoring Requirements [326 IAC 8-4-6]

Pursuant to 326 IAC 8-4-6 (e):

- (a) A vapor collection and control system shall not be operated with defective, malfunctioning, missing, or noncertified components. The following requirements apply to a vapor collection and control system:
 - (1) All parts of the system which can be visually inspected must be checked daily by the operator of the facility for the following malfunctions:
 - (A) Absence or disconnection of any component required to be used to certify the system.
 - (B) A vapor hose which is crimped or flattened such that the vapor passage is blocked or severely restricted.
 - (C) A nozzle boot which is torn in either of the following manners:
 - (i) A triangular shaped or similar tear one-half ($\frac{1}{2}$) inch or more to a side or a hole one-half ($\frac{1}{2}$) inch or more in diameter or length.

- (ii) Slit one (1) inch or more in length.
- (D) A faceplate or flexible cone which is damaged in the following manner:
 - (i) For balance nozzles and nozzles for aspirator and educator assist type systems, damage shall be such that the capability to achieve a seal with a fill pipe interface is affected for one-fourth ($\frac{1}{4}$) of the circumference of the faceplate (accumulated).
 - (ii) For nozzles for vacuum assist type systems that use a flexible cone, having more than one-fourth ($\frac{1}{4}$) of the flexible cone missing.
- (E) A nozzle shutoff mechanism which malfunctions in any manner.
- (F) A vacuum producing device which is inoperative.
- (b) All vapor collection and control systems shall be retested for vapor leakage and blockage, and successfully pass the test, at least every five (5) years or upon major system replacement or modification. A major system modification is considered to be replacing, repairing, or upgrading seventy-five percent (75%) or more of a vapor collection and control system of a facility.

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

D.8.5 Record Keeping Requirements

- (a) Pursuant to 326 IAC 8-4-6 (i), any gasoline dispensing facility subject to 326 IAC 8-4-6 (e) shall retain copies of all records and reports adequate to clearly demonstrate the following:
 - (1) That a certified vapor collection and control system has been installed and tested to verify its performance according to its specifications.
 - (2) That proper maintenance has been conducted in accordance with the manufacturer's specifications and requirements.
 - (3) The time period and duration of all malfunctions of the vapor collection and control system.
 - (4) The motor vehicle fuel throughput of the facility for each calendar month of the previous year.
 - (5) That operators and employees are trained and instructed in the proper operation and maintenance of the vapor collection and control system.
- (a) All records and reports required in 326 IAC 8-4-6 (i) shall be made available to the agency upon request. All records shall be retained for a period of two (2) years
- (c) Pursuant to 326 IAC 8-9, the Permittee must keep records of the following:
 - (1) The vessel identification number;
 - (2) The vessel dimensions; and
 - (3) The vessel capacity.

Records shall be maintained for the life of the vessel.

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

SECTION D.9

FACILITY OPERATION CONDITIONS

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

(i) Storage Vessels: (all tanks installed before 1975)

- (1) One (1) 400,000 gallon storage tank containing #6 fuel oil (T4F24)
- (2) One (1) 70,000 gallon storage tank containing #6 fuel oil (T4A1)
- (3) One (1) 25,000 gallon diesel fuel storage tank (T4A13)
- (4) One (1) 2,000,000 gallon storage tank containing #6 fuel oil (T4A4)
- (5) One (1) 200,000 gallon storage tank containing #6 fuel oil (T4A5)
- (6) One (1) 3,400,000 gallon storage tank containing #6 fuel oil (T4C9)
- (7) One (1) 3,400,000 gallon storage tank containing #6 fuel oil (T4A C10)
- (8) Three (3) 5,000 gallon bleach storage tanks (TR-05, TR-06, TR-07)
- (9) Two (2) 5,000 gallon storage tanks containing hydrochloric acid (HCl) (TR-22, TR-23)
- (10) One (1) 5,000 gallon storage tanks containing ethylene glycol (T4E15)
- (11) Two (2) 30,000 gallon storage tank containing hydrochloric acid (HCl) (T-238, T-239)
- (12) One (1) 8,000 gallon diesel fuel tank (T-4F95)

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

Emission Limitations and Standards

D.9.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-1, the Permittee is required to keep records on the information in 326 IAC 8-9-6(a)-(b) for all storage vessels containing No. 2 fuel oil, No. 6 fuel oil, diesel fuel, bleach and ethylene glycol.

D.9.2 NESHAP Operational and equipment standards [40 CFR 63.63.1159, Subpart CCC]

Hydrochloric acid storage vessels. Pursuant to 40 CFR 63.63.1159, Subpart CCC, the Permittee of an affected vessel shall provide and operate, except during loading and unloading of acid, a closed-vent system for each vessel. Loading and unloading shall be conducted either through enclosed lines or each point where the acid is exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.

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

D.9.3 Monitoring Requirements [40 CFR 63.1162]

Pursuant to 40 CFR 63.1162, the Permittee of an affected hydrochloric acid storage vessel shall inspect each vessel semiannually to determine that the closed-vent system and either the air pollution control device or the enclosed loading and unloading line, whichever is applicable, are installed and operating when required.

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

D.9.4 Record Keeping Requirements

Pursuant to 326 IAC 8-9, the Permittee must keep records of the following:

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

Records shall be maintained for the life of the vessel.

SECTION D.10

FACILITY OPERATION CONDITIONS

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

- (j) One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:**
- (1) Receiving:
 - (A) Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;
 - (B) Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;
 - (C) Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;
 - (D) Coal Truck Haul Roads, identified as CF01, using water flushing and sweeping as control, exhausting to the atmosphere;
 - (E) One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (F) One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (G) One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (H) One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (I) One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (J) One (1) Coal Storage Pile Area, approved for construction in 2008, identified as CF02, covering a nominal maximum area of 116,000 square feet, exhausting to the atmosphere;
 - (K) Front end wheel loaders with each having a minimum of an eight (8) cubic yard bucket and a vehicle weight of 100,000 lbs traveling on paved and unpaved roads, such that the use of any larger capacity wheel loader would be acceptable since it would reduce vehicle miles traveled and fugitive emissions;
and
 - (L) Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere;
and

(2) Grinding & Drying Plant:

- (A) Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01;
- (B) Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02;
- (C) Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and
- (D) Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04.

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

- (a) Pursuant to Significant Permit Modification 089-26506-00318, the raw coal throughput to the Raw Coal Truck Unloading System, identified as RC02, shall be limited to less than 74,460 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Pursuant to Significant Permit Modification 089-26506-00318, the combined PM₁₀ emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 2.71 pounds per hour.
- (c) Pursuant to Significant Permit Modification 089-26506-00318, the combined PM_{2.5} emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 2.05 pounds per hour.
- (d) Pursuant to Significant Permit Modification 089-26506-00318, the natural gas usage for the Thaw Shed Heater, identified as RC04, shall not exceed 41,391 MMBtu per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limits shall limit the PM from the units listed in Section D.10 PCI system to less than 25 tons per twelve (12) consecutive month period and the PM₁₀ from the units listed in Section D.10 PCI system to less than 15 tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable. Compliance with the above limit shall limit the direct PM_{2.5} from the units listed in Section D.10 PCI system to less than 10 tons per twelve (12) consecutive month period and render 326 IAC 2-1.1-5 not applicable.

D.10.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, the Raw Coal Railcar Unloading System (RC01), Raw Coal Truck Unloading System (RC02), Raw Coal Reclaim System (RC03), Coal Conveyors (CC01, CC03, CC04, CC05), Coal Stacker (CC02), Raw Coal Storage Bin (PC01), Coal Grinder and Dryer Mill Bag Filter Separator (PC02), and Pulverized Coal Storage Bin (PC04) shall not discharge to the atmosphere particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.10.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.10.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 6.8-1-2]

- (1) Within 60 days of achieving the maximum capacity, but no later than 180 days after start-up, in order to demonstrate compliance with Condition D.10.2, Particulate Emission, the Permittee shall perform PM testing on the Coal Grinder and Dryer, identified as PC02, operating in conjunction with the Coal Dryer Auxiliary Heater, identified as PC03, utilizing methods as approved by the Commissioner.
- (2) In order to demonstrate compliance with Condition D.10.1, PSD and Nonattainment NSR Minor Limit, the Permittee shall perform PM_{2.5} and PM₁₀ testing on the Coal Grinder and Dryer, identified as PC02, operating in conjunction with the Coal Dryer Auxiliary Heater, identified as PC03, within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ includes filterable PM₁₀ and condensable PM. PM_{2.5} includes filterable PM_{2.5} and condensable PM.

These tests shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.10.5 Particulate Control

In order to comply with Condition D.10.2:

- (a) bag filters for particulate control shall be in operation and shall control emissions from the Raw Coal Storage Bin, identified as PC01, at all times the Raw Coal Storage Bin is receiving material;
- (b) the Mill Bag Filter Separator for particulate control shall be in operation and shall control emissions from the Coal Grinder and Dryer, identified as PC02, at all times the Coal Grinder and Dryer are operating; and
- (c) bag filters for particulate control shall be in operation and shall control emissions from the Pulverized Coal Storage Bin, identified as PC04, at all times the Pulverized Coal Storage Bin is receiving material.

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

D.10.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Coal Grinder and Dryer exhaust, identified as PC02-S, shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.10.7 Bag Filter Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the bag filter used in conjunction with the Coal Grinder and Dryer Mill Bag Filter Separator (PC02) at least once per day when the associated processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 8.0 inches of water or an alternative range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A reading that is outside the ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation of 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.10.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (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 line. 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.10.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.10.1, the Permittee shall maintain the following records:
 - (1) Records of the total coal delivered for each day at the Raw Coal Truck Unloading System, identified as RC02; and
 - (2) Records of the natural gas usage for the Thaw Shed Heater, identified as RC04.
- (b) To document compliance with Condition D.10.5(b), the Permittee shall maintain records of once per day visible emission notations of the Coal Grinder and Dryer exhaust, identified as PC02-S. The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).

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

D.10.10 Reporting Requirements

A quarterly report shall be submitted containing the raw coal throughput to the Raw Coal Truck Unloading System, identified as RC02, and the natural gas usage for the Thaw Shed Heater, identified as RC04, in order to document compliance with Condition D.10.1. The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.11

FACILITY OPERATION CONDITIONS

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

Insignificant Activities:

- (a) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month. [326 IAC 8-9-1]
- (b) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons. [326 IAC 8-9-1]
- (c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6.5-1-2]
- (e) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6.5-1-2]

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

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

D.11.1 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (Particulate emission limitations; fuel combustion steam generators, asphalt concrete plant, grain elevators, foundries, mineral aggregate operations; modification by commissioner), the particulate matter emissions from the brazing equipment, cutting torches, soldering equipment, welding equipment, grinding and machining operations shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.11.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-1]

Pursuant to 326 IAC 8-9-1, the Permittee is required to keep records of the information in 326 IAC 8-9-6(a)-(b) for all stationary vessels used to store volatile organic liquids.

D.11.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations existing as of January 1, 1980, located in Clark, Elkhart, Floyd, Lake, Marion, Porter and St. Joseph Counties and which have potential emissions of one hundred (100) tons per year or greater of VOC, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

- (e) Provide a permanent, conspicuous label summarizing the degreaser operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.11.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs existing as of July 1, 1990, located in Clark, Elkhart, Floyd, Lake, Marion, Porter or St. Joseph Counties, the Permittee shall ensure that the following requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

Compliance Determination Requirement

D.11.5 Particulate Control

In order to comply with D.11.1, the control equipment for particulate control shall be in operation and control emissions from the grinding and machining operations at all times that the grinding and machining operations are in operation.

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

D.11.6 Record Keeping Requirements

Pursuant to 326 IAC 8-9, the Permittee must keep records of the following:

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

Records shall be maintained for the life of the vessel

D.11.7 Volatile Organic Compounds (VOC) [326 IAC 8-3-8] (Material requirements for cold cleaning degreasers)

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

- (a) On and after November 1, 1999, no person shall Operate a cold cleaning degreaser with a solvent vapor pressure that exceeds two (2) millimeters of mercury (thirty-eight thousandths (0.038) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (b) On and after May 1, 2001, no person shall Operate a cold cleaning degreaser with a solvent vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (c) On and after November 1, 1999, all persons subject to the requirements of 326 IAC 8-3-8 (c)(1)(B) and (c)(2)(B) shall maintain each of the following records for each purchase:
 - (1) The name and address of the solvent supplier.
 - (2) The date of purchase.
 - (3) The type of solvent.
 - (4) The volume of each unit of solvent.
 - (5) The total volume of the solvent.
 - (6) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (d) All records required by 326 IAC 8-3-8 (d) shall be retained on-site for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

SECTION D.12

FACILITY OPERATION CONDITIONS

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

Fugitive Dust Sources consisting of, but not limited to the following:

- (1) Paved Roads and Parking Lots
- (2) Unpaved Roads and Parking Lots
- (3) Batch Transfer-Loading and Unloading Operations
- (4) Continuous Transfer In and Out of Storage Piles
- (5) Batch Transfer Operations-Slag and Kish Handling
- (6) Wind Erosion from Storage Piles and Open Areas
- (7) In Plant Transfer by Truck or Rail
- (8) In Plant Transfer by Front End Loader or Skip Hoist
- (9) Material Processing Facility (except Crusher Fugitive Emissions)
- (10) Crusher Fugitive Emissions
- (11) Material Processing Facility Building Openings
- (12) Dust Handling Equipment

(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.12.1 Particulate Matter (PM) [326 IAC 6.8-10]

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

Compliance Determination Requirements

D.12.2 Particulate Matter (PM)

Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter Control Requirements), opacity from the activities shall be determined as follows:

- (a) Paved Roads and Parking Lots
The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:
 - (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.

(3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

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

(b) Unpaved Roads and Parking Lots

The fugitive particulate emissions from unpaved roads shall be controlled by the implementation of a work program and work practice under the fugitive dust control plan.

(c) Batch Transfer

The average instantaneous opacity shall consist of the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume.

(d) Continuous Transfer

The opacity shall be determined using 40 CFR 60, Appendix A, Method 9. The opacity readings shall be taken at least four (4) feet from the point of origin.

(e) Wind Erosion from Storage Piles

The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. The limitations may not apply during periods when applications of fugitive particulate control measures are either ineffective or unreasonable due to sustained very high wind speeds. During such periods, the company must continue to implement all reasonable fugitive particulate control measures and maintain records documenting the application of measures and the basis for a claim that meeting the opacity limitation was not reasonable given prevailing wind conditions.

(f) Wind Erosion from Exposed Areas

The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.

(g) Material Transported by Truck or Rail

Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the inplant transportation requirement.

(h) Material Transported by Front End Loader or Skip Hoist

Compliance with this limitation shall be determined by the average of three (3) opacity readings taken at five (5) second intervals. The three (3) opacity readings shall be taken as follows:

(1) The first will be taken at the time of emission generation.

(2) The second will be taken five (5) seconds later.

(3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

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

- (i) **Material Processing Limitations**
Compliance with all opacity limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 9. Compliance with all visible emissions limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 22. Compliance with all particulate matter limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 5 or 17.
- (j) **Dust Handling Equipment**
Compliance with this standard shall be determined by 40 CFR 60, Appendix A, Method 9.

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

D.12.3 Record Keeping Requirements

Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter Control Requirements):

- (a) The source shall keep the following documentation to show compliance with each of its control measures and control practices:
 - (1) A map or diagram showing the location of all emission sources controlled, including the location, identification, length, and width of roadways.
 - (2) For each application of water or chemical solution to roadways, the following shall be recorded:
 - (A) The name and location of the roadway controlled
 - (B) Application rate
 - (C) Time of each application
 - (D) Width of each application
 - (E) Identification of each method of application
 - (F) Total quantity of water or chemical used for each application
 - (G) For each application of chemical solution, the concentration and identity of the chemical
 - (H) The material data safety sheets for each chemical
 - (3) For application of physical or chemical control agents not covered by 326 IAC 6.8-10-4(B), the following:
 - (A) The name of the agent
 - (B) Location of application
 - (C) Application rate
 - (D) Total quantity of agent used
 - (E) If diluted, percent of concentration
 - (F) The material data safety sheets for each chemical
 - (4) A log recording incidents when control measures were not used and a statement of explanation.

- (5) Copies of all records required by this section shall be submitted to the department within twenty (20) working days of a written request by the department.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.12.4 Reporting Requirements

- (a) Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter Control Requirements), a quarterly report shall be submitted, stating the following:
 - (1) The dates any required control measures were not implemented
 - (2) A listing of those control measures
 - (3) The reasons that the control measures were not implemented
 - (4) Any corrective action taken
- (b) The Permittee shall submit to the IDEM, OAQ, within thirty (30) days of the end of each calendar quarter, the quarterly report in accordance with Section C - General Reporting Requirements of this permit.

SECTION E.1

EMISSIONS UNIT OPERATION CONDITIONS

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

- (j) **One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:**
- (1) Receiving:
 - (A) Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;
 - (B) Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;
 - (C) Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;
 - (E) One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (F) One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (G) One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (H) One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (I) One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (L) Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and
 - (2) Grinding & Drying Plant:
 - (A) Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01-S;
 - (B) Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02-S;
 - (C) Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and

- (D) Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04-S.

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

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1]
[40 CFR 60, Subpart A]

- (a) The provisions of 40 CFR 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this Section E.1, except when otherwise specified in 40 CFR 60, Subpart Y.
- (b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

E.1.2 New Source Performance Standards for Coal Preparation Plants [40 CFR 60, Subpart Y]
[326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart Y (included as Attachment A of the permit), which are incorporated by reference in 326 IAC 12:

- (1) 40 CFR 60.250;
- (2) 40 CFR 60.251;
- (3) 40 CFR 60.252;
- (4) 40 CFR 60.253(a)(1);
- (5) 40 CFR 60.253(b); and
- (6) 40 CFR 60.254.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: ArcelorMittal Indiana Harbor, LLC
Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
Mailing Address: 3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312
Part 70 Permit No.: T089-7099-00318

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
MC61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: ArcelorMittal Indiana Harbor, LLC
Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
Mailing Address: 3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312
Part 70 Permit No.: T089-7099-00318

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: ArcelorMittal Indiana Harbor, LLC
 Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
 Mailing Address: 3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312
 Part 70 Permit No.: T089-7099-00318
 Facility: Raw Coal Truck Unloading System (RC02)
 Parameter: Total throughput of coal delivered via trucks
 Limit: Less than 74,460 tons of iron per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR:

Month	Column 1 (coal throughput)	Column 2 (coal throughput)	Column 1 + Column 2 (coal throughput)
	This Month (tons)	Previous 11 Months (tons)	12 Month Total (tons)
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: ArcelorMittal Indiana Harbor, LLC
 Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
 Mailing Address: 3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312
 Part 70 Permit No.: T089-7099-00318
 Facility: Thaw Shed Heater (RC04)
 Parameter: Natural gas usage
 Limit: Less than 41,391 MMBtu per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR:

Month	Column 1 (natural gas usage)	Column 2 (natural gas usage)	Column1 + Column2 (natural gas usage)
	This Month (MMBtu)	Previous 11 Months (MMBtu)	12 Month Total (MMBtu)
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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

**PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: ArcelorMittal Indiana Harbor, LLC
Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
Mailing Address: 3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312
Part 70 Permit No.: T089-7099-00318

<input type="checkbox"/> Natural Gas Only
<input type="checkbox"/> Alternate Fuel burned
From:___ To:___

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:

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

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

**PART 70 OPERATING PERMIT
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: ArcelorMittal Indiana Harbor, LLC
 Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
 Mailing Address: 3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312
 Part 70 Permit No.: T089-7099-00318

Months: ____ to ____ Year: ____

This report shall be submitted quarterly based on a calendar year. 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".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Attachment A

Title 40: Protection of Environment

Subpart Y— New Source Performance Standards for Coal Preparation Plants

§ 60.250 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to any of the following affected facilities in coal preparation plants which process more than 181 Mg (200 tons) per day: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after October 24, 1974, is subject to the requirements of this subpart.

[42 FR 37938, July 25, 1977; 42 FR 44812, Sept. 7, 1977, as amended at 65 FR 61757, Oct. 17, 2000]

§ 60.251 Definitions.

As used in this subpart, all terms not defined herein have the meaning given them in the Act and in subpart A of this part.

(a) *Coal preparation plant* means any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying.

(b) *Bituminous coal* means solid fossil fuel classified as bituminous coal by ASTM Designation D388–77, 90, 91, 95, or 98a (incorporated by reference—see §60.17).

(c) *Coal* means all solid fossil fuels classified as anthracite, bituminous, subbituminous, or lignite by ASTM Designation D388–77, 90, 91, 95, or 98a (incorporated by reference—see §60.17).

(d) *Cyclonic flow* means a spiraling movement of exhaust gases within a duct or stack.

(e) *Thermal dryer* means any facility in which the moisture content of bituminous coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere.

(f) *Pneumatic coal-cleaning equipment* means any facility which classifies bituminous coal by size or separates bituminous coal from refuse by application of air stream(s).

(g) *Coal processing and conveying equipment* means any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts.

(h) *Coal storage system* means any facility used to store coal except for open storage piles.

(i) *Transfer and loading system* means any facility used to transfer and load coal for shipment.

[41 FR 2234, Jan. 15, 1976, as amended at 48 FR 3738, Jan. 27, 1983; 65 FR 61757, Oct. 17, 2000]

§ 60.252 Standards for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any thermal dryer gases which:

(1) Contain particulate matter in excess of 0.070 g/dscm (0.031 gr/dscf).

(2) Exhibit 20 percent opacity or greater.

(b) On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any pneumatic coal cleaning equipment, gases which:

(1) Contain particulate matter in excess of 0.040 g/dscm (0.017 gr/dscf).

(2) Exhibit 10 percent opacity or greater.

(c) On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

[41 FR 2234, Jan. 15, 1976, as amended at 65 FR 61757, Oct. 17, 2000]

§ 60.253 Monitoring of operations.

(a) The owner or operator of any thermal dryer shall install, calibrate, maintain, and continuously operate monitoring devices as follows:

(1) A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within ± 1.7 °C (± 3 °F).

(2) For affected facilities that use venturi scrubber emission control equipment:

(i) A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 1 inch water gauge.

(ii) A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ± 5 percent of design water supply pressure. The pressure sensor or tap must be located close to the water discharge point. The Administrator may be consulted for approval of alternative locations.

(b) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under §60.13(b).

[41 FR 2234, Jan. 15, 1976, as amended at 54 FR 6671, Feb. 14, 1989; 65 FR 61757, Oct. 17, 2000]

§ 60.254 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the particular matter standards in §60.252 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.

(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

[54 FR 6671, Feb. 14, 1989]

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

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

Source Background and Description

Source Name:	ArcelorMittal Indiana Harbor, LLC
Source Location:	3001 Dickey Road, East Chicago, IN 46312
County:	Lake
SIC Code:	3312
Operation Permit No.:	T089-7099-00318
Operation Permit Issuance Date:	December 7, 2004
Significant Source Revision No.:	089-26477-00318
Significant Permit Revision No.:	089-26506-00318
Permit Reviewer:	John Haney

On September 18, 2008, the Office of Air Quality (OAQ) had a notice published in The Post Tribune, Merrillville, Indiana, and The Times, Munster, Indiana, stating that ArcelorMittal Indiana Harbor, LLC had applied for a significant source modification and significant permit modification to install a pulverized coal injection (PCI) system. The notice also stated that the OAQ proposed to issue a significant source modification and significant permit modification for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On October 17, 2008, ArcelorMittal Indiana Harbor, LLC submitted comments to IDEM, OAQ on the draft significant source modification and significant permit modification.

IDEM, OAQ prefers that changes not be made to the TSD in order to preserve the document placed on public notice. However, this Addendum to the original TSD serves to acknowledge changes to the permit and the basis for changes that occur after public notice. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

The ArcelorMittal mailing address listed in Section A.1, on the quarterly reports, and on the cover letter needs revised to reflect the following address:

~~3210 Watling Street, MC8-124,~~ **3001 Dickey Road, Mail Station 001, East Chicago, Indiana 46312**

Response to Comment 1:

IDEM agrees with the recommended changes. The permit, quarterly reports, and cover letter have been revised as requested above.

Comment 2:

ArccelorMittal requests the following change to the emission unit description in condition A.3(e):

- (e) *One (1) Sheet Mill Finishing operation, designated as No. 2 Sheet Mill, having a maximum capacity of 1,404,929 tons per year, comprised of the following facilities, ~~fugitive sources~~, process equipment, and operational practices:*

Response to Comment 2:

IDEM agrees with the recommended change. The permit has been revised as requested above.

Comment 3:

ArccelorMittal requests the following change to the emission unit description in condition A.3(f):

- (f) *One (1) Sheet Mill Finishing operation, designated as No. 3 Sheet Mill, having a maximum capacity of 2,156,537 tons per year, comprised of the following facilities, ~~fugitive sources~~, process equipment, and operational practices:*

Response to Comment 3:

IDEM agrees with the recommended change. The permit has been revised as requested above.

Comment 4:

ArccelorMittal requests the following change to the emission unit description in condition A.3(h):

- (h)(11)(B) *Two (2) Diesel Fuel Storage Tanks (T-4A7 & T-4A8) **each** with a 10,000 gallon storage capacity.*

Response to Comment 4:

IDEM agrees with the recommended changes since there are two individual storage tanks. The permit has been revised as requested above.

Comment 5:

ArccelorMittal requests the following change to Section A.4:

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

Response to Comment 5:

Since the insignificant activities listed in Section A.4 are in fact specifically regulated as insignificant activities, the phrase "Specifically Regulated" can not be removed. No changes were made as a result of this comment.

Comment 6:

Condition C.11(b) states "the Permittee shall update the [Continuous Compliance Plan], as needed, ... and make the updated CCP available for inspection by the department." Since the CCP will only be updated as needed, the CCP should be submitted on an as-needed basis as well. ArcelorMittal requests the following change regarding CCP update submission:

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

...

- (b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, **if required**, to IDEM, OAQ within thirty (30) days of the update.
- (c) Pursuant to 326 IAC 6.8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP, **if required**, is a violation of 326 IAC 6.8.

Response to Comment 6:

IDEM agrees with the recommended changes to conform to the verbatim requirements of the rule. The permit has been revised as requested above.

Comment 7:

ArcelorMittal requests the following change in condition C.12(a) regarding continuous opacity monitoring systems in order to clarify applicability:

C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment **where required by Section D of this permit.**

Response to Comment 7:

IDEM does not agree with the recommended change since it does not include possible requirements through a new NSPS or NESHAP. However, the statement can be clarified. The permit has been revised as follows:

C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) The Permittee shall calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment **where required by this permit as well as a state or federal rule or regulation.**

Comment 8:

ArcelorMittal requests the following changes in Section C.17 regarding excursions/exceedances in order to clarify its requirements:

C.17 Response to ~~Excursions or Exceedances~~ **Abnormal and Out-of-Range Compliance Monitoring Measurements** [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting ~~an excursion or exceedance~~ **a measurement required by a compliance monitoring condition of this permit that is outside the normal or usual range of values for the monitoring**, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

- (b) *The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance **abnormal and out-of-range compliance monitoring values** (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:*
- (1) *initial inspection and evaluation;*
 - (2) *recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or*
 - (3) *any necessary follow-up actions to return operation to within the ~~indicator range, designated condition, or below the applicable emission limitation or standard~~ **normal or usual operating range**, as applicable.*
- (c) *A determination of whether the Permittee has used acceptable procedures in response to an ~~excursion or exceedance~~ **abnormal and out-of-range compliance monitoring parameter** will be based on information available, which may include, but is not limited to, the following:*
- (1) *monitoring results;*
 - (2) *review of operation and maintenance procedures and records;*
 - (3) *inspection of the control device, associated capture system, and the process.*
- (d) *Failure to take reasonable response steps shall be considered a deviation from the permit.*
- (e) *The Permittee shall maintain the following records:*
- (1) *monitoring data;*
 - (2) *monitor performance data, if applicable; and*
 - (3) *corrective actions taken.*
- (f) ***The existence of an abnormal or out-of-range value for a compliance monitoring condition is not a deviation from this permit. The existence of the abnormal or out-of-range value may be evidence that an emission limitation or standard may have been exceeded.***

Response to Comment 8:

IDEM has discussed this comment with ArcelorMittal. ArcelorMittal has decided to withhold this comment from this permit because these changes may be resolved in a separate permit action. No changes were made as a result of this comment.

Comment 9:

In multiple conditions of Section D which reference NESHAP requirements, the phrase "the Permittee must comply with these requirements on and after ..." has been included to indicate applicability dates. ArcelorMittal has been and is in compliance with these requirements and believes it unnecessary to include statements with elapsed dates. ArcelorMittal requests that these statements be deleted.

Response to Comment 9:

Even if the source is in compliance with these requirements, the statements are still indications to both the source and IDEM, OAQ of when compliance should have commenced. Without these statements, it is more difficult to determine applicability dates. No changes were made as a result of this comment.

Comment 10:

In multiple conditions of Section D which reference compliance monitoring requirements, the phrase "failure to take response steps in accordance with Section C- Response to Excursions or Exceedances, shall be considered a violation of this permit" is cited. However, condition C.17(d) clearly states "failure to take reasonable response steps shall be considered a deviation from the permit." ArcelorMittal requests that the statements with the word "violation" be changed to "deviation" for clarity.

Response to Comment 10:

IDEM agrees with the recommended changes. Conditions D.1.11, D.2.13, D.2.14(a), D.2.14(b), D.2.15, D.2.16, D.3.15, D.3.16, and D.10.7 of the permit have been revised throughout as follows:

*Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances, shall be considered a ~~violation~~ **deviation** of this permit.*

Comment 11:

With respect to the provisions regarding Broken or Failed Bag Detection requirements (see conditions D.1.12, D.3.17, and D.10.8), ArcelorMittal requests deletion of the phrase: "~~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.~~" This phrase contains conflicting requirements subject to varying interpretations and is unnecessary to demonstrate compliance with the applicable requirements.

Response to Comment 11:

This phrase is not a compliance requirement and is only descriptive in nature. It is only suggestive to both the source and IDEM, OAQ as to what might indicate bag failure. No changes were made as a result of this comment.

Comment 12:

With respect to the provisions regarding parametric monitoring (see conditions D.2.14, D.3.16, and D.10.7), ArcelorMittal requests that the frequency of calibration for instruments used for determining pressure drop and flow rate be revised from "~~once every six (6) months~~" to "**once every twelve (12) months or in accordance with manufacturer's recommendations**", which is a sufficient frequency to ensure compliance.

Response to Comment 12:

IDEM has discussed this comment with ArcelorMittal. ArcelorMittal has decided to withhold this comment from this permit because these changes may be resolved in a separate permit action. No changes were made as a result of this comment.

Comment 13:

In condition D.4.2, pursuant to 326 IAC 6.8-1-2, IDEM has included a PM emission limit of 0.03 grains/dscf of exhaust air for the 28 natural gas fired space heater (V4A). However, ArcelorMittal believes this provision is inconsistent with 326 6.8-2-1(d) which states: "particulate limitations shall not be established for combustion units that burn only natural gas at sources or facilities identified in this article, as long as the units continue to burn only natural gas" because in condition D.4.1, pursuant to 326 IAC 6.8-2-21, IDEM establishes requirements for these units to only combust natural gas. Emission units that only combust natural gas are not subject to the PM emission limits in 326 IAC 6.8. Therefore, IDEM should delete condition D.4.2.

Response to Comment 13:

Strict construction of 326 IAC 6.8-1-2 could lead to assigning a PM limit of 0.03 gr/dscf to the natural gas space heaters. However, since the heaters are exempt from PM₁₀ limits pursuant to 326 6.8-2-1(d), it is reasonable to not assign the heaters a PM limit as well. This reasoning is consistent with the organizational structure of 326 IAC 6.5; the exemption for natural gas combustion units is in an applicability section that does not differentiate between PM and PM₁₀. Therefore, IDEM agrees with the recommended changes. Subsequent sections and references have been renumbered accordingly. The permit has been revised as follows:

~~D.4.2 Particulate Matter (PM) [326 IAC 6.8-1-2]~~

~~Pursuant 326 IAC 6.8-1-2, the twenty eight (28) natural gas space heater (V4A) shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.~~

~~D.4.32 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]~~

...

~~D.4.43 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

...

~~D.4.54 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]~~

...

~~D.4.65 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]~~

~~Pursuant to 326 IAC 7-4.1-2, and in order to comply with condition D.4.32, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:~~

...

~~D.4.76 Record Keeping Requirements~~

...

~~(c) To document compliance with Conditions D.4.21 and D.4.5, the Permittee shall maintain the following records:~~

...

D.4.87 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO₂ emission rate in pounds per MMBtu for each facility for each day, total fuel usage for each type at each facility each day, and any violations of 326 IAC 7-4.1-10(a)(2), in order to document compliance with Condition D.4.76(c). The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Comment 14:

Condition D.4.8 is lacking a reporting requirement and is missing the "responsible official" clause. ArcelorMittal requests the following rewrite in order to clarify its requirements:

A quarterly report shall be submitted containing the calculated SO₂ emission rate in lb/ MMBtu for each facility for each day in quarter, total fuel usage for each type at each facility each day and any violations of limit 326 IAC 7-4-1.1(c)(14)(D), in order to document compliance with Conditions D.4.7(c). The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Response to Comment 14:

IDEM agrees this amendment can be instituted with revisions. 326 IAC 7-4-1.1 has been repealed and replaced with 326 IAC 7-4.1. Additional grammatical changes have been made. The permit has been revised as follows:

D.4.8 Reporting Requirements

~~*The Permittee shall submit to the IDEM, OAQ, within thirty (30) days of the end of each calendar quarter the calculated sulfur dioxide emission rate in pounds per million Btu for each facility for each day during the calendar quarter and the total fuel usage for each type at each facility for each day. The summary of the information to document compliance with Condition D.4.7 (c), shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit. A quarterly report shall be submitted containing the calculated SO₂ emission rate in pounds per MMBtu for each facility for each day, total fuel usage for each type at each facility each day, and any violations of 326 IAC 7-4.1-10(a)(2), in order to document compliance with Conditions D.4.7(c). The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).*~~

Comment 15:

In condition D.5.2, pursuant to 326 IAC 6.8-1-2, IDEM has included PM emission limits of 0.03 grains/dscf of exhaust air for several of the emission units in the No. 2 Sheet Mill. However, ArcelorMittal believes this provision is inconsistent with 326 6.8-2-1(d) which states: "particulate limitations shall not be established for combustion units that burn only natural gas at sources or facilities identified in this article, as long as the units continue to burn only natural gas" because in condition D.5.1, pursuant to 326 IAC 6.8-2-21, IDEM establishes requirements for these units to only combust natural gas. Emission units that combust only natural gas are not subject to the PM emission limits in 326 IAC 6.8. Therefore, IDEM should delete references to emission units in condition D.5.2 that combust only natural gas.

Response to Comment 15:

IDEM agrees with the recommended changes. See Response to Comment 13.

The permit has been revised as follows:

D.5.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

~~Pursuant to 326 IAC 6.8-1-2, the No. 1 Galvanizing and Aluminizing Line Flame Furnace, the No. 2 Galvanizing Line Flame Furnace, the No. 1 Galvanizing and Aluminizing Line Galvanizing and Aluminizing Furnace, and the No. 2 Galvanizing Line Galvanizing Furnace at the No. 2 Sheet Mill as well as the caustic cleaning system, and the pre-melt furnace, and the seven (7) space heaters shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.~~

Comment 16:

Current permit condition D.5.6 "Sulfur Dioxide (SO₂) Sampling and Analysis" is no longer relevant to this permit. The equipment it was applicable to has been shutdown and removed. ArcelorMittal requests the following changes to the permit:

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

~~D.5.6 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4-1.1(d)]~~

~~Pursuant to 326 IAC 7-4-1.1(d), and in order to comply with Condition D.5.5, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:~~

- ~~(a) A description of planned procedures for sampling of sulfur-bearing fuels and materials for analysis of sulfur content, and for any planned direct measurement of sulfur dioxide emissions vented to the atmosphere.~~
- ~~(b) The protocol shall specify the frequency of sampling, analysis and/or measurement for each fuel and materials for each facility. The department shall incorporate the protocol into the source's operation permit per procedures specified in 326 IAC 2-~~

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

~~D.5.76 Reporting Requirements~~

~~...~~

Response to Comment 16:

IDEM agrees with the recommended changes since 326 IAC 7 does not apply to any of the emission units or facilities in Section D.5. The permit has been revised as requested above.

Comment 17:

In condition D.6.5, pursuant to 326 IAC 6.8-1-2, IDEM has included PM emission limits of 0.03 grains/dscf of exhaust air for several of the emission units in the No. 3 Sheet Mill. However, this provision is inconsistent with 326 6.8-2-1(d) which states: "particulate limitations shall not be established for combustion units that burn only natural gas at sources or facilities identified in this article, as long as the units continue to burn only natural gas" because in condition D.6.4, pursuant to 326 IAC 6.8-2-21, IDEM establishes requirements for these units to only combust natural gas. Emission units that combust only natural gas are not subject to the PM emission limits in 326 IAC 6.8. Therefore, IDEM should delete references to emission units in condition D.6.5 that combust only natural gas.

Response to Comment 17:

IDEM agrees with the recommended changes. See Response to Comment 13.

The permit has been revised as follows:

D.6.5 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant 326 IAC 6.8-1-2, the Pickle Line (S6A), Shot Blaster (V6B), 2-Stand Temper Mill (S6B), and 5-Stand Tandem Mill (V6B), ~~seven (7) single stack batch annealing furnaces, and eleven (11) multi-stack batch annealing furnaces~~ shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

Comment 18:

The PCI project PM_{2.5} emissions are being limited to less than eight tons per year. However, the applicable significant threshold is 10 tons/year of PM_{2.5}. ArcelorMittal requests that the emission limit from the Coal Grinder and Dryer (PC02) and the Coal Dryer Auxiliary Heater (PC03) be increased from 1.54 pounds per hour to 2.05 pounds per hour. This will limit the combined PM_{2.5} emissions from the Coal Grinder and Dryer and the Coal Dryer Auxiliary Heater to less than 9 tons/year, ensuring that the direct PM_{2.5} emissions from the PCI project will be less than 10 tons/year.

Response to Comment 18:

IDEM agrees with the recommended changes, since the direct PM_{2.5} emissions from the PCI project will be less than 10 tons/year, as indicated in the revised PTE table below. See Attachment A to the TSD Addendum for a detailed copy of the revised calculations.

Emissions (tons/yr)								
Process / Emission Unit	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NO _x	Pb
<i>PTE (New Units)</i>								
Raw Coal Unloading/Transfer *	1.92	0.91	0.14	-	-	-	-	-
Grinding & Drying Plant ----- Raw Coal Storage Bin	0.01	0.01	0.003	-	-	-	-	-
Grinding & Drying Plant ----- Coal Grinder and Dryer	10.26	10.26	5.13 6.81**	-	-	-	-	-
Grinding & Drying Plant ----- Pulverized Coal Storage Bin	0.01	0.01	0.003	-	-	-	-	-
Coal Pile Wind Erosion	2.13	1.07	0.43	-	-	-	-	-
Haul Road Fugitives	1.08	0.21	0.03	-	-	-	-	-
Front End Loader Fugitives	3.30	0.74	0.07	-	-	-	-	-
Coal Dryer Auxiliary Heater	1.63	1.63	1.63 2.17**	0.13	1.18	18.04	21.47	0.00
Thaw Shed Heater	0.15	0.15	0.15	0.01	0.11	1.70	2.03	0.00
TOTAL PTE	20.49	14.99	7.59 9.81	0.14	1.29	19.74	23.50	0.00

* These PTE emissions are from raw coal unloading/transfer due to 100% rail delivery.
 ** The combined total of these emissions equals 8.98 tons per year (2.05 pounds per hour).

The permit has been revised as follows:

D.10.1 PSD and Nonattainment NSR Minor Limit [326 IAC 2-2] [326 IAC 2-1.1-5]

(c) Pursuant to Significant Permit Modification 089-26506-00318, the combined PM_{2.5} emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than ~~4.54~~ **2.05** pounds per hour.

Comment 19:

The last paragraph in condition D.10.1 incorrectly identifies the applicability of PM, PM₁₀, and PM_{2.5} limits to the "entire source". These limits will only apply to the emission units proposed to be constructed/affected in the PCI project.

Response to Comment 19:

IDEM agrees with the recommended changes. The permit has been revised as follows:

Compliance with the above limits shall limit the PM from the ~~entire source~~ units listed in Section D.10 PCI system to less than 25 tons per twelve (12) consecutive month period and the PM₁₀ from the ~~entire source~~ units listed in Section D.10 PCI system to less than 15 tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable. Compliance with the above limit shall limit the direct PM_{2.5} from the ~~entire source~~ units listed in Section D.10 PCI system to less than 10 tons per twelve (12) consecutive month period and render 326 IAC 2-1.1-5 not applicable.

Comment 20:

The last sentence of condition D.10.4(2) can be misinterpreted to mean that PM₁₀ and PM_{2.5} includes all of PM. ArcelorMittal requests the following revision (with changes shown in bold and strikethrough): "PM₁₀ and PM_{2.5} includes filterable and condensable ~~PM fractions~~."

In addition, ArcelorMittal has concerns with respect to the uncertainty in test methods for measuring condensable PM. ArcelorMittal requests that condition D.10.4 include a clause providing that the Permit may be re-opened if PM_{2.5} testing performed demonstrates that the PM_{2.5} limitations in condition D.10.1 are not achievable in practice.

Response to Comment 20:

IDEM agrees to change the first paragraph in condition D.10.4(2), since the last sentence is somewhat ambiguous as to the filterable fractions and to clarify that all condensables are assumed to be PM_{2.5}. This sentence has been revised as shown below.

Section C.18 of the Permit already contains the regulatory requirements for noncompliance demonstrated by a stack test. Pursuant to condition C.18(a), the Permittee shall take appropriate response actions. It is up to the source to determine if the appropriate actions should include submitting a permit modification application to IDEM for revising the emission limits in order to comply with the stack test results. If IDEM, OAQ should receive such notification, the Permit can be modified at that time, pursuant to Section B.16.

No changes with regards to possible noncompliance demonstrated by a stack test were made as a result of this comment.

The permit has been revised as follows:

D.10.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 6.8-1-2]

(2) *In order to demonstrate compliance with Condition D.10.1, PSD and Nonattainment NSR Minor Limit, the Permittee shall perform PM_{2.5} and PM₁₀ testing on the Coal Grinder and Dryer, identified as PC02, operating in conjunction with the Coal Dryer Auxiliary Heater, identified as PC03, within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ ~~and PM_{2.5}~~ includes filterable **PM₁₀** and condensable PM. **PM_{2.5} includes filterable PM_{2.5} and condensable PM.***

Comment 21:

ArcelorMittal's Part 70 Operating Permit is currently under appeal before the Indiana Office of Environmental Adjudication, Cause No. 04-AJ-3492. ArcelorMittal incorporates into this comment letter reference to the issues raised in its appeal. These issues raised in the pending appeal are preserved and also included as comments herein.

Response to Comment 21:

IDEM has reviewed the issues raised in this appeal.

On July 30, 2007, the United States Court of Appeals for the District of Columbia Circuit issued a mandate vacating the NESHAP for Industrial Boilers and Process Heaters, "Boiler MACT" (40 CFR Part 63 Subpart DDDDD). Therefore, IDEM, OAQ is striking this record keeping requirement from the permit. However, the source may continue to maintain these records at its own discretion.

In order to not delay the issuance of this permit, IDEM will issue this permit without readdressing the "common control" appeal issues. IDEM agrees that these issues are preserved and will be resolved in the future.

The permit has been revised as follows:

D.7.8 Record Keeping Requirements

...

~~(b) Pursuant to 40 CFR 63.1(b)(3) and 40 CFR 63.10 (b)(3), in order to document exclusion from applicability to 40 CFR 63, Subpart DDDDD, the Permittee shall maintain records of fuel usage at boilers 5, 6, 7 and 8, ascertaining that on the annual basis the blast furnace gas usage at each boiler is greater than 90%. These records shall be kept for a period of five (5) years after the determination of exclusion, or until the source changes its operations to become an affected source, whichever comes first.~~

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

Comment 22:

In Appendix A of the Technical Support Document, ArcelorMittal requests the following changes to the descriptive paragraph on page three concerning the explanation of excludable emissions:

Fuel has not been the limiting factor; market demand dictates production rates. To ensure that the projected production rate could have been accommodated by the blast furnaces during the baseline period, we used the highest actual month of hot metal production that each blast furnace achieved.

Response to Comment 22:

IDEM does not agree with the recommended change since it changes the meaning of the sentence and suggests that fuel may have limited the source, meaning the source could not have accommodated the revised baseline production.

Also, IDEM does not amend the Technical Support Document (TSD). The TSD is maintained to document the original review. This addendum to the TSD is used to document comments, responses to comments, and changes made from the time the permit was drafted until a final decision is made.

No changes were made as a result of this comment.

Comment 23:

ArccelorMittal suggests inclusion of the minor typographical edits, corrections, and clarifications which are referenced in their comments.

Response to Comment 23:

IDEM agrees with some of the requested changes. The permit has been revised to include those except as described in Comment 22.

Additional Changes

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

- (a) The list of specifically regulated insignificant activities contains references to 326 IAC 6.5. This facility is located in Lake County, so the activities should be referencing 326 IAC 6.8.
 - (b) Section D.2.18 contains duplicate listings of conditions D.2.18(a) and (b).
 - (c) Condition D.3.20(a) incorrectly references D.3.14 (Opacity Continuous Emission Monitoring). It should reference D.3.15 (Visible Emission Notations).
 - (d) Condition D.3.20(b) incorrectly references D.3.15 (Visible Emission Notations). It should reference D.3.16 (Baghouse Parametric Monitoring). It should also separately reference each baghouse.
 - (e) Condition D.3.21 incorrectly references D.3.13 (Particulate Matter & Carbon Monoxide). It should reference D.3.14 (Opacity Continuous Emission Monitoring)
 - (f) Sections D.7.6 incorrectly references 326 IAC 10-3-3(c). It should reference 326 IAC 10-3-4(c).
 - (g) Sections D.7.8 incorrectly references condition D.7.7. It should reference condition D.7.4.
 - (h) Sections D.11.5 incorrectly references condition D.10.1. It should reference condition D.11.1.
- A.4 *Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]*
-
- (d) *The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [~~326 IAC 6.5-1-2]~~ [326 IAC 6.8-1-2]*
 - (e) *Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [~~326 IAC 6.5-1-2]~~ [326 IAC 6.8-1-2]*

*D.2.18 National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing- Record Keeping Requirements for Sinter Plants [40 CFR 63.7810(b)]
[40 CFR 3 Sinter Plant process and control equipment in accordance with 40 CFR 63.7810(b)]
[40 CFR 63.7]*

The Permittee shall comply with these requirements on or after May 22, 2006.

- (a) During the period between May 22, 2006 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, the Permittee shall maintain a log detailing the operation and maintenance of the Sinter Plant process and control equipment in accordance with 40 CFR 63.7810(b).*
- (b) The Permittee shall keep the records required by 40 CFR 63.7842(a).*

~~*The Permittee shall comply with these requirements on or after May 22, 2006.*~~

- ~~*(a) During the period between May 22, 2006 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, the Permittee shall maintain a log detailing the operation and maintenance of the Sinter Plant process and control equipment in accordance with 40 CFR 63.7810(b).*~~
- ~~*(b) The Permittee shall keep the records required by 40 CFR 63.7842(a).*~~
- (c) If a Continuous Opacity Monitoring System (COMS) is used to comply with an opacity standard, the Permittee shall keep the records specified in 40 CFR 63.7842(b).*
- (d) The Permittee shall keep the records required in 40 CFR 63.6(h)(6) for visible observations in accordance with 40 CFR 63.7842(c).*
- (e) The Permittee shall keep the records required in 40 CFR 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to the Sinter Plant in 40 CFR 63.7842(d).*
- (f) The Permittee shall keep the records required by 40 CFR 63, FFFFF in accordance with 40 CFR 63.7843 and the General Record Keeping Requirements in Section C of this permit.*

D.3.20 Record Keeping Requirements

- (a) In order to document compliance with Condition D.3.4415, the Permittee shall maintain records of once per day visible emission notations of the reladle/desulfurization baghouse stack (S3B) and the ladle metallurgical facility (LMF) baghouse stack (S3C). The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).*
- (b) In order to document compliance with Condition D.3.4516, the Permittee shall maintain records, of once per day ~~of the~~ pressure drop **notations** across the **reladle/desulfurization baghouse and the ladle metallurgical facility (LMF) baghouse** when venting to the atmosphere. The Permittee shall include in its records when a daily pressure drop notation is not taken **across the reladle/desulfurization baghouse stack (S3B) and/or the ladle metallurgical facility (LMF) baghouse** and the reason for the lack of daily pressure drop notation **across either of the above baghouses** (e.g. the process did not operate that day).*
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.*

D.3.21 Reporting Requirements

The Permittee shall submit a quarterly excess emissions report, based on the continuous opacity monitor (COM) required in condition D.3.1314 data for opacity, pursuant to 326 IAC 3-5-7. These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

D.7.6 Nitrogen Oxide Reduction Program for Specific Source Categories [326 IAC 10-3]

Beginning May 31, 2004, and each ozone control period thereafter, the Permittee shall meet the monitoring requirements of 326 IAC ~~10-3-3(e)~~ 10-3-4(c). To comply with Condition D.7.4, for each affected boiler, the Permittee shall monitor fuel usage and the percentage heat input derived from each fuel combusted to demonstrate that greater than fifty percent (50%) of heat input is derived from blast furnace gas.

D.7.8 Record Keeping Requirements

(a) *To document compliance with Conditions D.7.2 and D.7.74, the Permittee shall maintain the following records:*

...

D.11.5 Particulate Control

In order to comply with D.4011.1, the control equipment for particulate control shall be in operation and control emissions from the grinding and machining operations at all times that the grinding and machining operations are in operation.

IDEM Contact

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

Attachment A to TSD Addendum

ArcelorMittal Indiana Harbor, LLC
 3001 Dickey Road, East Chicago, Indiana
 Permit Reviewer: John Haney

**Appendix A: Emission Calculations
 New Unit PTE**

Page 5 of 25
 SSM: 089-26477-00318
 SPM: 089-26506-00318

Minor NSR Applicability Analysis under 326 IAC 2-7-10.5								
Company:	ArcelorMittal							
Facility:	Indiana Harbor West							
Project:	Pulverized Coal Injection (PCI) on Blast Furnaces IH-3 and IH-4							
Date:	9/8/2008							
Potential to Emit (Controlled and Uncontrolled) for New Emissions Units								
Controlled PTE (lb/hr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	5.42	2.56	0.39					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	5.42	2.56	0.39					
Grinding & Drying Plant, Raw Coal Storage Bin	0.001	0.001	0.001					
Grinding & Drying Plant, Mill Bag Filter	2.34	2.34	1.17 1.56					
Grinding & Drying Plant, Pulverized Coal Storage Bin	0.001	0.001	0.001					
Coal Pile Wind Erosion	11.68	5.84	2.34					
Haul Road Fugitives	4.94	0.96	0.14					
Front End Loader Fugitives	5.94	1.34	0.13					
Coal Dryer Auxiliary Heater	0.37	0.37	0.37 0.49	4.90	0.03	4.12	0.27	0.00
Thaw Shed Heater	0.07	0.07	0.07	0.93	0.01	0.78	0.05	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	25.82	12.53	4.47 4.98	5.83	0.03	4.90	0.32	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	30.76	13.49	4.62 5.12	5.83	0.03	4.90	0.32	0.00
Combined Emissions, Mill Bag Filter + Aux. Heater	2.71	2.71	1.54 2.05	4.90	0.03	4.12	0.27	0.00
Controlled PTE (tons/yr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	1.92	0.91	0.14					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	1.84	0.87	0.13					
Grinding & Drying Plant, Raw Coal Storage Bin	0.01	0.01	0.003					
Grinding & Drying Plant, Mill Bag Filter	10.26	10.26	5.13 6.81					
Grinding & Drying Plant, Pulverized Coal Storage Bin	0.01	0.01	0.003					
Coal Pile Wind Erosion	2.13	1.07	0.43					
Haul Road Fugitives	1.08	0.21	0.03					
Front End Loader Fugitives	3.30	0.74	0.07					
Coal Dryer Auxiliary Heater	1.63	1.63	1.63 2.17	21.47	0.13	18.04	1.18	0.00
Thaw Shed Heater	0.15	0.15	0.15	2.03	0.01	1.70	0.11	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	19.41	14.77	7.56 9.79	23.50	0.14	19.74	1.29	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	20.41	14.95	7.58 9.81	23.50	0.14	19.74	1.29	0.00
Combined Emissions, Mill Bag Filter + Aux. Heater	11.89	11.89	6.76 8.98	21.47	0.13	18.04	1.18	0.00
Uncontrolled PTE (lb/hr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	5.42	2.56	0.39					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	5.42	2.56	0.39					
Grinding & Drying Plant, Raw Coal Storage Bin	1.19	0.56	0.09					
Grinding & Drying Plant, Mill Bag Filter	2.34	2.34	1.17 1.56					
Grinding & Drying Plant, Pulverized Coal Storage Bin	1.19	0.56	0.09					
Coal Pile Wind Erosion	11.68	5.84	2.34					
Haul Road Fugitives	60.53	11.80	1.77					
Front End Loader Fugitives	9.92	2.24	0.22					
Coal Dryer Auxiliary Heater	0.37	0.37	0.37 0.49	4.90	0.03	4.12	0.27	0.00
Thaw Shed Heater	0.07	0.07	0.07	0.93	0.01	0.78	0.05	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	32.19	14.55	4.73 5.25	5.83	0.03	4.90	0.32	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	92.71	26.35	6.50 7.02	5.83	0.03	4.90	0.32	0.00
Uncontrolled PTE (tons/yr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	1.92	0.91	0.14					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	1.84	0.87	0.13					
Grinding & Drying Plant, Raw Coal Storage Bin	5.22	2.47	0.37					
Grinding & Drying Plant, Mill Bag Filter	10.26	10.26	5.13 6.81					
Grinding & Drying Plant, Pulverized Coal Storage Bin	5.22	2.47	0.37					
Coal Pile Wind Erosion	2.13	1.07	0.43					
Haul Road Fugitives	13.26	2.58	0.39					
Front End Loader Fugitives	5.51	1.24	0.12					
Coal Dryer Auxiliary Heater	1.63	1.63	1.63 2.17	21.47	0.13	18.04	1.18	0.00
Thaw Shed Heater	0.15	0.15	0.15	2.03	0.01	1.70	0.11	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	32.04	20.20	8.35 10.57	23.50	0.14	19.74	1.29	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	45.22	22.74	8.73 10.95	23.50	0.14	19.74	1.29	0.00

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

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

Source Description and Location

Source Name:	ArcelorMittal Indiana Harbor, LLC
Source Location:	3001 Dickey Road, East Chicago, IN 46312
County:	Lake
SIC Code:	3312
Operation Permit No.:	T089-7099-00318
Operation Permit Issuance Date:	December 7, 2004
Significant Source Modification No.:	089-26477-00318
Significant Permit Modification No.:	089-26506-00318
Permit Reviewer:	John Haney

Existing Approvals

The source was issued Part 70 Operating Permit No. T089-7099-00318 on December 7, 2004. The source has since received the following approvals:

- (a) First Administrative Amendment No.: 089-21088-00318, issued on July 19, 2005;
- (b) First Minor Permit Modification No.: 089-20921-00318, issued on September 8, 2005;
- (c) Second Minor Permit Modification No.: 089-23361-00318 issued September 22, 2006;
- (d) First Significant Permit Modification No.: 089-24076-00318, issued on May 4, 2007; and
- (e) Second Administrative Amendment No.: 089-26376-00318, issued on May 16, 2008.

County Attainment Status

The source is located in Lake County.

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

¹Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard which was revoked effective June 15, 2005.
Basic nonattainment designation effective federally April 5, 2005, for PM2.5.

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.

(i) 1-hour ozone standard

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

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

(ii) 8-hour ozone standard

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

(b) PM2.5

U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM2.5. 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_{2.5} promulgated on May 8, 2008, and effective on July 15, 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

- (c) **Other Criteria Pollutants**
 Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Since this source is classified as an integrated steel mill, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) **Fugitive Emissions**
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Nonattainment NSR applicability.

Source Status

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

Pollutant	Emissions (ton/yr)
PM	>100
PM ₁₀	>100
PM _{2.5}	>100
SO ₂	>100
VOC	>100
CO	>100
NO _x	>100
Single HAP	>10
Combined HAPs	>25

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3) for the 8-hour ozone standard because VOC, a nonattainment regulated pollutant, is emitted at a rate of 100 tons per year or more.
- (c) This existing source is a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM_{2.5} and SO₂ are emitted at a rate of 100 tons per year or more.
- (d) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2006 OAQ emission data.

Pollutant	Actual Emissions (ton/yr)
PM ₁₀	1,121
PM and PM _{2.5}	not reported
SO ₂	2,032
VOC	206
CO	16,434
NO _x	1,885
Lead	13.55
Single HAP/Total HAPs	not reported

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by ArcelorMittal Indiana Harbor LLC on April 30, 2008, relating to the addition of a pulverized coal injection system for the existing No. 3 and No. 4 blast furnaces. The following is a list of the proposed emission units and pollution control devices:

- (a) One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:
 - (1) Receiving:
 - (A) Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;
 - (B) Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;
 - (C) Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;
 - (D) Coal Truck Haul Roads, identified as CF01, using water flushing and sweeping as control, exhausting to the atmosphere;
 - (E) One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (F) One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (G) One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;

- (H) One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (I) One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (J) One (1) Coal Storage Pile Area, approved for construction in 2008, identified as CF02, covering a nominal maximum area of 116,000 square feet, exhausting to the atmosphere;
 - (K) Front end wheel loaders with each having a minimum of an eight (8) cubic yard bucket and a vehicle weight of 100,000 lbs traveling on paved and unpaved roads, such that the use of any larger capacity wheel loader would be acceptable since it would reduce vehicle miles traveled and fugitive emissions; and
 - (L) Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and
- (2) Grinding & Drying Plant:
- (A) Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01-S;
 - (B) Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02-S;
 - (C) Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and
 - (D) Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04-S.

“Integral Part of the Process” Determination

ArcelorMittal Indiana Harbor, LLC has submitted the following information to justify why the Mill Bag Filter Separator should be considered an integral part of the Coal Grinder and Dryer:

- (a) The primary purpose of the Mill Bag Filter Separator is to recover pulverized coal.
- (b) Without this equipment, the Coal Grinding and Drying Plant would not function as designed.
- (c) The Mill Bag Filter Separator would be part of the Coal Grinding and Drying Plant design regardless of air quality regulatory requirements.

IDEM, OAQ has evaluated the information submitted and agrees that the Mill Bag Filter Separator should be considered an integral part of the Coal Grinder and Dryer. Therefore, the permitting level will be determined using the potential to emit after the Mill Bag Filter Separator. Operating conditions in the proposed permit will specify that this Mill Bag Filter Separator shall operate at all times when the Coal Grinder and Dryer are in operation.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
PC01-S	Raw Coal Storage Bin	TBD	TBD	50	TBD
PC02-S	Coal Grinder and Dryer	TBD	TBD	98,291	TBD
PC04-S	Pulverized Coal Storage Bin	TBD	TBD	50	TBD

Emission Calculations

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

Permit Level Determination – Part 70

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

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

PTE Before Controls of the PCI Plant	
Pollutant	Potential To Emit (tons/yr)
PM	45.22
PM ₁₀	22.74
PM _{2.5}	8.73
SO ₂	0.14
VOC	1.29
CO	19.74
NO _x	23.50
Lead	0

The PCI project involves physical/operational changes to the affected existing emission units (No. 3 blast furnace and No. 4 blast furnace). However, the PCI project does not increase the PTE of the existing affected emission units because there is no increase in the units' maximum capacities and because there is no debottlenecking that increases utilization.

Total PTE Change (before controls) due to the Modification			
Pollutant	PTE of New Emission Units (tons/yr)	Net Increase to PTE of Modified Emission Units (tons/yr)	Total PTE for New and Modified Units (tons/yr)
PM	45.22	0	45.22
PM ₁₀	22.74	0	22.74
PM _{2.5}	8.73	0	8.73
SO ₂	0.14	0	0.14
VOC	1.29	0	1.29
CO	19.74	0	19.74
NO _x	23.50	0	23.50
Lead	0	0	0

This source modification is subject to 326 IAC 2-7-10.5(f)(4) because the potential to emit particulate matter (PM) is greater than twenty-five (25) tons per year before control. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because the modification requires significant changes in existing monitoring Part 70 Operating Permit terms and conditions and because it is a Title I modification under the Clean Air Act (CAA) to incorporate 40 CFR 60, Subpart Y.

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

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

Emissions (tons/yr)								
Process / Emission Unit	PM	PM₁₀	PM_{2.5}	SO₂	VOC	CO	NO_x	Pb
<i>PTE (New Units)</i>								
Raw Coal Unloading/Transfer *	1.92	0.91	0.14	-	-	-	-	-
Grinding & Drying Plant ----- Raw Coal Storage Bin	0.01	0.01	0.003	-	-	-	-	-
Grinding & Drying Plant ----- Coal Grinder and Dryer	10.26	10.26	5.13	-	-	-	-	-
Grinding & Drying Plant ----- Pulverized Coal Storage Bin	0.01	0.01	0.003	-	-	-	-	-
Coal Pile Wind Erosion	2.13	1.07	0.43	-	-	-	-	-
Haul Road Fugitives	1.08	0.21	0.03	-	-	-	-	-
Front End Loader Fugitives	3.30	0.74	0.07	-	-	-	-	-
Coal Dryer Auxiliary Heater	1.63	1.63	1.63	0.13	1.18	18.04	21.47	0.00
Thaw Shed Heater	0.15	0.15	0.15	0.01	0.11	1.70	2.03	0.00
TOTAL PTE	20.49	14.99	7.59	0.14	1.29	19.74	23.50	0.00

* These PTE emissions are from raw coal unloading/transfer due to 100% rail delivery. The PTE emissions from raw coal unloading/transfer due to 90% rail and 10% road delivery are 1.84 tons per year PM, 0.87 tons per year PM₁₀, and 0.13 tons per year PM_{2.5}.

Emissions (tons/yr)								
Process / Emission Unit	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NO _x	Pb
<i>Actual to Projected Actual (No. 3 Blast Furnace)</i>								
Baseline Actual	94.39	69.06	57.43	262.27	19.47	987.67	35.78	19.43
Projected Actual	146.39	113.12	97.83	480.97	32.68	1416.49	55.25	25.52
Emissions the Unit Could Have Accommodated	52.00	44.06	40.41	218.70	13.21	428.81	19.47	6.10
Emissions Increases (ATPA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Actual to Projected Actual (No. 4 Blast Furnace)</i>								
Baseline Actual	114.37	86.96	76.23	505.03	27.28	1347.32	49.73	26.62
Projected Actual	149.62	119.10	107.15	698.03	37.44	1618.39	63.57	29.64
Emissions the Unit Could Have Accommodated	35.25	32.14	30.92	193.00	10.16	271.06	13.84	3.02
Emissions Increases (ATPA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Actual to Projected Actual (Nos. 5 - 9 Boilers, BFG Combustion)</i>								
Baseline Actual	186.76	186.76	186.76	1137.95	59.20	991.73	68.77	0.00
Projected Actual	275.70	275.70	275.70	1679.82	87.39	1463.96	101.52	0.00
Emissions the Units Could Have Accommodated	88.93	88.93	88.93	541.87	28.19	472.24	32.75	0.00
Emissions Increases (ATPA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Hybrid Test</i>								
Total PTE New Units	20.49	14.99	7.59	0.14	1.29	19.74	23.50	0.00
Total Emissions Increase from ATPA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hybrid Test Emissions Increase	20.49	14.99	7.59	0.14	1.29	19.74	23.50	0.00
PSD Significant Level	25	15	---	40	---	100	40	40
Emission Offset Significant Level	---	---	---	---	40	---	40	40
Nonattainment NSR Significant Level	---	---	10	40	---	---	---	---

(a) One-hour Ozone Standard:

Lake County was previously designated as a severe non-attainment area prior to revocation of the one-hour ozone standard. Pursuant to the anti-backsliding provisions of the Clean Air Act any new or existing source must be subject to the major source applicability cut-offs and offset ratios under the area's previous one-hour standard designation. Therefore, the proposed modification will be reviewed under this one-hour ozone standard.

Under this standard, the change in VOC emissions from the project was based on past actual to projected actual test.

(b) Eight-hour Ozone Standard:

- (1) This modification to an existing PSD major stationary source is not major because the NO_x emissions increase is less than the PSD significant level of 40 tons per year. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (2) This modification to an existing Emission Offset major stationary source is not major because the VOC emissions increase is less than the Emission Offset significant level of 40 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

(c) Direct PM_{2.5}

This modification to an existing Nonattainment NSR major stationary source is not major because the direct PM_{2.5} emissions increase is less than the Nonattainment NSR significant level of 10 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment NSR requirements do not apply.

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

- (a) The raw coal throughput to the Raw Coal Truck Unloading System, identified as RC02, shall be limited to less than 74,460 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The combined PM₁₀ emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 2.71 lbs/hour.
- (c) The combined PM_{2.5} emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 1.54 lbs/hour.
- (d) The natural gas usage from the Thaw Shed Heater, identified as RC04, shall not exceed 41,391 MMBtu per twelve (12) consecutive month period with compliance determined at the end of each month.

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

The Permittee has provided information as part of the application for this approval that, based on the Actual to Projected Actual test in 326 IAC 2-2-2, 326 IAC 2-3-2, and 326 IAC 2-1.1-5, this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1, Emission Offset under 326 IAC 2-3-1, and Nonattainment NSR under 326 IAC 2-1.1-5. IDEM, OAQ has not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with Source Obligation in 326 IAC 2-2-8 and Applicability in 326 IAC 2-3-2.

VOC De Minimis Determination

- (1) Lake County is classified as a severe nonattainment area for ozone.
- (2) Since ArcelorMittal Indiana Harbor, LLC is located in Lake County, the proposed modification must be evaluated to determine if it is a minor modification in terms of 326 IAC 2-3 by determining if the VOC emissions increase is de minimis. [326 IAC 2-3-1(z)]
- (3) De minimis means a VOC increase that does not exceed twenty-five (25) tons per year when the net emissions increases from the proposed modification are aggregated with all other net emissions increases from the source over a five (5) consecutive calendar year period prior to, and including, the year of the modification. [326 IAC 2-3-1(q)]
- (4) The total emissions increases from this project are 1.29 tons per year or 7.1 pounds per day. Pursuant to 326 IAC 2-1.1-3(h)(2)(D), the VOC de minimis determination is not necessary because the VOC emissions increase from this project is less than fifteen (15) pounds per day.

Federal Rule Applicability Determination

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

NSPS:

(a) ArcelorMittal Indiana Harbor, LLC is subject to the New Source Performance Standards for Coal Preparation Plants (40 CFR 60.250, Subpart Y), which is incorporated by reference as 326 IAC 12. The units subject to this rule include the following:

One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:

- (1) Receiving:
 - (A) Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;
 - (B) Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;
 - (C) Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;
 - (E) One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (F) One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;
 - (G) One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (H) One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (I) One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;
 - (L) Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and
- (2) Grinding & Drying Plant:
 - (A) Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01-S;

- (B) Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02-S;
- (C) Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and
- (D) Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04-S.

The pulverized coal injection system is subject to the following portions of Subpart Y:

- (1) 40 CFR 60.250;
- (2) 40 CFR 60.251;
- (3) 40 CFR 60.252;
- (4) 40 CFR 60.253(a)(1);
- (5) 40 CFR 60.253(b); and
- (6) 40 CFR 60.254.

NESHAP:

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.
- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
 - (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
 - (2) is subject to an emission limitation or standard for that pollutant; and
 - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Part 70 Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
Raw Coal Storage Bin (PM)	Bag Filter	Y	5.22	0.01	100	N	N
Raw Coal Storage Bin (PM ₁₀)	Bag Filter	Y	2.47	0.01	100	N	N
Raw Coal Storage Bin (PM _{2.5})	Bag Filter	Y	0.37	0.003	100	N	N
Coal Grinder and Dryer (PM)	Mill Bag Filter Separator (see below)	Y	>100	10.26	100	N	N
Coal Grinder and Dryer (PM ₁₀)	Mill Bag Filter Separator (see below)	Y	>100	10.26	100	N	N
Coal Grinder and Dryer (PM _{2.5})	Mill Bag Filter Separator (see below)	Y	>100	5.13	100	N	N
Pulverized Coal Storage Bin (PM)	Bag Filter	Y	5.22	0.01	100	N	N
Pulverized Coal Storage Bin (PM ₁₀)	Bag Filter	Y	2.47	0.01	100	N	N
Pulverized Coal Storage Bin (PM _{2.5})	Bag Filter	Y	0.37	0.003	100	N	N

Because the Mill Bag Fabric Separator is "inherent process equipment", it is not considered a control device under CAM; therefore, CAM are not applicable.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 and 2-3 and 2-1.1-5 (PSD and Emission Offset and Nonattainment NSR)

This modification to an existing PSD major stationary source is not major because the NO_x emissions increase is less than the PSD significant level of 40 tons per year. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

This modification to an existing Emission Offset major stationary source is not major because the VOC emissions increase is less than the Emission Offset significant level of 40 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

This modification to an existing Nonattainment NSR major stationary source is not major because the direct PM_{2.5} emissions increase is less than the Nonattainment NSR significant level of 10 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment NSR requirements do not apply.

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

- (a) The raw coal throughput to the Raw Coal Truck Unloading System, identified as RC02, shall be limited to less than 74,460 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The combined PM₁₀ emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 2.71 lbs/hour.
- (c) The combined PM_{2.5} emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 1.54 lbs/hour.
- (d) The natural gas usage from the Thaw Shed Heater, identified as RC04, shall not exceed 41,391 MMBtu per twelve (12) consecutive month period with compliance determined at the end of each month.

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

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

The operation of the pulverized coal injection system will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

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

326 IAC 5-1 (Opacity Limitations)

ArcelorMittal Indiana Harbor, LLC is located in Lake County. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6.8-1 (Particulate Emission Limitations for Lake County)

The ArcelorMittal Indiana Harbor, LLC facility is one of the listed sources at 326 IAC 6.8-2-21. Therefore, pursuant to 326 IAC 6.8-1-1, the proposed new emission units under the PCI project are subject to the requirements of 326 IAC 6.8-1-2. Only general requirements under 326 IAC 6.8-1-2 will apply to the following: Raw Coal Railcar Unloading System (RC01), Raw Coal Truck Unloading System (RC02), Raw Coal Reclaim System (RC03), Coal Conveyors (CC01, CC03, CC04, CC05), Coal Stacker (CC02), Raw Coal Storage Bin (PC01), Coal Grinder and Dryer Mill Bag Filter Separator (PC02), and Pulverized Coal Storage Bin (PC04). Pursuant to 326 IAC 6.8-1-2(a), particulate matter emissions from these units shall not exceed 0.03 grain/dscf. The Raw Coal Storage Bin (PC01), Coal Grinder and Dryer Mill Bag Filter Separator (PC02), and Pulverized Coal

Storage Bin (PC04) will utilize fabric filters designed to meet the outlet grain loading requirement of this rule.

Compliance Determination and Monitoring Requirements

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

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

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

- (a) Testing Requirements
 - (1) Within 60 days of achieving the maximum capacity, but no later than 180 days after start-up, in order to demonstrate compliance with Condition D.10.2, Particulate Emission, the Permittee shall perform PM testing on the Coal Grinder and Dryer, identified as PC02, operating in conjunction with the Coal Dryer Auxiliary Heater, identified as PC03, utilizing methods as approved by the Commissioner.
 - (2) In order to demonstrate compliance with Condition D.10.1, PSD and Nonattainment NSR Minor Limit, the Permittee shall perform PM_{2.5} and PM₁₀ testing on the Coal Grinder and Dryer, identified as PC02, operating in conjunction with the Coal Dryer Auxiliary Heater, identified as PC03, within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ and PM_{2.5} includes filterable and condensable PM.
- (b) Emission Controls Operation
 - (1) Bin vent filters for particulate emissions control shall be in operation and control particulate emissions whenever raw coal from the Coal Conveyor, CC04, is being transferred to the Raw Coal Storage Bin, PC01.
 - (2) The Mill Bag Filter Separator, PC02-S, for particulate emissions control shall be in operation and control particulate emissions whenever the Coal Grinder and Dryer, PC02, is in operation.
 - (3) Bin vent filters for particulate emissions control shall be in operation and control particulate emissions whenever the Pulverized Coal Storage Bin, PC04, is receiving material.

- (c) Fugitive Dust Control Plan
The dust suppression used as control for the fugitive particulate emissions from the fugitive dust sources shall be applied as often as necessary to control fugitive dust.

These requirements are required to ensure compliance with 326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter) and 326 IAC 6.8-1-2 (Particulate Matter Limitations) and to render 326 IAC 2-2 (PSD) not applicable.

The compliance monitoring requirements applicable to this modification are as follows:

- (a) Visible Emissions Notations
The Permittee shall perform daily visible emission notations of the Coal Grinder and Dryer, PC02, exhaust.
- (b) Baghouse Parametric Monitoring
The Permittee shall record the pressure drop across the Mill Bag Filter Separator, PC02-S, at least once per day when conditioned coal from the Coal Grinder and Dryer, PC02, is being transferred to the Pulverized Coal Storage Bin, PC04.
- (c) Broken or Failed Bag Detection
The Permittee shall maintain the bag filters and replace broken or failed bags as follows:
- (1) 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).
- (2) 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 line. 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.

- (d) Recordkeeping Requirements
- (1) The raw coal throughput to the Raw Coal Truck Unloading System, identified as RC02, shall be limited to 74,460 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.
- (2) The natural gas usage from the Thaw Shed Heater, identified as RC04, shall not exceed 41,391 MMBtu per twelve (12) consecutive month period with compliance determined at the end of each month.

These monitoring conditions are necessary because the facility must operate properly to ensure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-1.1-5 (Nonattainment NSR), and 326 IAC 6.8-1-2 (Particulate Matter Limitations).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T089-7099-00318. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

- (a) *Section A.1 has been revised to show the source's current name and mailing address. Subsequent source name and mailing address references in Section A and the Compliance Reports have also been revised.*

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary integrated steel mill and finishing facility.

Source Name: ~~Mittal Steel USA, Inc. — Indiana Harbor West~~
ArcelorMittal Indiana Harbor, LLC
Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
Mailing Address: ~~3250 Interstate Drive, 2nd Floor, Richfield, OH 44286-9000~~
3210 Watling Street, MC8-124, East Chicago, Indiana 46312
General Source Phone Number: (219) 391-2571
SIC Code: 3312
County Location: Lake County
Source Location Status: Nonattainment for PM_{2.5} ~~2.5~~
Nonattainment for 8-hour ozone standard
Attainment for all other criteria pollutants
Source Status: Part 70 Permit Program
Major Source, under PSD, ~~and~~ Emission Offset, **and**
Nonattainment NSR Rules;
~~Nonattainment NSR~~
Major Source, **under** Section 112 of the Clean Air Act
1 of 28 Source Categories under PSD, ~~and~~ Emission Offset, **and**
Nonattainment NSR Rules

- (b) *The new emission units for the pulverized coal injection (PCI) system have been added to the permit. All corresponding standards are listed under Section D.10. Subsequent D sections have been renumbered.*

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

~~ISC — Indiana Harbor Inc.~~ **ArcelorMittal Indiana Harbor, LLC** consists of the following permitted emission units and pollution control devices:

- ...
- (j) **One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:**
- (1) **Receiving:**
- (A) **Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;**
- (B) **Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;**
- (C) **Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;**

- (D) **Coal Truck Haul Roads, identified as CF01, using water flushing and sweeping as control, exhausting to the atmosphere;**
 - (E) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (F) **One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (G) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (H) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (I) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (J) **One (1) Coal Storage Pile Area, approved for construction in 2008, identified as CF02, covering a nominal maximum area of 116,000 square feet, exhausting to the atmosphere;**
 - (K) **Front end wheel loaders with each having a minimum of an eight (8) cubic yard bucket and a vehicle weight of 100,000 lbs traveling on paved and unpaved roads, such that the use of any larger capacity wheel loader would be acceptable since it would reduce vehicle miles traveled and fugitive emissions; and**
 - (L) **Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and**
- (2) **Grinding & Drying Plant:**
- (A) **Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01-S;**
 - (B) **Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02-S;**
 - (C) **Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and**
 - (D) **Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04-S.**

(c) **Section C – Open Burning**

The last sentence of original Condition C.2 – Open Burning was deleted because the provisions of 326 IAC 4-1 are federally enforceable and are included in Indiana’s State Implementation Plan (SIP).

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. ~~326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.~~

(d) **Section C – Asbestos Abatement Projects**

Section C.7(g) was revised to reflect the rule language in 326 IAC 14-10-1(a).

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

...

(g) ~~Indiana Accredited~~ **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 ~~Accredited~~ **Licensed** Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana ~~Accredited~~ **Licensed** Asbestos Inspector is not federally enforceable.

(e) **Section C – Emergency Reduction Plans**

Section C.15(b) has been revised to specify the permit referenced.

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

...

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

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

within ninety (90) days after the date of issuance of this permit **Part 70 Operating Permit No. T089-7099-00318.**

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

(f) **Section C – General Record Keeping Requirements – NSR Major**

The clean unit and pollution control project provisions of the U.S. EPA’s New Source Review Reform Rules were vacated on June 24, 2005 by a United States Court of Appeals for the District of Columbia Circuit decision. The OAQ plans to remove the vacated provisions from 326 IAC 2 at the next state rulemaking opportunity. Paragraph (c) of Condition C.20, Record Keeping Requirements, has been revised to remove references to the clean unit and pollution control project provisions. On January 22, 2008, U.S. EPA promulgated a rule to address the remand, by the U.S. Court of Appeals for the District of Columbia on June 25, 2005, of the reasonable possibility provisions of the December 31, 2002 major NSR reform rule. IDEM has agreed, with U.S. EPA, to interpret “reasonable possibility” in 326 IAC 2-2 and 326 IAC 2-3 consistent with the January 22, 2008 U.S. EPA rule. To implement this interpretation, IDEM is revising Section C - General Record Keeping Requirements and Section C - General Reporting Requirements. Revisions to have been made to the Section C – General Recordkeeping and Section C – General Reporting Requirements to reflect NSR (New Source Review) reform provisions at the major sources.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]

[326 IAC 2-3] [326 IAC 2-1.1-5]

- ...
- (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, ~~or~~ **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(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)~~ (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)~~ (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.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] **[326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-1.1-5]**

- ...
- (f) If the Permittee is required to comply with the recordkeeping provisions of ~~(e)~~ (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(II)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with ~~(c)(2) and (3)~~ **(d)(1) and (2)** in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

(g) **Section D – Particulate Matter**

Sections D.1.4, D.3.4, D.6.5, and renumbered D.11.1 currently reference 326 IAC 6.5 - Particulate Emissions Limitations Except Lake County. These sections should be referencing 326 IAC 6.8 - Particulate Emissions Limitations For Lake County. Sections D.3.4 and D.6.5 have been revised to properly reference existing emission units. Sections D.4.2 and D.5.2 have been added due to the repeal of 326 IAC 6.8-6; subsequent sections in D.4 and D.5 have been renumbered. All reference cites in Section D and the Table of Contents have been revised accordingly. The existing emission limitations are correct and have not been revised.

D.1.4 Particulate Matter (PM) ~~[326 IAC 6.5-1-2]~~ [326 IAC 6.8-1-2]

Pursuant 326 IAC ~~6.5-1-2~~ **6.8-1-2**, No. 3 Blast Furnace Casthouse Roof Monitor (V1A), No. 4 Blast Furnace Casthouse Roof Monitor (V1B) and No. 4 Blast Furnace Casthouse Baghouse (S1B) shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.3.4 Particulate Matter (PM) ~~[326 IAC 6.5-1-2]~~ [326 IAC 6.8-1-2]

Pursuant 326 IAC ~~6.5-1-2~~ **6.8-1-2**, the Hot Metal Reladle/Desulf Roof Monitor (V3B), BOF Roof Monitor (V3A), and LMF Roof Monitor (V3C), **and the pneumatic conveying system equipped with a bin vent filter (BV3D)** shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.4.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant 326 IAC 6.8-1-2, the twenty-eight (28) natural gas space heater (V4A) shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.5.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, the No. 1 Galvanizing and Aluminizing Line Flame Furnace, the No. 2 Galvanizing Line Flame Furnace, the No. 1 Galvanizing and Aluminizing Line Galvanizing and Aluminizing Furnace, and the No. 2 Galvanizing Line Galvanizing Furnace at the No. 2 Sheet Mill as well as the caustic cleaning system, the pre-melt furnace, and the seven (7) space heaters shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.6.5 Particulate Matter (PM) [326 IAC 6.5-1-2] [326 IAC 6.8-1-2]

Pursuant 326 IAC ~~6.5-1-2~~ **6.8-1-2**, the Pickle Line (S6A), Shot Blaster (V6B), 2-Stand Temper Mill (S6B), and 5-Stand Tandem Mill (V6B), **seven (7) single stack batch annealing furnaces, and eleven (11) multi-stack batch annealing furnaces** shall not discharge to the atmosphere any gases which contain particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

~~D.4011.1 Nonattainment Area Particulate Limitations [326 IAC 6.5-1-2]~~ **D.4011.1 Particulate Matter (PM) [326 IAC 6.8-1-2]**

Pursuant to 326 IAC ~~6.5-1-2~~ **6.8-1-2** (Particulate emission limitations; fuel combustion steam generators, asphalt concrete plant, grain elevators, foundries, mineral aggregate operations; modification by commissioner), the particulate matter emissions from the brazing equipment, cutting torches, soldering equipment, welding equipment, grinding and machining operations shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(h) **Section D – Lake County: PM₁₀ emission requirements**

Sections D.2.3, D.3.3, D.4.1, D.5.1, and D.6.4 have been renamed and re-cited to clarify rule applicability throughout the permit due to the repeal of 326 IAC 6.8-6. Subsection D.3.3(d) has been moved to Section D.3.4 to properly reference existing emission units. All reference cites in Section D and the Table of Contents have been revised accordingly. The existing emission limitations are correct and have not been revised.

~~D.2.3 Particulate Matter~~ **Lake County: PM₁₀ emission requirements [326 IAC 6.8-2-21]**

Pursuant to 326 IAC 6.8-2-21, TSP emissions from the Sinter Plant operations shall not exceed the following:

- (a) TSP emissions from the windbox exhausting to stack (S2A) (identified in 326 IAC 6.8-2-21, formerly 326 IAC 6-1-10.1(d), as "stack 08") shall not exceed 0.02 grains per dry standard cubic foot of exhaust air and 49.70 pounds per hour.

...

D.3.3 Lake County: PM₁₀ PM emission requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21 (Lake County: ~~PM₄₀~~ **PM₁₀** Emission Requirements), ~~PM₁₀~~ ~~PM₄₀~~ emissions from the Basic Oxygen Furnace operations shall not exceed the following:

- (a) ~~PM₄₀~~ **PM₁₀** emissions from the Reladle/desulfurization baghouse (Baghouse No.1) exhausting to stack (S3B) shall not exceed 0.008 grains ~~PM₄₀~~ **PM₁₀** per dry standard cubic foot of exhaust air and 10.49 pounds ~~PM₄₀~~ **PM₁₀** emitted per hour.
- (b) ~~PM₄₀~~ **PM₁₀** emissions from the electrostatic precipitator exhausting to stack (S3A) (BOF main stack) shall not exceed 0.018 grains ~~PM₄₀~~ **PM₁₀** per dry standard cubic foot of exhaust air and 69.40 pounds ~~PM₄₀~~ **PM₁₀** emitted per hour.
- (c) ~~PM₄₀~~ **PM₁₀** emissions from the ladle metallurgical station baghouse (LMF Baghouse) exhausting to stack (S3C) shall not exceed 0.004 grains ~~PM₄₀~~ **PM₁₀** per dry standard cubic foot of exhaust air and 3.630 pounds ~~PM₄₀~~ **PM₁₀** emitted per hour.

Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility descriptions notes "stack serving", and to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

- (d) ~~Pursuant to 326 IAC 6.8-1-2(a), the pneumatic conveying system equipped with a bin vent filter (BV3D) shall not exceed the allowable PM emission limitation of 0.03 grains per dry standard cubic foot.~~

D.4.1 ~~Particulate Matter [326 IAC 6.8-6-12]~~ **Lake County: PM₁₀ emission requirements [326 IAC 6.8-2-21]** [326 IAC 6.8-6-12]

- (a) Pursuant to 326 IAC 6.8-2-21, the ~~PM₁₀~~ **PM₁₀** emissions from each of the stacks serving the three (3) natural gas/fuel oil furnaces (S4A, S4B and S4C) shall not exceed 0.086 lbs/MMBtu and 36.56 pounds PM₁₀ emitted per hour.
- (b) Pursuant to 326 IAC ~~6.8-6-12~~ **6.8-2-21**, the allowable TSP emissions from the twenty-eight (28) natural gas space heater (V4A) shall ~~not exceed 0.003 lbs/MMBtu and 0.250 pounds per hour period combined and burn~~ **fire** natural gas only.

Each emission limit applies to one (1) stack serving one (1) facility unless otherwise noted. The emission limitations apply to one (1) stack serving the multiple units specified when the facility descriptions notes "stack serving", and to each stack of multiple stacks serving multiple facilities when the facility description notes "each stack serving".

D.5.1 ~~Particulate Matter [326 IAC 6.8-6-12]~~ **Lake County: PM₁₀ emission requirements [326 IAC 6.8-2-21]**

~~Pursuant to 326 IAC 6.8-6 (Lake County: Combustion Sources; Natural Gas) combustion from 6.8-2-21, the No. 1 Galvanizing and Aluminizing Line Flame Furnace, the No. 2 Galvanizing Line Flame Furnace, the No. 1 Galvanizing and Aluminizing Line Galvanizing and Aluminizing Furnace, and the No. 2 Galvanizing Line Galvanizing Furnace at the No. 2 Sheet Mill as well as the seven (7) space heaters shall be restricted to the use of fire natural gas as only. fuel and the total suspended particulate (TSP) and particulate matter (PM₁₀) emissions shall not exceed the following:~~

- (a) ~~The total suspended particulate emissions from the No. 1 Galvanizing and Aluminizing Line Galvanizing and Aluminizing Furnace (V5A) and No. 2 Galvanizing Line Galvanizing Furnace (V5B) shall not exceed 0.003 pounds per MMBtu and 0.265 pounds per one (1) hour period combined.~~
- (b) ~~The particulate matter (PM₁₀) emissions from the No. 1 Galvanizing and Aluminizing Line Flame Furnace (V5A) and No. 2 Galvanizing Line Flame Furnace (S5B) shall not exceed 0.003 pounds per MMBtu and 0.500 pounds per one (1) hour period combined.~~
- (c) ~~The total suspended particulate emissions from the seven (7) space heaters (V5B) shall not exceed 0.003 pounds per MMBtu and 0.050 pounds per one (1) hour period combined.~~

~~Pursuant to [326 IAC 6.8-1-2]:~~

- (d) ~~The particulate matter (PM) emissions from each of the caustic cleaning system and the pre-melt furnace shall not exceed 0.03 grains per dry standard cubic foot.~~

D.6.4 ~~Particulate Matter [326 IAC 6.8-6-12]~~ **Lake County: PM₁₀ emission requirements [326 IAC 6.8-2-21]**

~~Pursuant to 326 IAC 6.8-6 (Lake County: Combustion Sources; Natural Gas) 6.8-2-21, the seven (7) single stack batch annealing furnaces, and the eleven (11) multi-stack batch annealing furnaces shall fire natural gas only, and the total suspended particulate (TSP) emissions shall be limited as follows:~~

- (a) ~~The total suspended particulate emissions from the seven (7) single stack batch annealing furnaces (V6A) shall not exceed 0.003 pounds per MMBtu and 0.071 pounds of TSP emissions emitted per one (1) hour period combined.~~
- (b) ~~The total suspended particulate emissions from the eleven (11) multi stack batch annealing furnaces (V6A) shall not exceed 0.003 pounds per MMBtu and 0.520 pounds of TSP emissions emitted per one (1) hour period combined.~~

D.7.1 Particulate Matter Lake County: PM₁₀ emission requirements [326 IAC 6.8-2-21]

Pursuant to 326 IAC 6.8-2-21 (Lake County: ~~PM₁₀~~ PM₁₀ Emission Requirements), PM₁₀ PM₁₀ emissions from the Utilities operations shall not exceed the following:

...

(i) **Section D – Sulfur Dioxide**

IDEM has revised the SO₂ emission limitations in 326 IAC 7-4, re-codified at 326 IAC 7-4.1-10, applicable to this source. Sections D.1.5, D.2.4, renumbered D.4.3, and D.7.2 in the permit have been revised. Section D.3.5 - "Sulfur Dioxide" has been added; subsequent sections in D.3 have been renumbered. All reference cites in Section D and the Table of Contents have been revised accordingly.

D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-4-1.1(c)(14)(D) and 326 IAC 7-4-1.1(c)(14)(G)]

Pursuant to 326 IAC 7-4-1.1(c)(14)(D), the SO₂ emissions from the Blast Furnace operations shall be limited as follows:

- (a) ~~SO₂ emissions from the stack serving No. 3 Blast Furnace Stoves (S1A) shall not exceed 0.024 lbs/MMBtu.~~
- (b) ~~SO₂ emissions from the stack serving No. 4 Blast Furnace Stoves (S1C) shall not exceed 0.024 lbs/MMBtu.~~

D.1.5 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]

- (a) Pursuant to 326 IAC 7-4.1-10(a)(4)(A), the SO₂ emissions from the stack serving No. 3 Blast Furnace Stoves (S1A) shall not exceed 0.290 lbs/MMBtu and 127.89 pounds per hour.
- (b) Pursuant to 326 IAC 7-4.1-10(a)(4)(B), the SO₂ emissions from the stack serving No. 4 Blast Furnace Stoves (S1C) shall not exceed 0.290 lbs/MMBtu and 140.94 pounds per hour.
- (c) Pursuant to 326 IAC 7-4.1-10(a)(6), the SO₂ emissions from the stack serving No. 4 Blast Furnace Casthouse Baghouse shall not exceed 0.18 pounds per ton feed material and 69.9 pounds per hour.

D.2.4 Lake County Sulfur Dioxide (SO₂ SO₂) Emission Limitations [326 IAC 7-4-1] [326 IAC 7-4.1-10]

Pursuant to 326 IAC 7-4-1.1(c)(14)(C) 326 IAC 7-4.1-10(a)(3), the SO₂ SO₂ emissions from the Sinter Plant windbox (S2A) shall not exceed 4.0 pound of sulfur dioxide per ton of process material and 240 pounds of sulfur dioxide per hour.

D.3.5 Lake County Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-4.1-10]

Pursuant to 326 IAC 7-4.1-10(a)(5), the SO₂ emissions from the stack serving Reladling and Desulfurization Baghouse shall not exceed 0.057 pounds per ton feed material and 30.40 pounds per hour.

D.4.23 Lake County Sulfur Dioxide (SO₂ SO₂) Emission Limitations [326 IAC 7-4-1.1(c)(14)(D)] [326 IAC 7-4.1-10]

Pursuant to ~~326 IAC 7-4-1.1(c)(14)(B)~~ **326 IAC 7-4.1-10(a)(2)**, the ~~SO₂~~ **SO₂** emissions from each of the stacks serving the three (3) natural gas/fuel oil furnaces (S4A, S4B and S4C) shall not exceed 1.254 ~~lb SO₂ lbs~~/MMBtu and 535.1 pounds per hour.

D.7.2 Lake County Sulfur Dioxide (SO₂) Emission Limitations ~~[326 IAC 7-4-1.1]~~ **[326 IAC 7-4.1-10]**

Pursuant to ~~326 IAC 7-4-1.1(c)(14)(A)~~ **326 IAC 7-4.1-10(a)(1)**, the sulfur dioxide emission rate from these units shall be limited to the following:

- (a) SO₂ emissions from Boiler No. 5 (S8C/D) shall not exceed ~~0.896~~ **0.594** lbs/MMBtu.
- (b) SO₂ emissions from Boiler No. 6 (S8E) shall not exceed ~~0.896~~ **0.594** lbs/MMBtu.
- (c) SO₂ emissions from Boiler No. 7 (S8F) shall not exceed ~~0.896~~ **0.594** lbs/MMBtu.
- (d) SO₂ emissions from Boiler No. 8 (S8G) shall not exceed ~~0.896~~ **0.594** lbs/MMBtu.
- (e) Combined SO₂ emissions from Boiler No. 5 (S8C/D), Boiler No. 6 (S8E), Boiler No. 7 (S8F), and Boiler No. 8 (S8G) shall not exceed 1,456.5 pounds per hour.**
- ~~(e)~~ **(f) Total actual heat input from fuel oil and/or desulfurized coke oven gas usage at all boilers combined shall not exceed nine hundred ninety-three (993) million Btu two thousand four hundred fifty-two (2,452) MMBtu per hour.**
- ~~(f)~~ **(g) Boilers shall be fired on fuel oil, blast furnace gas, desulfurized coke oven gas and natural gas only.**
- ~~(g)~~ **(h) Fuel oil burned shall not exceed one and three-tenths percent (1.3%) sulfur and one and thirty-five hundredths (1.35) pounds per million Btu MMBtu.**
- (i) Utility Boilers 5, 6, 7, and 8 in combination with the Ironside Energy, LLC Utility Boiler No. 9 are limited to an annual operating limit of five thousand eight hundred seventy-one and sixty-one hundredths (5,871.61) tons per year.**

(j) Section D – Sulfur Dioxide Sampling

IDEM has revised the SO₂ emission limitations in 326 IAC 7-4, re-codified at 326 IAC 7-4.1-2, applicable to this source. Sections D.1.13, D.2.17, renumbered D.4.6, and D.7.7 in the permit have been revised. Since section D.3.5 - "Sulfur Dioxide" has been added, section D.3.18 - "Sulfur Dioxide (SO₂) Sampling and Analysis" has also been added. All reference cites in Section D and the Table of Contents have been revised accordingly.

D.1.13 Sulfur Dioxide (SO₂ SO₂) Sampling and Analysis ~~[326 IAC 7-4-1.1(d)]~~ **[326 IAC 7-4.1-2]**

Pursuant to ~~326 IAC 7-4-1.1(d)~~ **326 IAC 7-4.1-2**, and in order to comply with condition D.1.5, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

...

D.2.17 Sulfur Dioxide (SO₂ SO₂) Sampling and Analysis ~~[326 IAC 7-4-1.1(d)]~~ **[326 IAC 7-4.1-2]**

Pursuant to ~~326 IAC 7-4-1.1(d)~~ **326 IAC 7-4.1-2**, and in order to comply with condition D.2.4, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

...

D.3.18 Sulfur Dioxide (SO₂) Sampling and Analysis [326 IAC 7-4.1-2]

Pursuant to 326 IAC 7-4.1-2, and in order to comply with condition D.3.5, the Permittee shall submit a sampling and analysis protocol to IDEM by July 1, 2006. The protocol shall contain the following:

- (a) A description of planned procedures for sampling of sulfur-bearing fuels and materials for analysis of sulfur content, and for any planned direct measurement of sulfur dioxide emissions vented to the atmosphere.
- (b) The protocol shall specify the frequency of sampling, analysis and/or measurement for each fuel and materials for each facility. The department shall incorporate the protocol into the source's operation permit per procedures specified in 326 IAC 2.

D.4.56 Sulfur Dioxide (SO₂) Sampling and Analysis [~~326 IAC 7-4-1.1(d)~~] [326 IAC 7-4.1-2]

Pursuant to ~~326 IAC 7-4-1.1(d)~~ 326 IAC 7-4.1-2, and in order to comply with condition D.4.23, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

...

D.7.7 Sulfur Dioxide (SO₂) Sampling and Analysis [~~326 IAC 7-4-1.1(d)~~] [326 IAC 7-4.1-2]

Pursuant to ~~326 IAC 7-4-1.1(d)~~ 326 IAC 7-4.1-2, and in order to comply with condition D.7.2, the Permittee shall submit a sampling and analysis protocol to IDEM. The protocol shall contain the following:

...

(k) **Section D – Parametric Monitoring Record Keeping Requirements**

With regards to record keeping requirements for visible emission notations and other parametric monitoring, the Permittee needs to make a record of some sort every day. In order to attempt to clarify the requirements, the recordkeeping requirements relating the VEs and other daily parametric monitoring have been revised throughout Section D. Section D.2.20 has been clarified.

D.1.15 Record Keeping Requirements

...

- (b) To document compliance with Condition D.1.10, the Permittee shall maintain records of once per day visible emission notations of the No. 4 Blast Furnace Casthouse Baghouse (S1B). **The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).**
- (c) To document compliance with Condition D.1.11, the Permittee shall maintain records, once per day of the pressure drop across the No.4 Blast Furnace Casthouse Baghouse and the number of fans in operation when venting to the atmosphere. **The Permittee shall include in its records when a daily pressure drop notation is not taken and the reason for the lack of daily pressure drop notation (e.g. the process did not operate that day).**

...

D.2.20 Record Keeping Requirements

- (a) To document compliance with Condition D.2.13, the Permittee shall maintain records of once per day visible emission notations of the sinter plant stack exhausts. **The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).**
- (b) To document compliance with Condition D.2.14, the Permittee shall maintain the following:
- (1) Once per day records of the following operational parameters during normal operation when venting to the atmosphere:
- (A) Pressure drop across the venturi scrubber
- (B) ~~Flow~~ **Water flow rate**

The Permittee shall include in its records when a daily parameter notation is not taken and the reason for the lack of daily parameter notation (e.g. the process did not operate that day).

...

D.3.1820 Record Keeping Requirements

- (a) In order to document compliance with Condition D.3.14, the Permittee shall maintain records of once per day visible emission notations of the reladle/desulfurization baghouse stack (S3B) and the ladle metallurgical facility (LMF) baghouse stack (S3C). **The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).**
- (b) In order to document compliance with Condition D.3.15, the Permittee shall maintain records, once per day of the pressure drop across the baghouse when venting to the atmosphere. **The Permittee shall include in its records when a daily pressure drop notation is not taken and the reason for the lack of daily pressure drop notation (e.g. the process did not operate that day).**

...

D.4.67 Record Keeping Requirements

...

- (b) In order to document compliance with Condition D.4.4, the Permittee shall maintain records of once per day visible emission notations of the three (3) natural gas/fuel oil furnaces stacks (S4A, S4B and S4C), when using fuel oil. **The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).**

...

- (l) **Section D – Opacity**
IDEM has revised the opacity limitations in 326 IAC 6.8-3, re-codified at 326 IAC 6.8-2-21, applicable to this source. Renumbered section D.3.6 has been revised. All reference cites in Section D and the Table of Contents have been revised accordingly.

D.3.56 Opacity [~~326 IAC 6.8-3~~] [326 IAC 6.8-2-21(b)]

Pursuant to 326 IAC ~~6.8-3~~ **6.8-2-21(b)**, the following opacity limits shall be complied with and shall take precedence over those in 326 IAC 5-1-2 with which they conflict. The opacity limits for the BOF operations shall be as follows:

...

- (m) **Section D – Opacity Continuous Emission Monitoring**
IDEM has revised the opacity continuous emission monitoring standards in 326 IAC 6.8-5, re-codified at 326 IAC 6.8-2-21, applicable to this source. Renumbered section D.3.13 has been revised. All reference cites in Section D and the Table of Contents have been revised accordingly.

D.3.1314 Opacity Continuous Emission Monitoring [~~326 IAC 6.8-5~~] [326 IAC 6.8-2-21(c)]

Pursuant to 326 IAC ~~6.8-5~~ **6.8-2-21(c)**, the main basic oxygen furnace electrostatic precipitator stack shall be equipped with a Continuous Emission Monitoring (COM) for opacity. The COM shall comply with the maintenance, operating procedures, quality assurance procedures, and performance specifications in 326 IAC 3-5.

- (n) *On July 15, 2008, the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$) was effective. Pursuant to this rule revision, IDEM will continue to evaluate condensable PM for NSR permits and set limits for filterable and condensable $PM_{10}/PM_{2.5}$. However, IDEM will not require compliance demonstration until after the publication of a new or revised condensable test method (consistent with the "transition period" established by the U. S. EPA in this rulemaking).*

Section D.10 has been added to the permit to include the new emission units and their applicable requirements. The subsequent D sections have been renumbered accordingly. Part 70 Quarterly Reports for the Raw Coal Truck Unloading System (RC02) and Thaw Shed Heater (RC04) have been added to the permit.

SECTION D.10

FACILITY OPERATION CONDITIONS

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

- (j) **One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:**
- (1) **Receiving:**
 - (A) **Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;**
 - (B) **Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;**
 - (C) **Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;**
 - (D) **Coal Truck Haul Roads, identified as CF01, using water flushing and sweeping as control, exhausting to the atmosphere;**
 - (E) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (F) **One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (G) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (H) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (I) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (J) **One (1) Coal Storage Pile Area, approved for construction in 2008,**

	identified as CF02, covering a nominal maximum area of 116,000 square feet, exhausting to the atmosphere;
(K)	Front end wheel loaders with each having a minimum of an eight (8) cubic yard bucket and a vehicle weight of 100,000 lbs traveling on paved and unpaved roads, such that the use of any larger capacity wheel loader would be acceptable since it would reduce vehicle miles traveled and fugitive emissions; and
(L)	Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and
(2)	Grinding & Drying Plant:
(A)	Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01;
(B)	Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control, exhausting to stack PC02;
(C)	Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and
(D)	Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04.
(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.10.1 PSD and Nonattainment NSR Minor Limit [326 IAC 2-2] [326 IAC 2-1.1-5]

- (a) Pursuant to Significant Permit Modification 089-26506-00318, the raw coal throughput to the Raw Coal Truck Unloading System, identified as RC02, shall be limited to less than 74,460 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Pursuant to Significant Permit Modification 089-26506-00318, the combined PM₁₀ emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 2.71 pounds per hour.
- (c) Pursuant to Significant Permit Modification 089-26506-00318, the combined PM_{2.5} emissions from the Coal Grinder and Dryer, identified as PC02, and the Coal Dryer Auxiliary Heater, identified as PC03, shall be less than 1.54 pounds per hour.
- (d) Pursuant to Significant Permit Modification 089-26506-00318, the natural gas usage for the Thaw Shed Heater, identified as RC04, shall not exceed 41,391 MMBtu per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limits shall limit the PM from the entire source to less than 25

tons per twelve (12) consecutive month period and the PM_{10} from the entire source to less than 15 tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable. Compliance with the above limit shall limit the direct $PM_{2.5}$ from the entire source to less than 10 tons per twelve (12) consecutive month period and render 326 IAC 2-1.1-5 not applicable.

D.10.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, the Raw Coal Railcar Unloading System (RC01), Raw Coal Truck Unloading System (RC02), Raw Coal Reclaim System (RC03), Coal Conveyors (CC01, CC03, CC04, CC05), Coal Stacker (CC02), Raw Coal Storage Bin (PC01), Coal Grinder and Dryer Mill Bag Filter Separator (PC02), and Pulverized Coal Storage Bin (PC04) shall not discharge to the atmosphere particulate matter in excess of 0.03 grains per dry standard cubic foot of exhaust air.

D.10.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.10.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 6.8-1-2]

- (1) Within 60 days of achieving the maximum capacity, but no later than 180 days after start-up, in order to demonstrate compliance with Condition D.10.2, Particulate Emission, the Permittee shall perform PM testing on the Coal Grinder and Dryer, identified as PC02, operating in conjunction with the Coal Dryer Auxiliary Heater, identified as PC03, utilizing methods as approved by the Commissioner.
- (2) In order to demonstrate compliance with Condition D.10.1, PSD and Nonattainment NSR Minor Limit, the Permittee shall perform $PM_{2.5}$ and PM_{10} testing on the Coal Grinder and Dryer, identified as PC02, operating in conjunction with the Coal Dryer Auxiliary Heater, identified as PC03, within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$), signed on May 8, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM_{10} and $PM_{2.5}$ includes filterable and condensable PM.

These tests shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.10.5 Particulate Control

In order to comply with Condition D.10.2:

- (a) bag filters for particulate control shall be in operation and shall control emissions from the Raw Coal Storage Bin, identified as PC01, at all times the Raw Coal Storage Bin is receiving material;**
- (b) the Mill Bag Filter Separator for particulate control shall be in operation and shall control emissions from the Coal Grinder and Dryer, identified as PC02, at all times the Coal Grinder and Dryer are operating; and**
- (c) bag filters for particulate control shall be in operation and shall control emissions from the Pulverized Coal Storage Bin, identified as PC04, at all times the Pulverized Coal Storage Bin is receiving material.**

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

D.10.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Coal Grinder and Dryer exhaust, identified as PC02-S, shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.**
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.**
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.**
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.**
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.**

D.10.7 Bag Filter Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the bag filter used in conjunction with the Coal Grinder and Dryer Mill Bag Filter Separator (PC02) at least once per day when the associated processes are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 8.0 inches of water or an alternative range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A reading that is outside the ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a violation of 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.10.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (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 line. 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.10.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.10.1, the Permittee shall maintain the following records:
 - (1) Records of the total coal delivered for each day at the Raw Coal Truck Unloading System, identified as RC02; and
 - (2) Records of the natural gas usage for the Thaw Shed Heater, identified as RC04.
- (b) To document compliance with Condition D.10.5(b), the Permittee shall maintain records of once per day visible emission notations of the Coal Grinder and Dryer exhaust, identified as PC02-S. The Permittee shall include in its records when a daily visible emission notation is not taken and the reason for the lack of daily visible emission notation (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.10.10 Reporting Requirements

A quarterly report shall be submitted containing the raw coal throughput to the Raw Coal Truck Unloading System, identified as RC02, and the natural gas usage for the Thaw Shed Heater, identified as RC04, in order to document compliance with Condition D.10.1. The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

Part 70 Quarterly Report

Source Name: ArcelorMittal Indiana Harbor, LLC
Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street, MC8-124, East Chicago, Indiana 46312
Part 70 Permit No.: T089-7099-00318
Facility: Raw Coal Truck Unloading System (RC02)
Parameter: Total throughput of coal delivered via trucks
Limit: Less than 74,460 tons of iron per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR:

Month	Column 1 (coal throughput)	Column 2 (coal throughput)	Column1 + Column2 (coal throughput)
	This Month (tons)	Previous 11 Months (tons)	12 Month Total (tons)
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: ArcelorMittal Indiana Harbor, LLC
Source Address: 3001 Dickey Road, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street, MC8-124, East Chicago, Indiana 46312
Part 70 Permit No.: T089-7099-00318
Facility: Thaw Shed Heater (RC04)
Parameter: Natural gas usage
Limit: Less than 41,391 MMBtu per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR:

Month	Column 1 (natural gas usage)	Column 2 (natural gas usage)	Column1 + Column2 (natural gas usage)
	This Month (MMBtu)	Previous 11 Months (MMBtu)	12 Month Total (MMBtu)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

- (o) *Section E.1 and Attachment A have been added to the permit to include the NSPS, Subpart Y requirements.*

SECTION E.1

EMISSIONS UNIT OPERATION CONDITIONS

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

- (j) **One (1) pulverized coal injection (PCI) system, comprised of the following facilities, process equipment, and operational practices:**
- (1) **Receiving:**
- (A) **Raw Coal Railcar Unloading System, approved for construction in 2008, identified as RC01, with a maximum capacity of 1,500 tons per hour, using partial enclosure as control, exhausting to the atmosphere;**
 - (B) **Raw Coal Truck Unloading System, approved for construction in 2008, identified as RC02, with a maximum capacity of 170 tons per hour, exhausting to the atmosphere;**
 - (C) **Raw Coal Pile Reclaim System, approved for construction in 2008, identified as RC03, with a maximum capacity of 450 tons per hour, exhausting to the atmosphere;**
 - (E) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC01, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (F) **One (1) Coal Stacker, approved for construction in 2008, identified as CC02, with a maximum capacity of 1,500 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (G) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC03, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (H) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC04, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (I) **One (1) Coal Conveyor, approved for construction in 2008, identified as CC05, with a maximum capacity of 450 tons per hour, using covers as control, exhausting to the atmosphere;**
 - (L) **Thaw Shed Heater, approved for construction in 2008, identified as RC04, with a maximum capacity of 9.45 MMBtu per hour, exhausting to the atmosphere; and**
- (2) **Grinding & Drying Plant:**
- (A) **Raw Coal Storage Bin, approved for construction in 2008, identified as PC01, with a maximum capacity of 700 tons, using bag filters as control, exhausting to stack PC01-S;**
 - (B) **Coal Grinder and Dryer, approved for construction in 2008, identified as PC02, with a maximum capacity of 85 tons of raw coal per hour, using Mill Bag Filter Separator as integral part of the process for control,**

exhausting to stack PC02-S;

(C) Coal Dryer Auxiliary Heater, approved for construction in 2008, identified as PC03, with a maximum capacity of 50 MMBtu per hour, exhausting to the atmosphere; and

(D) Pulverized Coal Storage Bin, approved for construction in 2008, identified as PC04, with a maximum capacity of 650 tons, using bag filters as control, and exhausting to stack PC04-S.

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

**E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1]
[40 CFR 60, Subpart A]**

- (a) The provisions of 40 CFR 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this Section E.1, except when otherwise specified in 40 CFR 60, Subpart Y.**
- (b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:**

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

**E.1.2 New Source Performance Standards for Coal Preparation Plants [40 CFR 60, Subpart Y]
[326 IAC 12]**

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart Y (included as Attachment A of the permit), which are incorporated by reference in 326 IAC 12:

- (1) 40 CFR 60.250;**
- (2) 40 CFR 60.251;**
- (3) 40 CFR 60.252;**
- (4) 40 CFR 60.253(a)(1);**
- (5) 40 CFR 60.253(b); and**
- (6) 40 CFR 60.254.**

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-26477-00318 and Significant Permit Modification No. 0890-26506-00318, respectively. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

**Appendix A: Emission Calculations
 Summary**

Major NSR Applicability Analysis and Pre-Project Record						
Company:	ArcelorMittal					
Facility:	Indiana Harbor West					
Project	Pulverized Coal Injection (PCI) on Blast Furnaces IH-3 and IH-4					
Date:	9/8/2008					
1. Pre-Project Record						
<u>(A) Description of the Project</u>						
<p>ArcelorMittal USA has proposed a project to implement pulverized coal injection (PCI) on Blast Furnaces H-3 and H-4 located at the Indiana Harbor West plant in East Chicago, IN. The purpose of the project is to offset natural gas, fuel oil, and coke usage in the blast furnaces with coal for cost savings. No increase in blast furnace iron production rates above current furnace capabilities are projected. The project scope involves three major components: Raw Coal System, Coal Grinding and Drying Plant, and Pulverized Coal Storage Bin and Injection Plant. The Raw Coal System will consist of coal unloading from either railcars (primary) or trucks (backup), storage, and conveyance to a new Raw Coal Storage Bin (RCSB). The Grinding and Drying Plant will consist of grinding equipment with a nominal capacity of 85 tons raw coal/hr. Blast furnace stove exhaust gas (waste heat) will be used to dry the coal, with an auxiliary natural gas-fired heater providing backup. Drying will occur in the pulverizer almost simultaneously with the grinding process. A classifier will separate larger particles from the gas stream to be reground, while the finished product is carried out of the pulverizer in a gas stream. The gas stream will carry the coal to a baghouse where the pulverized coal will be separated from the stream. The coal will then move through a screw conveyor and rotary valve and be deposited into the Pulverized Coal Storage Bin (PCSB). A process fan will maintain negative pressure on the system and exhaust process gas to the stack after the coal is separated from the stream. The PCSB will feed PC injection systems for each furnace. Injection capacity will be 300 lb/nthm. The injection system will consist of PCSB discharge equipment, injection vessels, a distributor, injection lances, and all associated equipment and piping. New and affected existing emission units are identified below.</p>						
<u>(B) Identification of Affected Emission Units</u>						
(i) New Emission Units	Proposed annual trucking rate:	10%	of coal unloading			
		Design				
Emission Unit	ID	Capacity	Units	Control Device	Notes	
Raw Coal Railcar Unloading / Transfer to Pile	RC01	1500	tons/hr	Partial Enclosure	Railcar dump: RC01, conveyor: CC01, coal stacker: CC02	
	CC01; CC02	744,600	tons/yr			
Raw Coal Truck Unloading	RC02	170	tons/hr	None	Truck dump directly to pile	
		74,460	tons/yr			
Raw Coal Reclaim from Pile to RCSB	RC03	450	tons/hr	None	Reclaim hoppers: RC03, conveyors CC03 - CC05	
	CC03-CC05	744,600	tons/yr			
Coal Pile Fugitives	CF02	80,000	tons	None	Two (2) 40,000 ton piles	
Haul Road Fugitives and Front End Loader Fugitives	CF01			Work practice	Water flushing followed by sweeping (haul roads only)	
Grinding and Drying Plant, Raw Coal Storage Bin (RCSB)	PC01	700	tons	RCSB Bag Filter		
		450	tons/hr			
		744,600	tons/yr			
		50	acfm			
Grinding and Drying Plant, Mill Bag Filter	PC02	85	tons/hr	Mill Bag Filter (see Note)	Bag filter is integral process equipment	
		744,600	tons/yr			
		98,291	acfm			
Grinding and Drying Plant, Pulverized Coal Storage Bin (PCSB)	PC04	650	tons	PCSB Bag Filter		
		85	tons/hr			
		744,600	tons/yr			
		50	acfm			
Coal Dryer Auxiliary Heater	PC03	50	MMBtu/hr	None		
Thaw Shed Heater	RC04	9.45	MMBtu/hr	None	50% capacity factor assumed for annual PTE	
Grain loading specification for all bag filters			0.00278	gr/acf		

**Appendix A: Emission Calculations
 Summary**

(ii) Existing Emission Units										
Existing affected emission units include the Nos. 3 and 4 Blast Furnaces (H-3 & H-4) and associated casthouse, slag pit, and BFG combustion emission units/points. Specific emission units are listed below.										
Emission Unit	Stack ID	PCI Rate								
No. 3 Blast Furnace		300 lb/NTHM								
- Stoves (31, 32, 33)	S1A									
- Casthouse	V1A									
- Bleeder Flare	S1E									
- Furnace Charging	F1A									
- Slag Pits	F1C									
No. 4 Blast Furnace		300 lb/NTHM								
- Stoves (41, 42, 43)	S1C									
- Casthouse	V1B									
- Casthouse Baghouse	S1B									
- Bleeder Flare	S1D									
- Furnace Charging	F1B									
- Slag Pits	F1D									
No. 5 Boiler, BFG Combustion	S8C/D									
No. 6 Boiler, BFG Combustion	S8E									
No. 7 Boiler, BFG Combustion	S8F									
No. 8 Boiler, BFG Combustion	S8G									
No. 9 Boiler, BFG Combustion										
C) Description of Applicability Test										
Applicability Test:	Actual-to-Projected-Actual Emissions (ATPA)									
(i) Baseline Actual Emissions (BAE)										
BAE (tons/yr)										
Emission Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb	H2S	
Raw Coal Unloading/Transfer (100% Rail)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grinding and Drying Plant, Raw Coal Storage Bin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grinding and Drying Plant, Mill Bag Filter	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grinding and Drying Plant, Pulverized Coal Storage Bin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coal Pile Wind Erosion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haul Road Fugitives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Front End Loader Fugitives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coal Dryer Auxiliary Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thaw Shed Heater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No. 3 Blast Furnace										
- Stoves (31, 32, 33)	29.44	29.44	29.44	10.84	179.36	156.31	9.33	0.00	0.00	0.00
- Casthouse	41.06	21.22	9.58	20.53	21.90	173.16	9.58	0.00	0.00	0.00
- Bleeder Flare	0.45	0.45	0.45	0.17	2.74	2.39	0.14	0.00	0.00	0.00
- Furnace Charging	6.32	6.32	6.32	0.00	0.09	641.10	0.02	0.00	0.00	0.00
- Slag Pits	17.11	11.63	11.63	4.24	58.17	14.71	0.40	0.00	0.00	19.43
No. 4 Blast Furnace										
- Stoves (41, 42, 43)	42.23	42.23	42.23	15.55	257.30	224.24	13.39	0.00	0.00	0.00
- Casthouse	37.70	19.23	8.82	28.13	30.01	237.27	13.13	0.00	0.00	0.00
- Casthouse Baghouse	1.88	0.44	0.12	0.00	134.11	0.00	0.00	0.00	0.00	0.00
- Bleeder Flare	0.62	0.62	0.62	0.23	3.76	3.27	0.20	0.00	0.00	0.00
- Furnace Charging	8.51	8.51	8.51	0.00	0.13	862.37	0.03	0.00	0.00	0.00
- Slag Pits	23.45	15.94	15.94	5.81	79.72	20.16	0.55	0.00	0.00	26.62
Nos. 5 - 9 Boilers, BFG Combustion	186.76	186.76	186.76	68.77	1137.96	991.73	59.20	0.00	0.00	0.00
(ii) Potential Emissions (PTE) - New Units Only										
PTE (tons/yr)										
Emission Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb	H2S	
Raw Coal Unloading/Transfer (100% Rail)	1.92	0.91	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	1.84	0.87	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grinding and Drying Plant, Raw Coal Storage Bin	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grinding and Drying Plant, Mill Bag Filter	10.26	10.26	5.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grinding and Drying Plant, Pulverized Coal Storage Bin	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coal Pile Wind Erosion	2.13	1.07	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haul Road Fugitives	1.08	0.21	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Front End Loader Fugitives	3.30	0.74	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coal Dryer Auxiliary Heater	1.63	1.63	1.63	21.47	0.13	18.04	1.18	0.00	0.00	0.00
Thaw Shed Heater	0.15	0.15	0.15	2.03	0.01	1.70	0.11	0.00	0.00	0.00

**Appendix A: Emission Calculations
 Summary**

<i>(iii) Projected Actual Emissions (PAE)</i>										
PAE (tons/yr)										
Emission Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb	H2S	
No. 3 Blast Furnace										
- Stoves (31, 32, 33)	57.02	57.02	57.02	20.99	347.40	302.76	18.07	0.00	0.00	
- Casthouse	53.95	27.87	12.59	26.98	28.77	227.49	12.59	0.00	0.00	
- Bleeder Flare	4.63	4.63	4.63	1.71	28.23	24.61	1.47	0.00	0.00	
- Furnace Charging	8.31	8.31	8.31	0.00	0.12	842.29	0.02	0.00	0.00	
- Slag Pits	22.48	15.29	15.29	5.57	76.43	19.33	0.53	0.00	25.52	
No. 4 Blast Furnace										
- Stoves (41, 42, 43)	64.60	64.60	64.60	23.79	393.61	343.03	20.48	0.00	0.00	
- Casthouse	41.98	21.41	9.82	31.32	33.41	264.17	14.62	0.00	0.00	
- Casthouse Baghouse	2.09	0.49	0.13	0.00	149.32	0.00	0.00	0.00	0.00	
- Bleeder Flare	5.38	5.38	5.38	1.98	32.78	28.57	1.71	0.00	0.00	
- Furnace Charging	9.47	9.47	9.47	0.00	0.14	960.15	0.03	0.00	0.00	
- Slag Pits	26.10	17.75	17.75	6.47	88.75	22.45	0.61	0.00	29.64	
Nos. 5 - 9 Boilers, BFG Combustion										
	275.69	275.69	275.69	101.52	1679.82	1463.96	87.39	0.00	0.00	
<i>(iv) Excludable Emissions (EE)</i>										
EE (tons/yr)										
Emission Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb	H2S	
No. 3 Blast Furnace										
- Stoves (31, 32, 33)	27.58	27.58	27.58	10.16	168.05	146.45	8.74	0.00	0.00	
- Casthouse	12.89	6.66	3.01	6.44	6.87	54.34	3.01	0.00	0.00	
- Bleeder Flare	4.18	4.18	4.18	1.54	25.49	22.21	1.33	0.00	0.00	
- Furnace Charging	1.98	1.98	1.98	0.00	0.03	201.19	0.01	0.00	0.00	
- Slag Pits	5.37	3.65	3.65	1.33	18.26	4.62	0.13	0.00	6.10	
No. 4 Blast Furnace										
- Stoves (41, 42, 43)	22.37	22.37	22.37	8.24	136.31	118.79	7.09	0.00	0.00	
- Casthouse	4.27	2.18	1.00	3.19	3.40	26.90	1.49	0.00	0.00	
- Casthouse Baghouse	0.21	0.05	0.01	0.00	15.21	0.00	0.00	0.00	0.00	
- Bleeder Flare	4.76	4.76	4.76	1.75	29.03	25.30	1.51	0.00	0.00	
- Furnace Charging	0.96	0.96	0.96	0.00	0.01	97.78	0.00	0.00	0.00	
- Slag Pits	2.66	1.81	1.81	0.66	9.04	2.29	0.06	0.00	3.02	
Nos. 5 - 9 Boilers, BFG Combustion										
	88.93	88.93	88.93	32.75	541.86	472.23	28.19	0.00	0.00	

Explanation of excludable emissions: In accordance with the definition of projected actual emissions (PAE) at 326 IAC 2-2-1(rr), sources performing major-NSR applicability analyses using the actual-to-projected-actual (ATPA) test shall exclude, in calculating any increase in emissions, emissions after the project that the unit(s) could have accommodated in the period selected to determine baseline actual emissions (BAE) and that are otherwise unrelated to the project (e.g., demand growth-related emissions). Since the PCI project is designed to reduce raw material/fuel costs--not to increase production, all of the projected hot metal production at the blast furnace used to calculate PAE is unrelated to this project. Fuel has not been the limiting factor; market demand dictates production rates. To ensure that the projected production rate could have been accommodated by the blast furnaces during the baseline period, we used the highest actual month of hot metal production that each blast furnace achieved. With sufficient demand growth, each blast furnace could have operated at that peak monthly rate for the selected 24-month baseline period. The emissions increase associated with this peak production rate is properly excluded from projected actual emissions. Emissions from PCI project units that are burning blast furnace gas are calculated using emission factors per mmcf of blast furnace gas combusted. Using historic data, we determined the highest monthly average mmcf of BFG generated per net ton of hot metal produced (NTHM). By multiplying this mmcf/NTHM ratio by the NTHM production increase associated with demand growth unrelated to the PCI project, we were able to calculate the projected increase in BFG generated and combusted in mmcf/year. Our analysis indicates that BFG emission factors (lb/mmcf) will not change as a result of the PCI project. Therefore, the emission increases associated with increased BFG combustion at the boilers, stoves and flares are excludable as emissions that these units could have accommodated during the baseline period and are unrelated to the PCI project. Because projected production rates and PAE are consistent with rates that H-3 and H-4 could have accommodated in the BAE period and that are unrelated to the PCI project, and no emission factors are expected to change as a result of the project, the project emissions increase (PEI) is zero for all affected existing emission units as shown below. Emissions associated with startup, shutdown, and malfunction are not expected to be affected by the project and are therefore not included in BAE or PAE.

**Appendix A: Emission Calculations
 Summary**

<i>(v) Project Emissions Increase (PEI) = PTE, new units + (PAE - BAE - EE), existing affected units</i>											
PEI (tons/yr)											
Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb	H2S		
Raw Coal Unloading/Transfer (100% Rail)	1.92	0.91	0.14	0.00	0.00	0.00	0.00	0.00	0.00		
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	1.84	0.87	0.13	0.00	0.00	0.00	0.00	0.00	0.00		
Grinding and Drying Plant, Raw Coal Storage Bin	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grinding and Drying Plant, Mill Bag Filter	10.26	10.26	5.13	0.00	0.00	0.00	0.00	0.00	0.00		
Grinding and Drying Plant, Pulverized Coal Storage Bin	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Coal Pile Wind Erosion	2.13	1.07	0.43	0.00	0.00	0.00	0.00	0.00	0.00		
Haul Road Fugitives	1.08	0.21	0.03	0.00	0.00	0.00	0.00	0.00	0.00		
Front End Loader Fugitives	3.30	0.74	0.07	0.00	0.00	0.00	0.00	0.00	0.00		
Coal Dryer Auxiliary Heater	1.63	1.63	1.63	21.47	0.13	18.04	1.18	0.00	0.00		
Thaw Shed Heater	0.15	0.15	0.15	2.03	0.01	1.70	0.11	0.00	0.00		
No. 3 Blast Furnace											
- Stoves (31, 32, 33)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Casthouse	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Bleeder Flare	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Furnace Charging	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Slag Pits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
No. 4 Blast Furnace											
- Stoves (41, 42, 43)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Casthouse	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Casthouse Baghouse	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Bleeder Flare	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Furnace Charging	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
- Slag Pits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Nos. 5 - 9 Boilers, BFG Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
TOTAL (100% Rail Coal Delivery Scenario 1)	19.41	14.77	7.56	23.50	0.14	19.74	1.29	0.00	0.00		
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	20.41	14.95	7.58	23.50	0.14	19.74	1.29	0.00	0.00		
<u>Spreadsheet Organization</u>											
<u>Worksheet</u>											
	<u>Contents/Description</u>										
New Unit PTE	Potential emissions of regulated NSR pollutants from new emission units										
Coal Handling	PTE calculations for coal handling operations										
Coal Pile Fugitives	PTE calculations for coal pile wind erosion										
Road Fugitives	PTE calculations for coal truck traffic on plant roads										
Loader Fugitives	PTE calculations for front-end loader activity										
BAE	Calculation of BAE for existing affected emission units										
PAE	Calculation of PAE for existing affected emission units										
CHAE	Calculation of emissions that affected units 'could have accommodated' in the BAE period; CHAE - BAE = EE										

Appendix A: Emission Calculations
New Unit PTE

Minor NSR Applicability Analysis under 326 IAC 2-7-10.5								
Company:	ArcelorMittal							
Facility:	Indiana Harbor West							
Project:	Pulverized Coal Injection (PCI) on Blast Furnaces IH-3 and IH-4							
Date:	9/8/2008							
Potential to Emit (Controlled and Uncontrolled) for New Emissions Units								
Controlled PTE (lb/hr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	5.42	2.56	0.39					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	5.42	2.56	0.39					
Grinding & Drying Plant, Raw Coal Storage Bin	0.001	0.001	0.001					
Grinding & Drying Plant, Mill Bag Filter	2.34	2.34	1.17					
Grinding & Drying Plant, Pulverized Coal Storage Bin	0.001	0.001	0.001					
Coal Pile Wind Erosion	11.68	5.84	2.34					
Haul Road Fugitives	4.94	0.96	0.14					
Front End Loader Fugitives	5.94	1.34	0.13					
Coal Dryer Auxiliary Heater	0.37	0.37	0.37	4.90	0.03	4.12	0.27	0.00
Thaw Shed Heater	0.07	0.07	0.07	0.93	0.01	0.78	0.05	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	25.82	12.53	4.47	5.83	0.03	4.90	0.32	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	30.76	13.49	4.62	5.83	0.03	4.90	0.32	0.00
Combined Emissions, Mill Bag Filter + Aux. Heater	2.71	2.71	1.54	4.90	0.03	4.12	0.27	0.00
Controlled PTE (tons/yr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	1.92	0.91	0.14					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	1.84	0.87	0.13					
Grinding & Drying Plant, Raw Coal Storage Bin	0.01	0.01	0.003					
Grinding & Drying Plant, Mill Bag Filter	10.26	10.26	5.13					
Grinding & Drying Plant, Pulverized Coal Storage Bin	0.01	0.01	0.003					
Coal Pile Wind Erosion	2.13	1.07	0.43					
Haul Road Fugitives	1.08	0.21	0.03					
Front End Loader Fugitives	3.30	0.74	0.07					
Coal Dryer Auxiliary Heater	1.63	1.63	1.63	21.47	0.13	18.04	1.18	0.00
Thaw Shed Heater	0.15	0.15	0.15	2.03	0.01	1.70	0.11	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	19.41	14.77	7.56	23.50	0.14	19.74	1.29	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	20.41	14.95	7.58	23.50	0.14	19.74	1.29	0.00
Combined Emissions, Mill Bag Filter + Aux. Heater	11.89	11.89	6.76	21.47	0.13	18.04	1.18	0.00
Uncontrolled PTE (lb/hr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	5.42	2.56	0.39					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	5.42	2.56	0.39					
Grinding & Drying Plant, Raw Coal Storage Bin	1.19	0.56	0.09					
Grinding & Drying Plant, Mill Bag Filter	2.34	2.34	1.17					
Grinding & Drying Plant, Pulverized Coal Storage Bin	1.19	0.56	0.09					
Coal Pile Wind Erosion	11.68	5.84	2.34					
Haul Road Fugitives	60.53	11.80	1.77					
Front End Loader Fugitives	9.92	2.24	0.22					
Coal Dryer Auxiliary Heater	0.37	0.37	0.37	4.90	0.03	4.12	0.27	0.00
Thaw Shed Heater	0.07	0.07	0.07	0.93	0.01	0.78	0.05	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	32.19	14.55	4.73	5.83	0.03	4.90	0.32	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	92.71	26.35	6.50	5.83	0.03	4.90	0.32	0.00
Uncontrolled PTE (tons/yr)								
Emissions Unit	PM	PM10	PM2.5	NOx	SO2	CO	VOC	Pb
Raw Coal Unloading/Transfer (100% Rail)	1.92	0.91	0.14					
Raw Coal Unloading/Transfer (90% Rail; 10% Truck)	1.84	0.87	0.13					
Grinding & Drying Plant, Raw Coal Storage Bin	5.22	2.47	0.37					
Grinding & Drying Plant, Mill Bag Filter	10.26	10.26	5.13					
Grinding & Drying Plant, Pulverized Coal Storage Bin	5.22	2.47	0.37					
Coal Pile Wind Erosion	2.13	1.07	0.43					
Haul Road Fugitives	13.26	2.58	0.39					
Front End Loader Fugitives	5.51	1.24	0.12					
Coal Dryer Auxiliary Heater	1.63	1.63	1.63	21.47	0.13	18.04	1.18	0.00
Thaw Shed Heater	0.15	0.15	0.15	2.03	0.01	1.70	0.11	0.00
TOTAL (100% Rail Coal Delivery Scenario 1)	32.04	20.20	8.35	23.50	0.14	19.74	1.29	0.00
TOTAL (90% Rail, 10% Truck Coal Delivery Scenario 2)	45.22	22.74	8.73	23.50	0.14	19.74	1.29	0.00

Appendix A: Emission Calculations
Coal Handling

Parameter	Value	Units	Source / Basis
Raw Coal Moisture Content (M)	9	%	Conservative estimate of mean moisture content, PCI coal spec. is < 12% moisture
Processed Coal Moisture Content (M)	1.0	%	Design specification
Annual Mean Wind speed (U)	10.3	mph	Mean annual wind speed, Chicago, IL, Ref. 2
PM Particle size multiplier (kP)	0.74	dimensionless	Ref. 1
PM10 Particle size multiplier (kP)	0.35	dimensionless	Ref. 1
PM2.5 Particle size multiplier (kP)	0.053	dimensionless	Ref. 1
Raw Coal Handling PM Emission Factor	0.00074	lb/ton/drop	$EF = (kP * 0.0032) * ((U/5)^{1.3}) / (M/2)^{1.4}$, Ref. 1
Raw Coal Handling PM10 Emission Factor	0.00035	lb/ton/drop	$EF = (kP * 0.0032) * ((U/5)^{1.3}) / (M/2)^{1.4}$, Ref. 1
Raw Coal Handling PM2.5 Emission Factor	0.00005	lb/ton/drop	$EF = (kP * 0.0032) * ((U/5)^{1.3}) / (M/2)^{1.4}$, Ref. 1
Maximum Coal Handled, hourly basis	1500	tons/hr	Max. railcar unloading rate and transfer to pile
Maximum Coal Handled, hourly basis	170	tons/hr	Max. truck unloading rate
Maximum Coal Handled, hourly basis	450	tons/hr	Max. reclaim rate from pile to RCSB
Maximum Coal Handled, annual basis, Railcar (Scenario 1)	744,600	tons/yr	Coal grinder capacity = 85 tons/hr * 8760 hrs/yr (100% Railcar)
Maximum Coal Handled, annual basis, Railcar (Scenario 2)	670,140	tons/yr	Assumes 90% of annual coal deliveries by rail
Maximum Coal Handled, annual basis, Truck (Scenario 2)	74,460	tons/yr	Assumes 10% of annual coal deliveries by truck
Raw Coal Drop Points (car dump to pile)	4	#	Railcar unloading hopper, intermediate conveyor, stacker, stacker to pile
Raw Coal Drop Points (truck dump to pile)	1	#	Truck dump to pile
Raw Coal Drop Points (reclaim from pile to RCSB)	3	#	Pile to reclaim reclaim hoppers (2), hoppers to intermediate reclaim conveyors (2), intermediate reclaim conveyors to master reclaim conveyor
Raw Coal Storage Bin Filter	50	ACFM	Design specification
Bag Filter Exit Grain Loading	0.00278	gr/acf	Design specification, see Ref. 3 for particle size assumptions
Mill Bag Filter	98,291	ACFM	Design specification
Bag Filter Exit Grain Loading	0.00278	gr/acf	Design specification, see Ref. 3 for particle size assumptions
Pulverized Coal Storage Bin	50	ACFM	Design specification
Bag Filter Exit Grain Loading	0.00278	gr/acf	Design specification, see Ref. 3 for particle size assumptions
Bag Filter Control Efficiency	99.9%	%	Assumed for purposes of uncontrolled emissions calculation
PTE Calculation Results			
PTE, Controlled			
		lb/hr	tpy
Emissions Unit	PM	PM10	PM2.5
Raw Coal Unloading / Transfer (100% Railcar)	5.42	2.56	0.39
Raw Coal Unloading / Transfer (90% Railcar; 10% Truck)	5.42	2.56	0.39
Grinding & Drying Plant, Raw Coal Storage Bin	0.001	0.001	0.001
Grinding & Drying Plant, Mill Bag Filter	2.34	2.34	1.17
Grinding & Drying Plant, Pulverized Coal Storage Bin	0.001	0.001	0.001
PTE, Uncontrolled			
		lb/hr	tpy
Emissions Unit	PM	PM10	PM2.5
Raw Coal Unloading / Transfer (100% Railcar)	5.42	2.56	0.39
Raw Coal Unloading / Transfer (90% Railcar; 10% Truck)	5.42	2.56	0.39
Grinding & Drying Plant, Raw Coal Storage Bin	1.19	0.56	0.09
Grinding & Drying Plant, Mill Bag Filter (Integral)	2.34	2.34	1.17
Grinding & Drying Plant, Pulverized Coal Storage Bin	1.19	0.56	0.09
References			
1. EPA AP-42 Chapter 13.2.4; 11/2006.			
2. EPA AP-42 Chapter 7.1, Table 7.1-9; 11/2006.			
3. PM10 assumed equal to PM; PM2.5 assumed to equal 50% of PM (conservative assumption based on EPA AP-42 Appendix B.1 Section 11.1, Coal Cleaning; 1/1995). For uncontrolled emissions, particle size multipliers from Reference 1 applied.			

**Appendix A: Emission Calculations
 Heaters**

Input Data	Value	Units	Source/Reference					
Coal Dryer Aux. Heater Capacity	50	MMBtu/hr	Design specification					
Coal Dryer Aux. Heater Capacity	438,000	MMBtu/yr	MMBtu/hr * 8760 hrs/yr					
Thaw Shed Heater Capacity	9.45	MMBtu/hr	Design specification					
Thaw Shed Heater Capacity	41,391	MMBtu/yr	MMBtu/hr * 4380 hrs/yr (50% capacity factor assumed for annual PTE)					
Natural Gas HHV	1,020	Btu/scf	Average literature value assumed					
<u>Emission Factors and PTE Calculation</u>				PTE				
Pollutants	Emission Factor	Units	Ref.	Coal Dryer Heater		Thaw Shed Heater		
				lb/hr	tons/yr	lb/hr	tons/yr	
PM	7.5E-03	lb/MMBtu	1	3.7E-01	1.6E+00	7.0E-02	1.5E-01	
PM10	7.5E-03	lb/MMBtu	1	3.7E-01	1.6E+00	7.0E-02	1.5E-01	
PM2.5	7.5E-03	lb/MMBtu	1	3.7E-01	1.6E+00	7.0E-02	1.5E-01	
NOx	9.8E-02	lb/MMBtu	1	4.9E+00	2.1E+01	9.3E-01	2.0E+00	
SO2	5.9E-04	lb/MMBtu	1	2.9E-02	1.3E-01	5.6E-03	1.2E-02	
CO	8.2E-02	lb/MMBtu	1	4.1E+00	1.8E+01	7.8E-01	1.7E+00	
VOC	5.4E-03	lb/MMBtu	1	2.7E-01	1.2E+00	5.1E-02	1.1E-01	
Lead	4.9E-07	lb/MMBtu	1	2.5E-05	1.1E-04	4.6E-06	1.0E-05	
Arsenic compounds	2.0E-07	lb/MMBtu	1	9.8E-06	4.3E-05	1.9E-06	4.1E-06	
Beryllium compounds	1.2E-08	lb/MMBtu	1	5.9E-07	2.6E-06	1.1E-07	2.4E-07	
Cadmium compounds	1.1E-06	lb/MMBtu	1	5.4E-05	2.4E-04	1.0E-05	2.2E-05	
Chromium compounds	1.4E-06	lb/MMBtu	1	6.9E-05	3.0E-04	1.3E-05	2.8E-05	
Cobalt compounds	8.2E-08	lb/MMBtu	1	4.1E-06	1.8E-05	7.8E-07	1.7E-06	
Lead compounds	4.9E-07	lb/MMBtu	1	2.5E-05	1.1E-04	4.6E-06	1.0E-05	
Manganese compounds	3.7E-07	lb/MMBtu	1	1.9E-05	8.2E-05	3.5E-06	7.7E-06	
Mercury compounds	2.5E-07	lb/MMBtu	1	1.3E-05	5.6E-05	2.4E-06	5.3E-06	
Nickel compounds	2.1E-06	lb/MMBtu	1	1.0E-04	4.5E-04	1.9E-05	4.3E-05	
Selenium compounds	2.4E-08	lb/MMBtu	1	1.2E-06	5.2E-06	2.2E-07	4.9E-07	
Benzene	2.1E-06	lb/MMBtu	1	1.0E-04	4.5E-04	1.9E-05	4.3E-05	
Dichlorobenzene	1.2E-06	lb/MMBtu	1	5.9E-05	2.6E-04	1.1E-05	2.4E-05	
Formaldehyde	7.4E-05	lb/MMBtu	1	3.7E-03	1.6E-02	6.9E-04	1.5E-03	
Hexane	1.8E-03	lb/MMBtu	1	8.8E-02	3.9E-01	1.7E-02	3.7E-02	
Naphthalene	6.3E-07	lb/MMBtu	1	3.1E-05	1.4E-04	5.9E-06	1.3E-05	
POM	6.8E-07	lb/MMBtu	2	3.4E-05	1.5E-04	6.4E-06	1.4E-05	
Toluene	3.3E-06	lb/MMBtu	1	1.7E-04	7.3E-04	3.2E-05	6.9E-05	
<u>References</u>								
1. EPA AP-42, Chapter 1.4; 7/1998; NOx emission factor for small uncontrolled boilers used.								
2. Sum of POM compounds from Reference 1.								

Appendix A: Emission Calculations
Coal Pile Fugitives

	A	B	C	D
1	Parameter	Value	Units	Source / Basis
2	Coal Storage Pile Area	116,000	ft ²	Design Specification
3	Coal Storage Pile Area	2.66	acre	=B2/43,560
4	Annual Pile Days	365	days/yr	
5	Coal Silt Content (s)	2.2	wt. %	AP-42; Table 13.2.4-1, Coal (as received); 11/06
6	Threshold Wind Speed (f)	25.3	% of time	% of time that wind speed exceeds 12 mph at mean pile height, from IDEM Met data file for Lake County at http://www.in.gov/idem/programs/air/modeling/index.html
7	Days with > 0.01" of precipitation (p)	120	days/yr	AP-42; Figure 13.2.2-1; 11/06 for NW Indiana
8	PM Particle Size Multiplier	1.0		Air Pollution Engineering Manual; p 136; AWMA; 1992
9	PM-10 Particle Size Multiplier	0.5		Air Pollution Engineering Manual; p 136; AWMA; 1992
10	PM-2.5 Particle Size Multiplier	0.2		Air Pollution Engineering Manual; p 136; AWMA; 1992
11	PM Emissions Factor	4.4	lb/day/acre	Air Pollution Engineering Manual; p 136; Eqn. 5; AWMA; 1992
12	PM-10 Emissions Factor	2.2	lb/day/acre	Air Pollution Engineering Manual; p 136; Eqn. 5; AWMA; 1992
13	PM-2.5 Emissions Factor	0.9	lb/day/acre	Air Pollution Engineering Manual; p 136; Eqn. 5; AWMA; 1992
14	Hourly PM Emissions	11.68	lb/hr	=B11*B3; hourly emissions assumed equal to daily
15	Hourly PM-10 Emissions	5.84	lb/hr	=B12*B3; hourly emissions assumed equal to daily
16	Hourly PM-2.5 Emissions	2.34	lb/hr	=B13*B3; hourly emissions assumed equal to daily
17	Annual PM Emissions	2.13	tpy	=B3*B4*B11/2000
18	Annual PM-10 Emissions	1.07	tpy	=B3*B4*B12/2000
19	Annual PM-2.5 Emissions	0.43	tpy	=B3*B4*B13/2000

Appendix A: Emission Calculations
Road Fugitives

	A	B	C	D
1	Parameter	Value	Units	Source / Basis
2	Hourly Coal by Truck	170	tons/hr	Max truck unloading capacity = 170 tons/hr
3	Annual Coal by Truck	74,460	tons/yr	Proposed to equal 10% of total grinder capacity
4	Truck Travel Distance	4.4	miles	Plant entrance at West Bridge to PCI coal dump = 2.2 miles, 2-way = 4.4 miles; all roads paved
5	Empty Coal Truck Weight	15	tons	Use 30,000 lb
6	Coal Truck Capacity	43	tons	Use 86,000 lb gross vehicle weight (DOT)
7	Mean Vehicle Weight (W)	37	tons	=B5+B6/2
8	Hourly Trips, maximum	4.0	trips/hr	=B2/B6
9	Hourly Trips, average	0.2	trips/hr	=B10/8760
10	Annual Trips	1,732	trips/yr	=B3/B6
11	Truck miles per hour	17	VMT/hr	=B8*B4
12	Truck miles per year	7,619	VMT/yr	=B10*B4
13	Paved Road Silt Loading (sL)	2.0	g/m ²	IHW Fugitive PM Control Plan, 12/15/93; weighted average of measured results for road segments 1,11,12,14, & 22
14	PM particle size factor (k)	0.082	lb/VMT	AP-42; Table 13.2.1-1; 11/06
15	PM10 particle size factor (k)	0.016	lb/VMT	AP-42; Table 13.2.1-1; 11/06
16	PM2.5 particle size factor (k)	0.0024	lb/VMT	AP-42; Table 13.2.1-1; 11/06
17	PM Brake wear emission factor (C)	0.00047	lb/VMT	AP-42; Table 13.2.1-2; 11/06
18	PM10 Brake wear emission factor (C)	0.00047	lb/VMT	AP-42; Table 13.2.1-2; 11/06
19	PM2.5 Brake wear emission factor (C)	0.00036	lb/VMT	AP-42; Table 13.2.1-2; 11/06
20	Days with > 0.01" of precipitation (N)	120	days/yr	AP-42; Figure 13.2.2-1; 11/06 - NW Indiana
21	Hourly Uncontrolled PM Emissions Factor	3.48	lb/VMT	AP-42, Ch. 13.2.1, Eqn. 1; 11/06
22	Hourly Uncontrolled PM10 Emissions Factor	0.68	lb/VMT	AP-42, Ch. 13.2.1, Eqn. 1; 11/06
23	Hourly Uncontrolled PM2.5 Emissions Factor	0.10	lb/VMT	AP-42, Ch. 13.2.1, Eqn. 1; 11/06
24	Annual Uncontrolled PM Emissions Factor	3.48	lb/VMT	AP-42, Ch. 13.2.1, Eqn. 1; 11/06
25	Annual Uncontrolled PM10 Emissions Factor	0.68	lb/VMT	AP-42, Ch. 13.2.1, Eqn. 1; 11/06
26	Annual Uncontrolled PM2.5 Emissions Factor	0.10	lb/VMT	AP-42, Ch. 13.2.1, Eqn. 1; 11/06
27	Uncontrolled Hourly PM Emissions	60.5	lb/hr	=B21*B11
28	Uncontrolled Hourly PM10 Emissions	11.8	lb/hr	=B22*B11
29	Uncontrolled Hourly PM2.5 Emissions	1.8	lb/hr	=B23*B11
30	Uncontrolled Annual PM Emissions	13.26	tons/yr	=B24*B12/2000
31	Uncontrolled Annual PM10 Emissions	2.58	tons/yr	=B25*B12/2000
32	Uncontrolled Annual PM2.5 Emissions	0.39	tons/yr	=B26*B12/2000
33	Control Measure Application Interval	4.0	hours	Apply water flushing followed by sweeping
34	Control Measure Efficiency	92%	%	Control of Open Fugitive Dust Sources EPA-450/3-88-008, Table 2-4 (96-0.263V)%, V = No. of Vehicles since application
35	Controlled Hourly PM Emissions	4.94	lb/hr	=B27*(1-B34)
36	Controlled Hourly PM10 Emissions	0.96	lb/hr	=B28*(1-B34)
37	Controlled Hourly PM2.5 Emissions	0.14	lb/hr	=B29*(1-B34)
38	Controlled Annual PM Emissions	1.08	tons/yr	=B30*(1-B34)
39	Controlled Annual PM10 Emissions	0.21	tons/yr	=B31*(1-B34)
40	Controlled Annual PM2.5 Emissions	0.03	tons/yr	=B32*(1-B34)
41				
42	Notes:			
43				
44	1. The EPA AP-42 emission factor equations for paved roads are believed to over predict PM emissions from industrial plant settings such as			
45	the subject facility. EPA is currently in the process of revising Chapter 13.2.1 to address this issue. As such, calculated PM emissions from			
46	paved roads are considered conservative and may be revised.			
47	2. For the purpose of this calculation, coal truck haul roads are considered a new emissions unit. This approach is conservative because			
48	reductions in emissions from existing road traffic as a result of proposed control measures have not been accounted for.			

Appendix A: Emission Calculations
Loader Fugitives

	A	B	C	D
1	Parameter	Value	Units	Source / Basis
2	Hourly Coal by Front End Loader (reclaim)	450	tons/hr	Max Conveyor reclaim capacity = 450 tons/hr
3	Annual Coal by Front End Loader (reclaim)	744,600	tons/yr	Conservatively assumed all coal will be stored
4	Front End Loader Average Travel Distance	0.0189	miles	Annual average distance travelled by the front end loader = 50 feet one way in the storage area (unpaved surface)
5	Empty Front End Loader Weight	50	tons	Use 100,000 lb
6	Coal Density	49	lb/cu ft	AP-42, Appendix A
7	Bucket Capacity	216	cu ft	Based on 8 cu yard bucket capacity
8	Coal Capacity	5.2	tons	Bucket load
9	Loaded Front End Loader Weight	55	tons	=B8+B5
10	Mean Vehicle Weight (W)	52.6	tons	=(B5+B9)/2
11	Hourly Trips, maximum	85.9	trips/hr	=B2/B8
12	Hourly Trips, average	16.2	trips/hr	=B13/8760
13	Annual Trips	142,153	trips/yr	=B3/B8
14	Truck miles per hour	1.6	VMT/hr	=B11*B4
15	Truck miles per year	2,692	VMT/yr	=B13*B4
16	Coal Silt Content (s)	2.6	wt. %	Surface Material Silt Content by state. EPA TTN CHIEF website under AP-42 Chapter 13.2.2. r13s0202_dec03.xls - December 2003. Reported value for Indiana.
17	PM particle size factor (k)	4.9	lb/VMT	AP-42; Table 13.2.2-2; 11/06
18	PM10 particle size factor (k)	1.5	lb/VMT	AP-42; Table 13.2.2-2; 11/06
19	PM2.5 particle size factor (k)	0.15	lb/VMT	AP-42; Table 13.2.2-2; 11/06
20	Days with > 0.01" of precipitation (N)	120	days/yr	AP-42; Figure 13.2.2-1; 11/06 - NW Indiana
21	Hourly Uncontrolled PM Emissions Factor	6.10	lb/VMT	AP-42, Ch. 13.2.2, Eqn. 1a; 11/06
22	Hourly Uncontrolled PM10 Emissions Factor	1.37	lb/VMT	AP-42, Ch. 13.2.2, Eqn. 1a; 11/06
23	Hourly Uncontrolled PM2.5 Emissions Factor	0.14	lb/VMT	AP-42, Ch. 13.2.2, Eqn. 1a; 11/06
24	Annual Uncontrolled PM Emissions Factor	4.09	lb/VMT	AP-42, Ch. 13.2.2, Eqn. 1a and 2; 11/06
25	Annual Uncontrolled PM10 Emissions Factor	0.92	lb/VMT	AP-42, Ch. 13.2.2, Eqn. 1a and 2; 11/06
26	Annual Uncontrolled PM2.5 Emissions Factor	0.09	lb/VMT	AP-42, Ch. 13.2.2, Eqn. 1a and 2; 11/06
27	Uncontrolled Hourly PM Emissions	9.9	lb/hr	=B21*B14
28	Uncontrolled Hourly PM10 Emissions	2.2	lb/hr	=B22*B14
29	Uncontrolled Hourly PM2.5 Emissions	0.2	lb/hr	=B23*B14
30	Uncontrolled Annual PM Emissions	5.51	tons/yr	=B24*B15/2000
31	Uncontrolled Annual PM10 Emissions	1.24	tons/yr	=B25*B15/2000
32	Uncontrolled Annual PM2.5 Emissions	0.12	tons/yr	=B26*B15/2000
33	Value from Figure 4	40	inches	Mean Annual Class A Pan Evaporation page 142 - Ref 1
34	Potential Average hourly evaporation (p)	0.20	mm/h	For annual conditions =0.0049*B33 Page 141 - Ref 1
35	Watering application intensity (i)	0.90	l/m2	Proposed
36	Time between application (t)	4.00	hours	Proposed
37	Control Measure Efficiency	40.13%	%	Use Equation 3-2. Control of Open Fugitive Dust Sources EPA-450/3-88-008
38	Controlled Hourly PM Emissions	5.94	lb/hr	=B27*(1-B37)
39	Controlled Hourly PM10 Emissions	1.34	lb/hr	=B28*(1-B37)
40	Controlled Hourly PM2.5 Emissions	0.13	lb/hr	=B29*(1-B37)
41	Controlled Annual PM Emissions	3.30	tons/yr	=B30*(1-B37)
42	Controlled Annual PM10 Emissions	0.74	tons/yr	=B31*(1-B37)
43	Controlled Annual PM2.5 Emissions	0.07	tons/yr	=B32*(1-B37)
44				
45	Ref 1: Air Pollution Engineering Manual, 1992, Air & Waste Management Association - Chapter 4			

Appendix A: Emission Calculations
BAE

Baseline Actual Emissions (BAE)				
Blast Furnaces H-3 & H-4; BAE Period = 10/1998 - 09/2000				
Input Data	Value	Units	Source/Reference	
BAE Production, H-3 Hot Metal	1,368,821	NTHM/yr	24-month average; BAE period = 10/1998 - 09/2000	
BAE Production, H-3 Stoves BFG	22,819	MMcf/yr	"H-3 Hot Metal" X average monthly MMcf/NTHM production rate for H-3 Stoves from period 05/1998 - 01/2008	
BAE Production, H-3 Flared BFG	349	MMcf/yr	"H-3 Hot Metal" X average monthly MMcf/NTHM production rate for H-3/H-4 Flares from period 05/1998 - 01/2008	
BAE Production, H-4 Hot Metal	1,875,653	NTHM/yr	24-month average; BAE period = 10/1998 - 09/2000	
BAE Production, H-4 Stoves BFG	32,736	MMcf/yr	"H-4 Hot Metal" X average monthly MMcf/NTHM production rate for H-4 Stoves from period 05/1998 - 01/2008	
BAE Production, H-4 Flared BFG	478	MMcf/yr	"H-4 Hot Metal" X average monthly MMcf/NTHM production rate for H-3/H-4 Flares from period 05/1998 - 01/2008	
BAE Production, Boiler Nos. 5 - 9 BFG Combustion	144,778	MMcf/yr	24-month average; BAE period = 10/1998 - 09/2000	
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace Stoves - Fuel BFG				
STEPS Point #:	69	Air Emissions :		Annual
STEPS Segment #:	2	Pollutant	EF lb/Unit	tons/yr
STEPS Stack ID:	15	CO	13.7	156.3
Title V Stack ID:	S1A	NOx	0.95	10.8
Process Rate Throughput:	22,819	PM10	2.58	29.4
Process Rate Units:	MMscf	PM	2.58	29.4
		SO2	15.720	179.4
		VOC	0.8178	9.3
		Pb		0.0
		PM2.5	2.58	29.4
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr @ 4.249 MMcf BFG = 0.95 lb/MMcf			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2 MMBtu = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Casthouse				
STEPS Point #:	69	Air Emissions :		Annual
STEPS Segment #:	3	Pollutant	EF lb/Unit	tons/yr
STEPS Stack ID:	20	CO	0.253	173.2
Title V Stack ID:	V1A	NOx	0.03	20.5
Process Rate Throughput:	1,368,821	PM10	0.031	21.2
Process Rate Units:	Tons	PT	0.06	41.1
		SO2	0.032	21.9
		VOC	0.014	9.6
		Pb		0.0
		PM2.5	0.014	9.6
EF Reference				
CO	Non-LTV (ISG) Blast Furnace Emissions Data			
NOx	FIRE - 0.03 lbs/ton hot metal			
PM10	AP42, PM10 = 51% PT = 0.031 lbs/ton			
PT	AP42, 0.6 lbs/ton & assuming 90% control for PEC = 0.06 lbs/ton			
SO2	IEMC Engineering Estimate - 0.032 lbs/ton			
VOC	Average of LTV Cleveland Refractory MSDS Calculations = 0.014 lbs/ton			
PM2.5	AP42, PM2.5 = 0.14 lbs/ton & assuming 90% control for PEC = 0.014 lbs/ton			

Appendix A: Emission Calculations
BAE

Baseline Actual Emissions (BAE)				
Blast Furnaces H-3 & H-4; BAE Period = 10/1998 - 09/2000				
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace Bleeder Flare - Flared BFG				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	4	CO	13.7	2.391
STEPS Stack ID:	32	NOx	0.95	0.166
Title V Stack ID:	S1E	PM10	2.58	0.450
Process Rate Throughput:	349	PT	2.58	0.450
Process Rate Units:	MMscf	SO2	15.720	2.743
		VOC	0.8178	0.143
		Pb		0.000
		PM2.5	2.58	0.450
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace - Furnace Charging				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	5	CO	0.93672	641.1
STEPS Stack ID:	41	NOx		0.0
Title V Stack ID:	F1A	PM10	0.00924	6.3
Process Rate Throughput:	1,368,821	PT	0.00924	6.3
Process Rate Units:	Tons	SO2	0.0001362	0.1
		VOC	0.0000274	0.0
		Pb		0.0
		PM2.5	0.00924	6.3
EF Reference				
CO	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM10	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PT	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
SO2	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
VOC	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM2.5	Assume PM2.5 = PM10			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace - Slag Pits				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	6	CO	0.0215	14.715
STEPS Stack ID:	47	NOx	0.0062	4.243
Title V Stack ID:	F1C	PM10	0.017	11.635
Process Rate Throughput:	1,368,821	PT	0.025	17.110
Process Rate Units:	Tons	SO2	0.085	58.175
		VOC	0.000585	0.400
		Pb		0.000
		PM2.5	0.017	11.635
		H2S	0.0284	19.425
EF Reference				
CO	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
NOx	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM10	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PT	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
SO2	IEMC Engineering Estimate - 0.085 lbs/ton			
VOC	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM2.5	Assumed equal to PM10			
H2S	Based on ratio of H2S / SO2 emission factors reported in Slag Granulator Study cited above multiplied by SO2 emission factor.			

Appendix A: Emission Calculations
BAE

Baseline Actual Emissions (BAE)				
Blast Furnaces H-3 & H-4; BAE Period = 10/1998 - 09/2000				
Facility:		H-4 Blast Furnace		
Emission Unit:		H-4 Blast Furnace Stoves - Fuel BFG		
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	2	CO	13.7	224.242
STEPS Stack ID:	16	NOx	0.95	15.550
Title V Stack ID:	S1C	PM10	2.58	42.229
Process Rate Throughput:	32,736	PT	2.58	42.229
Process Rate Units:	MMscf	SO2	15.720	257.305
		VOC	0.8178	13.386
		Pb		0.000
		PM2.5	2.58	42.229
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility:		H-4 Blast Furnace		
Emission Unit:		H-4 Casthouse		
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	3	CO	0.253	237.270
STEPS Stack ID:	21	NOx	0.03	28.135
Title V Stack ID:	V1B	PM10	0.0205	19.225
Process Rate Throughput:	1,875,653	PT	0.0402	37.701
Process Rate Units:	Tons	SO2	0.032	30.010
		VOC	0.014	13.130
		Pb		0.000
		PM2.5	0.0094	8.816
EF Reference				
CO	Non-LTV (ISG) Blast Furnace Emissions Data			
NOx	FIRE - 0.03 lbs/ton hot metal			
PM10	AP42, PM10 = 51% PT = 0.0205 lbs/ton			
PT	AP42, 0.6 lbs/ton & assuming 93.3% control for PEC & Baghouse = 0.0402 lbs/ton			
SO2	IEMC Engineering Estimate - 0.032 lbs/ton			
VOC	Average of LTV Cleveland Refractory MSDS Calculations = 0.014 lbs/ton			
PM2.5	AP42, 0.14 lbs/ton & assuming 93.3% control for PEC & Baghouse = 0.0094 lbs/ton			
Facility:		H-4 Blast Furnace		
Emission Unit:		H-4 Casthouse Baghouse		
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	4	CO		0.000
STEPS Stack ID:	26	NOx		0.000
Title V Stack ID:	S1B	PM10	0.0005	0.437
Process Rate Throughput:	1,875,653	PT	0.002	1.876
Process Rate Units:	Tons	SO2	0.143	134.109
		VOC		0.000
		Pb		0.000
		PM2.5	0.00013	0.118
EF Reference				
PM10	PM10 = 23.3% PT, Elzone analysis of particulate catch from 11/1/06 stack test.			
PT	11/1/06 Stack Test 0.532 lbs/hr TSP / 275.76 tons/hr iron = 0.002 lbs/ton iron			
SO2	IEMC Engineering Estimate - 0.143 lbs/ton			
PM2.5	PM2.5 = 27% PM10, Accusizer analysis of particulate catch from 11/1/06 stack test.			

Appendix A: Emission Calculations
BAE

Baseline Actual Emissions (BAE)				
Blast Furnaces H-3 & H-4; BAE Period = 10/1998 - 09/2000				
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace Bleeder Flare - Flared BFG				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	5	CO	13.7	3.274
STEPS Stack ID:	33	NOx	0.95	0.227
Title V Stack ID:	S1D	PM10	2.58	0.617
Process Rate Throughput:	478	PT	2.58	0.617
Process Rate Units:	MMscf	SO2	15.720	3.757
		VOC	0.8178	0.195
		Pb		0.000
		PM2.5	2.58	0.617
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace - Furnace Charging				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	6	CO	0.91954	862.369
STEPS Stack ID:	42	NOx		0.000
Title V Stack ID:	F1B	PM10	0.00907	8.506
Process Rate Throughput:	1,875,653	PT	0.00907	8.506
Process Rate Units:	Tons	SO2	0.0001336	0.125
		VOC	0.0000269	0.025
		Pb		0.000
		PM2.5	0.00907	8.506
EF Reference				
CO	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM10	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PT	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
SO2	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
VOC	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM2.5	Assume PM2.5 = PM10			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace - Slag Pits				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	7	CO	0.0215	20.163
STEPS Stack ID:	48	NOx	0.0062	5.815
Title V Stack ID:	F1D	PM10	0.017	15.943
Process Rate Throughput:	1,875,653	PT	0.025	23.446
Process Rate Units:	Tons	SO2	0.085	79.715
		VOC	0.000585	0.549
		Pb		0.000
		PM2.5	0.017	15.943
		H2S	0.0284	26.618
EF Reference				
CO	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
NOx	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM10	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PT	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
SO2	IEMC Engineering Estimate - 0.085 lbs/ton			
VOC	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM2.5	Assumed equal to PM10			
H2S	Based on ratio of H2S / SO2 emission factors reported in Slag Granulator Study cited above multiplied by SO2 emission factor.			

Appendix A: Emission Calculations
BAE

Baseline Actual Emissions (BAE)											
Blast Furnaces H-3 & H-4; BAE Period = 10/1998 - 09/2000											
Facility:		Utilities (Process Fuel)									
Emission Unit:		Nos. 5-9 Boilers - BF Gas									
		Air Emissions :		Annual							
STEPS Point #:	21	Pollutant	EF lb/Unit	tons/yr							
STEPS Segment #:	3	CO	13.7	991.729							
STEPS Stack ID:	6	NOx	0.95	68.770							
Title V Stack ID:	S8C/D	PM10	2.58	186.764							
Process Rate Throughput:	144,778	PT	2.58	186.764							
Process Rate Units:	MMscf	SO2	15.72	1137.955							
		VOC	0.8178	59.200							
		Pb		0.000							
		PM2.5	2.58	186.764							
Reference											
CO	FIRE - 13.7 lbs/MMcf										
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG										
PM10	PM10 = PT										
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf										
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf										
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf										
PM2.5	Combustion Unit - Assume PM10 = PM2.5										
TOTAL EMISSIONS											
Emission Unit:		CO	NOx	PM10	PT	SO2	VOC	Pb	PM2.5	H2S	
H-3 Blast Furnace											
H-3 Blast Furnace Stoves - Fuel BFG		156.31	10.84	29.44	29.44	179.36	9.33	0.00	29.44	0.00	
H-3 Casthouse		173.16	20.53	21.22	41.06	21.90	9.58	0.00	9.58	0.00	
H-3 Blast Furnace Bleeder Flare - Flared BFG		2.39	0.17	0.45	0.45	2.74	0.14	0.00	0.45	0.00	
H-3 Blast Furnace - Furnace Charging		641.10	0.00	6.32	6.32	0.09	0.02	0.00	6.32	0.00	
H-3 Blast Furnace - Slag Pits		14.71	4.24	11.63	17.11	58.17	0.40	0.00	11.63	19.43	
H-3 TOTALS (tons/yr)		987.67	35.78	69.06	94.39	262.27	19.47	0.00	57.43	19.43	
H-4 Blast Furnace											
H-4 Blast Furnace Stoves - Fuel BFG		224.24	15.55	42.23	42.23	257.30	13.39	0.00	42.23	0.00	
H-4 Casthouse		237.27	28.13	19.23	37.70	30.01	13.13	0.00	8.82	0.00	
H-4 Casthouse Baghouse		0.00	0.00	0.44	1.88	134.11	0.00	0.00	0.12	0.00	
H-4 Blast Furnace Bleeder Flare - Flared BFG		3.27	0.23	0.62	0.62	3.76	0.20	0.00	0.62	0.00	
H-4 Blast Furnace - Furnace Charging		862.37	0.00	8.51	8.51	0.13	0.03	0.00	8.51	0.00	
H-4 Blast Furnace - Slag Pits		20.16	5.81	15.94	23.45	79.72	0.55	0.00	15.94	26.62	
H-4 TOTALS (tons/yr)		1347.32	49.73	86.96	114.37	505.02	27.28	0.00	76.23	26.62	
Boiler Nos. 5 - 9, BFG Combustion		991.73	68.77	186.76	186.76	1137.96	59.20	0.00	186.76	0.00	
TOTAL AFFECTED SOURCES		CO	NOx	PM10	PT	SO2	VOC	Pb	PM2.5	H2S	
tons/yr		3326.72	154.28	342.78	395.52	1905.25	105.96	0.00	320.42	46.04	

Appendix A: Emission Calculations
PAE

Projected Actual Emissions (PAE)				
Blast Furnaces H-3 & H-4				
Input Data	Value	Units	Source/Reference	
PAE Production, H-3 Hot Metal	4,927	NTHM/day	H-3 maximum monthly NTHM/day; BAE period = 10/1998 - 09/2000	
PAE Production, H-3 Hot Metal	1,798,379	NTHM/yr	"H-3 Hot Metal (daily)" X 365 days/yr	
PAE Production, H-3 Stoves BFG	44,199	MMcf/yr	"H-3 Hot Metal (yearly)" X maximum monthly MMcf/NTHM production rate for H-3 Stoves from period 05/1998 - 01/2008	
PAE Production, H-3 Flared BFG	3,592	MMcf/yr	"H-3 Hot Metal (yearly)" X maximum monthly MMcf/NTHM production rate for H-3/H-4 Flares from period 05/1998 - 01/2008	
PAE Production, H-4 Hot Metal	5,721	NTHM/day	H-4 maximum monthly NTHM/day; BAE period = 10/1998 - 09/2000	
PAE Production, H-4 Hot Metal	2,088,333	NTHM/yr	"H-4 Hot Metal (daily)" X 365 days/yr	
PAE Production, H-4 Stoves BFG	50,078	MMcf/yr	"H-4 Hot Metal (yearly)" X maximum monthly MMcf/NTHM production rate for H-4 Stoves from period 05/1998 - 01/2008	
PAE Production, H-4 Flared BFG	4,171	MMcf/yr	"H-4 Hot Metal (yearly)" X maximum monthly MMcf/NTHM production rate for H-3/H-4 Flares from period 05/1998 - 01/2008	
PAE Production, Boiler Nos. 5 - 9 BFG Combustion	213,717	MMcf/yr	["H-3 Hot Metal (yearly)" + "H-4 Hot Metal (yearly)"] X max. monthly MMcf/NTHM prod. rate for Boilers 5-9 from period 05/1998 - 01/2008	
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace Stoves - Fuel BFG				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	2	CO	13.7	302.8
STEPS Stack ID:	15	NOx	0.95	21.0
Title V Stack ID:	S1A	PM10	2.58	57.0
Process Rate Throughput:	44,199	PT	2.58	57.0
Process Rate Units:	MMscf	SO2	15.720	347.4
		VOC	0.8178	18.1
		Pb		0.0
		PM2.5	2.58	57.0
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Casthouse				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	3	CO	0.253	227.5
STEPS Stack ID:	20	NOx	0.03	27.0
Title V Stack ID:	V1A	PM10	0.031	27.9
Process Rate Throughput:	1,798,379	PT	0.06	54.0
Process Rate Units:	Tons	SO2	0.032	28.8
		VOC	0.014	12.6
		Pb		0.0
		PM2.5	0.014	12.6
EF Reference				
CO	Non-LTV (ISG) Blast Furnace Emissions Data			
NOx	FIRE - 0.03 lbs/ton hot metal			
PM10	AP42, PM10 = 51% PT = 0.031 lbs/ton			
PT	AP42, 0.6 lbs/ton & assuming 90% control for PEC = 0.06 lbs/ton			
SO2	IEMC Engineering Estimate - 0.032 lbs/ton			
VOC	Average of LTV Cleveland Refractory MSDS Calculations = 0.014 lbs/ton			
PM2.5	AP42, PM2.5 = 0.14 lbs/ton & assuming 90% control for PEC = 0.014 lbs/ton			

Appendix A: Emission Calculations
PAE

Projected Actual Emissions (PAE)				
Blast Furnaces H-3 & H-4				
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace Bleeder Flare - Flared BFG				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	4	CO	13.7	24.605
STEPS Stack ID:	32	NOx	0.95	1.706
Title V Stack ID:	S1E	PM10	2.58	4.634
Process Rate Throughput:	3,592	PT	2.58	4.634
Process Rate Units:	MMscf	SO2	15.720	28.233
		VOC	0.8178	1.469
		Pb		0.000
		PM2.5	2.58	4.634
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace - Furnace Charging				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	5	CO	0.93672	842.3
STEPS Stack ID:	41	NOx		0.0
Title V Stack ID:	F1A	PM10	0.00924	8.3
Process Rate Throughput:	1,798,379	PT	0.00924	8.3
Process Rate Units:	Tons	SO2	0.0001362	0.1
		VOC	0.0000274	0.0
		Pb		0.0
		PM2.5	0.00924	8.3
EF Reference				
CO	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM10	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PT	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
SO2	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
VOC	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM2.5	Assume PM2.5 = PM10			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace - Slag Pits				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	6	CO	0.0215	19.333
STEPS Stack ID:	47	NOx	0.0062	5.575
Title V Stack ID:	F1C	PM10	0.017	15.286
Process Rate Throughput:	1,798,379	PT	0.025	22.480
Process Rate Units:	Tons	SO2	0.085	76.431
		VOC	0.000585	0.526
		Pb		0.000
		PM2.5	0.017	15.286
		H2S	0.0284	25.521
EF Reference				
CO	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
NOx	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM10	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PT	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
SO2	IEMC Engineering Estimate - 0.085 lbs/ton			
VOC	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM2.5	Assumed equal to PM10			
H2S	Based on ratio of H2S / SO2 emission factors reported in Slag Granulator Study cited above multiplied by SO2 emission factor.			

Appendix A: Emission Calculations
PAE

Projected Actual Emissions (PAE)				
Blast Furnaces H-3 & H-4				
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace Stoves - Fuel BFG				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	2	CO	13.7	343.034
STEPS Stack ID:	16	NOx	0.95	23.787
Title V Stack ID:	S1C	PM10	2.58	64.601
Process Rate Throughput:	50,078	PT	2.58	64.601
Process Rate Units:	MMscf	SO2	15.720	393.613
		VOC	0.8178	20.477
		Pb		0.000
		PM2.5	2.58	64.601
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Casthouse				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	3	CO	0.253	264.174
STEPS Stack ID:	21	NOx	0.03	31.325
Title V Stack ID:	V1B	PM10	0.0205	21.405
Process Rate Throughput:	2,088,333	PT	0.0402	41.975
Process Rate Units:	Tons	SO2	0.032	33.413
		VOC	0.014	14.618
		Pb		0.000
		PM2.5	0.0094	9.815
EF Reference				
CO	Non-LTV (ISG) Blast Furnace Emissions Data			
NOx	FIRE - 0.03 lbs/ton hot metal			
PM10	AP42, PM10 = 51% PT = 0.0205 lbs/ton			
PT	AP42, 0.6 lbs/ton & assuming 93.3% control for PEC & Baghouse = 0.0402 lbs/ton			
SO2	IEMC Engineering Estimate - 0.032 lbs/ton			
VOC	Average of LTV Cleveland Refractory MSDS Calculations = 0.014 lbs/ton			
PM2.5	AP42, 0.14 lbs/ton & assuming 93.3% control for PEC & Baghouse = 0.0094 lbs/ton			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Casthouse Baghouse				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	4	CO		0.000
STEPS Stack ID:	26	NOx		0.000
Title V Stack ID:	S1B	PM10	0.0005	0.487
Process Rate Throughput:	2,088,333	PT	0.002	2.088
Process Rate Units:	Tons	SO2	0.143	149.316
		VOC		0.000
		Pb		0.000
		PM2.5	0.00013	0.131
EF Reference				
PM10	PM10 = 23.3% PT, Elzone analysis of particulate catch from 11/1/06 stack test.			
PT	11/1/06 Stack Test 0.532 lbs/hr TSP / 275.76 tons/hr iron = 0.002 lbs/ton iron			
SO2	IEMC Engineering Estimate - 0.143 lbs/ton			
PM2.5	PM2.5 = 27% PM10, Accusizer analysis of particulate catch from 11/1/06 stack test.			

Appendix A: Emission Calculations
PAE

Projected Actual Emissions (PAE)				
Blast Furnaces H-3 & H-4				
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace Bleeder Flare - Flared BFG				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	5	CO	13.7	28.571
STEPS Stack ID:	33	NOx	0.95	1.981
Title V Stack ID:	S1D	PM10	2.58	5.381
Process Rate Throughput:	4,171	PT	2.58	5.381
Process Rate Units:	MMscf	SO2	15.720	32.784
		VOC	0.8178	1.706
		Pb		0.000
		PM2.5	2.58	5.381
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace - Furnace Charging				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	6	CO	0.91954	960.153
STEPS Stack ID:	42	NOx		0.000
Title V Stack ID:	F1B	PM10	0.00907	9.471
Process Rate Throughput:	2,088,333	PT	0.00907	9.471
Process Rate Units:	Tons	SO2	0.0001336	0.140
		VOC	0.0000269	0.028
		Pb		0.000
		PM2.5	0.00907	9.471
EF Reference				
CO	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM10	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PT	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
SO2	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
VOC	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM2.5	Assume PM2.5 = PM10			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace - Slag Pits				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	7	CO	0.0215	22.450
STEPS Stack ID:	48	NOx	0.0062	6.474
Title V Stack ID:	F1D	PM10	0.017	17.751
Process Rate Throughput:	2,088,333	PT	0.025	26.104
Process Rate Units:	Tons	SO2	0.085	88.754
		VOC	0.000585	0.611
		Pb		0.000
		PM2.5	0.017	17.751
		H2S	0.0284	29.636
EF Reference				
CO	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
NOx	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM10	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PT	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
SO2	IEMC Engineering Estimate - 0.085 lbs/ton			
VOC	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM2.5	Assumed equal to PM10			
H2S	Based on ratio of H2S / SO2 emission factors reported in Slag Granulator Study cited above multiplied by SO2 emission factor.			

Appendix A: Emission Calculations
PAE

Projected Actual Emissions (PAE)											
Blast Furnaces H-3 & H-4											
Facility:		Utilities (Process Fuel)									
Emission Unit:		Nos. 5-9 Boilers - BF Gas									
		Air Emissions :		Annual							
STEPS Point #:	21	Pollutant	EF lb/Unit	tons/yr							
STEPS Segment #:	3	CO	13.7	1463.961							
STEPS Stack ID:	6	NOx	0.95	101.516							
Title V Stack ID:	S8C/D	PM10	2.58	275.695							
Process Rate Throughput:	213,717	PT	2.58	275.695							
Process Rate Units:	MMscf	SO2	15.72	1679.816							
		VOC	0.8178	87.389							
		Pb		0.000							
		PM2.5	2.58	275.695							
Reference											
CO	FIRE - 13.7 lbs/MMcf										
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG										
PM10	PM10 = PT										
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf										
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf										
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf										
PM2.5	Combustion Unit - Assume PM10 = PM2.5										
TOTAL EMISSIONS											
Emission Unit:		CO	NOx	PM10	PT	SO2	VOC	Pb	PM2.5	H2S	
H-3 Blast Furnace											
H-3 Blast Furnace Stoves - Fuel BFG		302.76	20.99	57.02	57.02	347.40	18.07	0.00	57.02	0.00	
H-3 Casthouse		227.49	26.98	27.87	53.95	28.77	12.59	0.00	12.59	0.00	
H-3 Blast Furnace Bleeder Flare - Flared BFG		24.61	1.71	4.63	4.63	28.23	1.47	0.00	4.63	0.00	
H-3 Blast Furnace - Furnace Charging		842.29	0.00	8.31	8.31	0.12	0.02	0.00	8.31	0.00	
H-3 Blast Furnace - Slag Pits		19.33	5.57	15.29	22.48	76.43	0.53	0.00	15.29	25.52	
H-3 TOTALS (tons/yr)		1416.48	55.25	113.12	146.39	480.96	32.68	0.00	97.83	25.52	
H-4 Blast Furnace											
H-4 Blast Furnace Stoves - Fuel BFG		343.03	23.79	64.60	64.60	393.61	20.48	0.00	64.60	0.00	
H-4 Casthouse		264.17	31.32	21.41	41.98	33.41	14.62	0.00	9.82	0.00	
H-4 Casthouse Baghouse		0.00	0.00	0.49	2.09	149.32	0.00	0.00	0.13	0.00	
H-4 Blast Furnace Bleeder Flare - Flared BFG		28.57	1.98	5.38	5.38	32.78	1.71	0.00	5.38	0.00	
H-4 Blast Furnace - Furnace Charging		960.15	0.00	9.47	9.47	0.14	0.03	0.00	9.47	0.00	
H-4 Blast Furnace - Slag Pits		22.45	6.47	17.75	26.10	88.75	0.61	0.00	17.75	29.64	
H-4 TOTALS (tons/yr)		1618.38	63.57	119.09	149.62	698.02	37.44	0.00	107.15	29.64	
Boiler Nos. 5 - 9, BFG Combustion		1463.96	101.52	275.69	275.69	1679.82	87.39	0.00	275.69	0.00	
TOTAL AFFECTED SOURCES											
		CO	NOx	PM10	PT	SO2	VOC	Pb	PM2.5	H2S	
tons/yr		4498.83	220.33	507.91	571.70	2858.80	157.51	0.00	480.68	55.16	

Appendix A: Emission Calculations
CHAE

Could Have Accommodated Emissions (CHAE)				
Blast Furnaces H-3 & H-4				
Input Data	Value	Units	Source/Reference	
CHA Production, H-3 Hot Metal	1,798,379	NTHM/yr	H-3 maximum monthly NTHM/day X 365 days/yr	
CHA Production, H-3 Stoves BFG	44,199	MMcf/yr	"H-3 Hot Metal" X maximum monthly MMcf/NTHM production rate for H-3 Stoves	
CHA Production, H-3 Flared BFG	3,592	MMcf/yr	"H-3 Hot Metal" X maximum monthly MMcf/NTHM production rate for H-3/H-4 Flares	
CHA Production, H-4 Hot Metal	2,088,333	NTHM/yr	H-4 maximum monthly NTHM/day X 365 days/yr	
CHA Production, H-4 Stoves BFG	50,078	MMcf/yr	"H-4 Hot Metal" X maximum monthly MMcf/NTHM production rate for H-4 Stoves	
CHA Production, H-4 Flared BFG	4,171	MMcf/yr	"H-4 Hot Metal" X maximum monthly MMcf/NTHM production rate for H-3/H-4 Flares	
CHA Production, Boiler Nos. 5 - 9 BFG Combustion	213,717	MMcf/yr	["H-3 Hot Metal" + "H-4 Hot Metal"] X maximum monthly MMcf/NTHM production rate for Boilers Nos. 5 - 9	
			<i>All values based on maximum demonstrated monthly production rate for 10-yr period prior to project.</i>	
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace Stoves - Fuel BFG				
STEPS Point #:	69	Air Emissions : Pollutant	EF lb/Unit	Annual tons/yr
STEPS Segment #:	2	CO	13.7	302.8
STEPS Stack ID:	15	NOx	0.95	21.0
Title V Stack ID:	S1A	PM10	2.58	57.0
Process Rate Throughput:	44,199	PT	2.58	57.0
Process Rate Units:	MMscf	SO2	15.720	347.4
		VOC	0.8178	18.1
		Pb		0.0
		PM2.5	2.58	57.0
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Casthouse				
STEPS Point #:	69	Air Emissions : Pollutant	EF lb/Unit	Annual tons/yr
STEPS Segment #:	3	CO	0.253	227.5
STEPS Stack ID:	20	NOx	0.03	27.0
Title V Stack ID:	V1A	PM10	0.031	27.9
Process Rate Throughput:	1,798,379	PT	0.06	54.0
Process Rate Units:	Tons	SO2	0.032	28.8
		VOC	0.014	12.6
		Pb		0.0
		PM2.5	0.014	12.6
EF Reference				
CO	Non-LTV (ISG) Blast Furnace Emissions Data			
NOx	FIRE - 0.03 lbs/ton hot metal			
PM10	AP42, PM10 = 51% PT = 0.031 lbs/ton			
PT	AP42, 0.6 lbs/ton & assuming 90% control for PEC = 0.06 lbs/ton			
SO2	IEMC Engineering Estimate - 0.032 lbs/ton			
VOC	Average of LTV Cleveland Refractory MSDS Calculations = 0.014 lbs/ton			
PM2.5	AP42, PM2.5 = 0.14 lbs/ton & assuming 90% control for PEC = 0.014 lbs/ton			

Appendix A: Emission Calculations
CHAE

Could Have Accommodated Emissions (CHAE)				
Blast Furnaces H-3 & H-4				
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace Bleeder Flare - Flared BFG				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	4	CO	13.7	24.605
STEPS Stack ID:	32	NOx	0.95	1.706
Title V Stack ID:	S1E	PM10	2.58	4.634
Process Rate Throughput:	3,592	PT	2.58	4.634
Process Rate Units:	MMscf	SO2	15.720	28.233
		VOC	0.8178	1.469
		Pb		0.000
		PM2.5	2.58	4.634
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace - Furnace Charging				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	5	CO	0.93672	842.3
STEPS Stack ID:	41	NOx		0.0
Title V Stack ID:	F1A	PM10	0.00924	8.3
Process Rate Throughput:	1,798,379	PT	0.00924	8.3
Process Rate Units:	Tons	SO2	0.0001362	0.1
		VOC	0.0000274	0.0
		Pb		0.0
		PM2.5	0.00924	8.3
EF Reference				
CO	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM10	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PT	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
SO2	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
VOC	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM2.5	Assume PM2.5 = PM10			
Facility: H-3 Blast Furnace				
Emission Unit: H-3 Blast Furnace - Slag Pits				
		Air Emissions :		Annual
STEPS Point #:	69	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	6	CO	0.0215	19.333
STEPS Stack ID:	47	NOx	0.0062	5.575
Title V Stack ID:	F1C	PM10	0.017	15.286
Process Rate Throughput:	1,798,379	PT	0.025	22.480
Process Rate Units:	Tons	SO2	0.085	76.431
		VOC	0.000585	0.526
		Pb		0.000
		PM2.5	0.017	15.286
		H2S	0.0284	25.521
EF Reference				
CO	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
NOx	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM10	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PT	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
SO2	IEMC Engineering Estimate - 0.085 lbs/ton			
VOC	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM2.5	Assumed equal to PM10			
H2S	Based on ratio of H2S / SO2 emission factors reported in Slag Granulator Study cited above multiplied by SO2 emission factor.			

Appendix A: Emission Calculations
CHAE

Could Have Accommodated Emissions (CHAE)				
Blast Furnaces H-3 & H-4				
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace Stoves - Fuel BFG				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	2	CO	13.7	343.034
STEPS Stack ID:	16	NOx	0.95	23.787
Title V Stack ID:	S1C	PM10	2.58	64.601
Process Rate Throughput:	50,078	PT	2.58	64.601
Process Rate Units:	MMscf	SO2	15.720	393.613
		VOC	0.8178	20.477
		Pb		0.000
		PM2.5	2.58	64.601
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Casthouse				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	3	CO	0.253	264.174
STEPS Stack ID:	21	NOx	0.03	31.325
Title V Stack ID:	V1B	PM10	0.0205	21.405
Process Rate Throughput:	2,088,333	PT	0.0402	41.975
Process Rate Units:	Tons	SO2	0.032	33.413
		VOC	0.014	14.618
		Pb		0.000
		PM2.5	0.0094	9.815
EF Reference				
CO	Non-LTV (ISG) Blast Furnace Emissions Data			
NOx	FIRE - 0.03 lbs/ton hot metal			
PM10	AP42, PM10 = 51% PT = 0.0205 lbs/ton			
PT	AP42, 0.6 lbs/ton & assuming 93.3% control for PEC & Baghouse = 0.0402 lbs/ton			
SO2	IEMC Engineering Estimate - 0.032 lbs/ton			
VOC	Average of LTV Cleveland Refractory MSDS Calculations = 0.014 lbs/ton			
PM2.5	AP42, 0.14 lbs/ton & assuming 93.3% control for PEC & Baghouse = 0.0094 lbs/ton			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Casthouse Baghouse				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	4	CO		0.000
STEPS Stack ID:	26	NOx		0.000
Title V Stack ID:	S1B	PM10	0.0005	0.487
Process Rate Throughput:	2,088,333	PT	0.002	2.088
Process Rate Units:	Tons	SO2	0.143	149.316
		VOC		0.000
		Pb		0.000
		PM2.5	0.00013	0.131
EF Reference				
PM10	PM10 = 23.3% PT, Elzone analysis of particulate catch from 11/1/06 stack test.			
PT	11/1/06 Stack Test 0.532 lbs/hr TSP / 275.76 tons/hr iron = 0.002 lbs/ton iron			
SO2	IEMC Engineering Estimate - 0.143 lbs/ton			
PM2.5	PM2.5 = 27% PM10, Accusizer analysis of particulate catch from 11/1/06 stack test.			

Appendix A: Emission Calculations
CHAE

Could Have Accommodated Emissions (CHAE)				
Blast Furnaces H-3 & H-4				
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace Bleeder Flare - Flared BFG				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	5	CO	13.7	28.571
STEPS Stack ID:	33	NOx	0.95	1.981
Title V Stack ID:	S1D	PM10	2.58	5.381
Process Rate Throughput:	4,171	PT	2.58	5.381
Process Rate Units:	MMscf	SO2	15.720	32.784
		VOC	0.8178	1.706
		Pb		0.000
		PM2.5	2.58	5.381
EF Reference				
CO	FIRE - 13.7 lbs/MMcf			
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG			
PM10	PM10 = PT			
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf			
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf			
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf			
PM2.5	Combustion Unit - Assume PM10 = PM2.5			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace - Furnace Charging				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	6	CO	0.91954	960.153
STEPS Stack ID:	42	NOx		0.000
Title V Stack ID:	F1B	PM10	0.00907	9.471
Process Rate Throughput:	2,088,333	PT	0.00907	9.471
Process Rate Units:	Tons	SO2	0.0001336	0.140
		VOC	0.0000269	0.028
		Pb		0.000
		PM2.5	0.00907	9.471
EF Reference				
CO	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM10	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PT	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
SO2	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
VOC	Radian Engineering Estimate - EI Report 2/5/97 - Appendix B			
PM2.5	Assume PM2.5 = PM10			
Facility: H-4 Blast Furnace				
Emission Unit: H-4 Blast Furnace - Slag Pits				
		Air Emissions :		Annual
STEPS Point #:	70	Pollutant	EF lb/Unit	tons/yr
STEPS Segment #:	7	CO	0.0215	22.450
STEPS Stack ID:	48	NOx	0.0062	6.474
Title V Stack ID:	F1D	PM10	0.017	17.751
Process Rate Throughput:	2,088,333	PT	0.025	26.104
Process Rate Units:	Tons	SO2	0.085	88.754
		VOC	0.000585	0.611
		Pb		0.000
		PM2.5	0.017	17.751
		H2S	0.0284	29.636
EF Reference				
CO	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
NOx	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM10	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PT	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
SO2	IEMC Engineering Estimate - 0.085 lbs/ton			
VOC	From Slag Granulator Study, No. 7 BF; 12/10/1999; Converted based on 500 lb slag/NTHM			
PM2.5	Assumed equal to PM10			
H2S	Based on ratio of H2S / SO2 emission factors reported in Slag Granulator Study cited above multiplied by SO2 emission factor.			

Appendix A: Emission Calculations
CHAE

Could Have Accommodated Emissions (CHAE)											
Blast Furnaces H-3 & H-4											
Facility:		Utilities (Process Fuel)									
Emission Unit:		Nos. 5-9 Boilers - BF Gas									
		Air Emissions :		Annual							
STEPS Point #:	21	Pollutant	EF lb/Unit	tons/yr							
STEPS Segment #:	3	CO	13.7	1463.961							
STEPS Stack ID:	6	NOx	0.95	101.516							
Title V Stack ID:	S8C/D	PM10	2.58	275.695							
Process Rate Throughput:	213,717	PT	2.58	275.695							
Process Rate Units:	MMscf	SO2	15.72	1679.816							
		VOC	0.8178	87.389							
		Pb		0.000							
		PM2.5	2.58	275.695							
Reference											
CO	FIRE - 13.7 lbs/MMcf										
NOx	5/11/04 Stack Test - 4.0 lbs/hr & 4.249 MMcf BFG										
PM10	PM10 = PT										
PT	1998-1999 H4 BF Stove Stack Tests - 2.58 lbs/MMcf										
SO2	1998-1999 H4 BF Stove Stack Tests - 15.72 lbs/MMcf										
VOC	#9 Boiler Vendor Spec. & "98" Btu content of BFG = 0.0085lbs/MMBtu x 96.2mmBTU = 0.0085 lbs/MMBtu x 96.21 MMBtu/MMcf = 0.8178 lbs/MMcf										
PM2.5	Combustion Unit - Assume PM10 = PM2.5										
TOTAL EMISSIONS											
Emission Unit:		CO	NOx	PM10	PT	SO2	VOC	Pb	PM2.5	H2S	
H-3 Blast Furnace											
H-3 Blast Furnace Stoves - Fuel BFG		302.76	20.99	57.02	57.02	347.40	18.07	0.00	57.02	0.00	
H-3 Casthouse		227.49	26.98	27.87	53.95	28.77	12.59	0.00	12.59	0.00	
H-3 Blast Furnace Bleeder Flare - Flared BFG		24.61	1.71	4.63	4.63	28.23	1.47	0.00	4.63	0.00	
H-3 Blast Furnace - Furnace Charging		842.29	0.00	8.31	8.31	0.12	0.02	0.00	8.31	0.00	
H-3 Blast Furnace - Slag Pits		19.33	5.57	15.29	22.48	76.43	0.53	0.00	15.29	25.52	
H-3 TOTALS (tons/yr)		1416.48	55.25	113.12	146.39	480.96	32.68	0.00	97.83	25.52	
H-4 Blast Furnace											
H-4 Blast Furnace Stoves - Fuel BFG		343.03	23.79	64.60	64.60	393.61	20.48	0.00	64.60	0.00	
H-4 Casthouse		264.17	31.32	21.41	41.98	33.41	14.62	0.00	9.82	0.00	
H-4 Casthouse Baghouse		0.00	0.00	0.49	2.09	149.32	0.00	0.00	0.13	0.00	
H-4 Blast Furnace Bleeder Flare - Flared BFG		28.57	1.98	5.38	5.38	32.78	1.71	0.00	5.38	0.00	
H-4 Blast Furnace - Furnace Charging		960.15	0.00	9.47	9.47	0.14	0.03	0.00	9.47	0.00	
H-4 Blast Furnace - Slag Pits		22.45	6.47	17.75	26.10	88.75	0.61	0.00	17.75	29.64	
H-4 TOTALS (tons/yr)		1618.38	63.57	119.09	149.62	698.02	37.44	0.00	107.15	29.64	
Boiler Nos. 5 - 9, BFG Combustion		1463.96	101.52	275.69	275.69	1679.82	87.39	0.00	275.69	0.00	
TOTAL AFFECTED SOURCES		CO	NOx	PM10	PT	SO2	VOC	Pb	PM2.5	H2S	
tons/yr		4498.83	220.33	507.91	571.70	2858.80	157.51	0.00	480.68	55.16	