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 3, 2008

RE: ArcelorMittal USA, Inc. / 089-22044-00316

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 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) 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.

Recycled Paper An Equal Opportunity Employer *Please Recycle*

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

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

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

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

Enclosures
FNTV-PMOD.doc 3/27/08

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

Mr. Michael E. Long
ArcelorMittal USA, Inc.
3210 Watling Street MC 8-130
East Chicago, Indiana 46312

November 3, 2008

Re: 089-22044-00316
Third Significant Permit Modification to:
Part 70 Operating Permit No. 089-6577-00316

Dear Mr. Long:

ArcelorMittal USA, Inc. (formerly Mittal Steel USA Inc. - Indiana Harbor East) was issued Part 70 Operating Permit No. 089-6577-00316 on September 12, 2006 for an iron and steel mill. Applications to modify the source were received on May 2, 2005, February 21, 2006, April 25, 2007, and July 26, 2007. Pursuant to 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of revisions to the existing PSD BACT limits for several units associated with the No. 7 Blast Furnace, revisions to the existing emission factors listed in Appendix A of the Part 70 permit, revisions to the slag throughput limit for the existing slag pits operation, and revisions to the total emission limits for the units involved in the No. 7 Blast Furnace modification project in 2003.

All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised permit.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc. (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 386-1024 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely/Original Signed By:

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

Attachments
ERG/YC
cc: File – Lake County
Lake County Health Department
IDEM Northwest Regional Office
Air Compliance Section Inspector
Compliance Data Section
Administrative and Development
Technical Support and Modeling
Billing, Licensing, and Training Section

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

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) AND A PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

ArcelorMittal USA, Inc.
3210 Watling Street
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 Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T089-6577-00316	
Original signed by: Nisha Sizemore, Branch Chief Office of Air Quality	Issuance Date: September 12, 2006 Expiration Date: September 12, 2011

First Administrative Amendment No.: 089-23628-00316, issued November 1, 2006
First Significant Permit Modification No.: 089-23470-00316, issued January 22, 2007
Second Significant Permit Modification No.: 089-25757-00316, issued July 9, 2008
Second Administrative Amendment No.: 089-26796-00316, issued August 20, 2008

Third Significant Permit Modification No.: 089-22044-00316	
Issued by/Original Signed By: Donald F. Robin, P.E., Section Chief Permits Branch Office of Air Quality	Issuance Date: November 3, 2008 Expiration Date: September 12, 2011

TABLE OF CONTENTS

A SOURCE SUMMARY 11
A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]
A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]
A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]
A.4 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)]
A.5 Fugitive Dust Sources
A.6 Part 70 Permit Applicability [326 IAC 2-7-2]

B GENERAL CONDITIONS 26
B.1 Definitions [326 IAC 2-7-1]
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)][13-15-3-6(a)]
B.3 Enforceability [326 IAC 2-7-7]
B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]
B.5 Severability [326 IAC 2-7-5(5)]
B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]
B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1), (3) and (13)][326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]
B.11 Emergency Provisions [326 IAC 2-7-16]
B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]
B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]
B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4]
B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]
B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]
B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]
B.20 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2][326 IAC 2-3-2]
B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-2]
B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]
B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]
B.25 Term of Condition [326 IAC 2-1.1-9.5]

C SOURCE OPERATION CONDITIONS 36

Emission Limitations and Standards [326 IAC 2-7-5(1)]
C.1 Opacity [326 IAC 5-1]
C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]
C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
C.4 Fugitive Dust Emissions [326 IAC 6-4]
C.5 Stack Height [326 IAC 1-7]
C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

Testing Requirements [326 IAC 2-7-6(1)]
C.7 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]
C.8 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]
C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
C.10 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8)]
C.11 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]
C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]
C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
C.17 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]
C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]
C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

Stratospheric Ozone Protection
C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

D.0 FACILITY OPERATION CONDITIONS-No.7 Blast Furnace operation modification project 45

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.0.1 Non-applicability of Major Modification [326 IAC 2-2-1 (x)]
D.0.2 Non-applicability of Major Modification [326 IAC 2-3-1 (s)]
D.0.3 Volatile Organic Compounds (VOC)– non-applicability of De-minimis [326 IAC 2 3-1 (l)]
D.0.4 Carbon Monoxide (CO)– Air quality impacts and increment consumption [326 IAC 2-2-4, 5 and 6]
D.0.5 Emissions units subject to the emissions limitations [326 IAC 2-2-1 (x)] [326 IAC 2-3-1 (s)] [326 IAC 2-3-1 (l)] [326 IAC 2-2-4, 5 and 6]
D.0.6 Operation Condition [326 IAC 2-2-3] [326 IAC 2-2-1 (x)] [326 IAC 2-3-1 (s)] [326 IAC 2-3-1 (l)] [326 IAC 2-2-4, 5 and 6]

Compliance Determination Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.0.7 Emissions Factors and Performance Testing

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.0.8 Record Keeping Requirements
D.0.9 Reporting Requirements
D.0.10 Permit Expiration Date [326 IAC 2-2-8(a)(1)]

D.1 FACILITY OPERATION CONDITIONS - No. 5 and 6 Blast Furnaces 49

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.1.1 Lake County PM10 emission requirements [326 IAC 6.8-2-17)]
D.1.2 Particulate Matter (PM) [326 IAC 6.8-1-2]
D.1.3 Sulfur Dioxide (SO_2)[326 IAC 7-4.1-11]
D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.1.5 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.1.6 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.1.7 Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

D.1.8 Sulfur Dioxide (SO_2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.1.9 Record Keeping Requirements
D.1.10 Reporting Requirements

D.2 FACILITY OPERATION CONDITIONS - No. 7 Blast Furnace 53

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.2.1 Lake County PM10 emission requirements [326 IAC 6.8-2-17]
D.2.2 Particulate Matter (PM) [326 IAC 6.8-1-2]
D.2.3 Opacity [326 IAC 6.8-3]
D.2.4 Opacity
D.2.5 Particulate Matter (PM) [326 IAC 2-3]
D.2.6 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2-3]
D.2.7 Operation Condition – Best Available Control Technology [326 IAC 2-2-3]
D.2.8 Operation Restriction – Curtailment of slag pits operation [326 IAC 2-2][326 IAC 2-3]
D.2.9 Operational Condition [326 IAC 2-2][326 IAC 2-3]
D.2.10 No.7 Blast Furnace Specific Control Requirements [326 IAC 6.8-7-5]
D.2.11 Carbon Monoxide [326 IAC 9-1-2(2)]
D.2.12 Sulfur Dioxide [326 IAC 7-4.1-11]
D.2.13 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.2.14 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]
D.2.15 Carbon Monoxide Emissions – Compliance Requirements [326 IAC 2-2-3]
D.2.16 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.2.17 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.2.18 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.2.19 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.2.20 Blast Furnace Gas Flare Monitoring [326 IAC 9-1-2][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.2.21 Sulfur Dioxide (SO_2) Sampling and Analysis [326 IAC 7-4.1-11 (b)]
D.2.22 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-2-3]
D.2.23 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.2.24 Record Keeping Requirements
D.2.25 Reporting Requirements

D.3 FACILITY OPERATION CONDITIONS - Sinter Plant 61

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.3.1 Lake County PM Emission Requirements [326 IAC 6.8-2]
D.3.2 Particulate Matter (PM) [326 IAC 6.8-10-3]
D.3.3 Lake County Sulfur Dioxide (SO_2) Emission Limitations [326 IAC 7-4.1-11]
D.3.4 Sinter Plant Volatile Organic Compounds (VOCs) [326 IAC 8-13-3]
D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.3.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]
D.3.7 Particulate Control [326 IAC 2-7-6(6)]
D.3.8 Continuous Emissions Monitoring [326 IAC 8-13-8]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.3.9 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.3.10 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.3.11 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

D.3.12 Sulfur Dioxide (SO_2) Sampling and Analysis [326 IAC 7-4.1-11 (b)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.3.13 Record Keeping Requirements
D.3.14 Continuous Emission Monitoring - Record Keeping and Reporting [326 IAC 8-13]
D.3.15 Reporting Requirements

D.4 FACILITY OPERATION CONDITIONS - Pulverized Coal Injection (PCI) 66

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.4.1 Lake County PM10 Emission Requirements [326 IAC 6.8-2]
D.4.2 Particulate Matter (PM) [326 IAC 6.8-1-2]
D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.4.4 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)
D.4.5 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.4.6 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.4.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.4.8 Record Keeping Requirements

D.5 FACILITY OPERATION CONDITIONS - No. 2 Basic Oxygen Furnace (BOF) Shop 69

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.5.1 Lake County PM Emission Requirements [326 IAC 6.8-2-17]
D.5.2 Opacity [326 IAC 6.8-3]
D.5.3 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.5.4 Sulfur Dioxide (SO_2) Emission Limitations [326 IAC 7-4.1-11]
D.5.5 Carbon Monoxide [326 IAC 9-1-2(2)]
D.5.6 Operation restriction – shutdown of 2 A Blooming Mill and 21 inch Bar Mill [326 IAC 2-3][326 IAC 2-2]
D.5.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.5.8 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]
D.5.9 Particulate Control [326 IAC 2-7-6(6)]
D.5.10 Particulate Matter (PM) and Carbon Monoxide (CO)

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.5.11 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.5.12 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.5.13 Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.5.14 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.5.15 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.5.16 No.2 BOF Flare Monitoring [326 IAC 9-1-2][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.5.17 Sulfur Dioxide (SO_2) Sampling and Analysis [326 IAC 7-4.1-11 (b)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.5.18 Record Keeping Requirements
D.5.19 Reporting Requirements

D.6 FACILITY OPERATION CONDITIONS - No. 4 Basic Oxygen Furnace (BOF) 76

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.6.1 General Provisions Relating to HAPs [326 IAC 20-1][40 CFR 63, Subpart A] [Table 4 to 40 CFR 63, Subpart FFFFF]

D.6.2 National Emissions Standards for Hazardous Air pollutants from Integrated Iron and Steel Manufacturing - Emission Limitations for Basic Oxygen Furnace (BOF) [40 CFR 63, Subpart FFFFF]
D.6.3 Lake County PM emission requirements [326 IAC 6.8-2-17]
D.6.4 Opacity [326 IAC 6.8-3]
D.6.5 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.5.6 Sulfur Dioxide (SO_2) Emission Limitations [326 IAC 7-4.1-11]
D.6.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.6.8 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]
D.6.9 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.6.10 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.6.11 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.6.12 Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.6.13 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.6.14 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.6.15 Sulfur Dioxide (SO_2) Sampling and Analysis [326 IAC 7-4.1-11 (b)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.6.16 Record Keeping Requirements
D.6.17 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5]
D.6.18 Reporting Requirements

D.7 FACILITY OPERATION CONDITIONS - No. 1 Lime Plant 82

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.7.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
D.7.2 National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants [40 CFR Part 63, Subpart AAAAA]
D.7.3 Lake County PM10 emission requirements [326 IAC 6.8-2-17]
D.7.4 Sulfur Dioxide [326 IAC 7-4.1-11]
D.7.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.7.6 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)
D.7.7 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.7.8 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.7.9 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.7.10 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(d)]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.7.11 Record Keeping Requirements
D.7.12 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5]
D.7.13 Reporting Requirements

D.8 FACILITY OPERATION CONDITIONS - Electric Arc Furnace 86
Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.8.1 Lake County PM10 emission requirements [326 IAC 6.8-2]
D.8.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.8.3 Opacity [326 IAC 6.8-3]
D.8.4 Sulfur Dioxide Emissions Limitations [326 IAC 2-2][326 IAC 2-3]
D.8.5 Sulfur Dioxide - Combustion Fuel Usage [326 IAC 2-2][326 IAC 2-3]
D.8.6 Sulfur Dioxide [326 IAC 7-4.1-11]

D.8.7 Ladle Preheater Limits [326 IAC 2-2][326 IAC 2-3]
D.8.8 Carbon Monoxide Emissions [326 IAC 2-2][326 IAC 2-3]
D.8.9 Prevention of Significant Deterioration and Emission Offset [326 IAC 2-2][326 IAC 2-3]
D.8.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.8.11 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
D.8.12 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.8.13 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.8.14 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.8.15 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.8.16 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(d)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.8.17 Record Keeping Requirements
D.8.18 Reporting Requirements

D.9 FACILITY OPERATION CONDITIONS - 80" Hot Strip Mill 93

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.9.1 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.9.2 Walking Beam Furnace Limitations [326 IAC 2-2][326 IAC 2-3]
D.9.3 Fuel Usage Limit [326 IAC 2-2]
D.9.4 Sulfur Dioxide [326 IAC 2-2]
D.9.5 PSD and Emissions Offset Credit Limits [326 IAC 2-2 and 326 IAC 2-3]
D.9.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.9.7 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.9.8 Record Keeping Requirements
D.9.9 Reporting Requirements

D.10 FACILITY OPERATION CONDITIONS - 12" Bar Mill 95

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.10.1 Particulate Matter [326 IAC 6.8-2-6]
D.10.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.10.3 Sulfur Dioxide [326 IAC 7-4.1-1]
D.10.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.10.5 Particulate Control [326 IAC 2-7-6(6)]

D.11 FACILITY OPERATION CONDITIONS - No. 3 Cold Strip Mill 96

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.11.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]
D.11.2 National Emission Standards for Hazardous Air Pollutants for Steel Pickling - HCI Process Facilities and Hydrochloric Acid Regeneration Plants [40 CFR 63, Subpart CCC] [40 CFR 63.1157]
D.11.3 NESHAP Maintenance Requirements [40 CFR Part 63.1160, Subpart CCC]
D.11.4 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.11.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

D.11.6 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.11.7 Monitoring Requirements [40 CFR Part 63.1162]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.11.8 Record Keeping Requirements
D.11.9 Reporting Requirements [40 CFR Part 63.1164]

D.12 FACILITY OPERATION CONDITIONS - Coated Products 102

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.12.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
D.12.2 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]
D.12.3 Particulate Matter [326 IAC 6.8-6]
D.12.4 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.12.5 No. 4 Aluminizing Line Radiant Tube Reducing Furnace Limitations
D.12.6 Opacity
D.12.7 Sulfur Dioxide (SO2) [326 IAC 7-4.1-1]
D.12.8 Nitrogen Oxide (NOx) [326 IAC 2-2]
D.12.9 Carbon Monoxide (CO)[326 IAC 2-2]
D.12.10 Emission Offsets [326 IAC 2-3]
D.12.11 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.12.12 Particulate Matter (PM)

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.12.13 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12] [326 IAC 2-7-5]

D.13 FACILITY OPERATION CONDITIONS - Utilities 107

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.13.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
D.13.2 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]
D.13.3 Particulate Matter [326 IAC 6.8-2]
D.13.4 Sulfur Dioxide (SO2) [326 IAC 7-4.1-11]
D.13.5 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2-3]
D.13.6 NOx Budget Unit Exemption [326 IAC 10-4-3]
D.13.7 Equipment and Operational Specifications [326 IAC 2-2]
D.13.8 Operation Restriction – Shutdown of No.4 AC Station [326 IAC 2-2][326 IAC 2-3]
D.13.9 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.13.10 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.13.11 Sulfur Dioxide (SO_2) Sampling and Analysis [326 IAC 7-4.1-11(d)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.13.12 Record Keeping Requirements
D.13.13 Reporting Requirements
D.13.14 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12] [326 IAC 2-7-5]

D.14 FACILITY OPERATION CONDITIONS - Shops 112

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.14.1 Lake County PM10 emission requirements [326 IAC 6.8-2]
D.14.2 Particulate Matter Limitations [326 IAC 2-2][326 IAC 2-1.1-5]
D.14.3 Prevention of Significant Deterioration and Emission Offset [326 IAC 2-2][326 IAC 2-3]
D.14.4 Sulfur Dioxide (SO_2) [326 IAC 7-4.1-11]
D.14.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
D.14.6 Particulate Control [326 IAC 2-7-6(6)]
D.14.7 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.14.8 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.14.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.14.10 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.14.11 Record Keeping Requirements

D.15 FACILITY OPERATION CONDITIONS - Storage Vessels 116

Emission Limitations and Standards
D.15.1 Volatile Organic Storage Vessels [40 CFR Part 60, Subpart Kb]
D.15.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]
D.15.3 NESHAP Operational and equipment standards [40 CFR Part 63.63.1159, Subpart CCC] Hydrochloric acid storage vessels

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.15.4 Monitoring Requirements [40 CFR Part 63.1162]

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]
D.15.5 Record Keeping Requirements
D.15.6 Record Keeping Requirements

D.16 FACILITY OPERATION CONDITIONS - Insignificant Activities..... 119

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.16.1 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.16.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-1]
D.16.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
D.16.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

Compliance Determination Requirement
D.16.5 Particulate Control

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]
D.16.6 Record Keeping Requirements
D.16.7 Volatile Organic Compounds (VOC) [326 IAC 8-3-8] (Material requirements for cold cleaning degreasers)

E NITROGEN OXIDES BUDGET TRADING PROGRAM - NO_X Budget Permit 122

E.1 Automatic Incorporation of Definitions [326 IAC 10-4-7(e)]
E.2 Standard Permit Requirements [326 IAC 10-4-4(a)]
E.3 Monitoring Requirements [326 IAC 10-4-4(b)]
E.4 Nitrogen Oxides Requirements [326 IAC 10-4-4(c)]
E.5 Excess Emissions Requirements [326 IAC 10-4-4(d)]
E.6 Record Keeping Requirements [326 IAC 10-4-4(e)] [326 IAC 2-7-5(3)]

E.7 Reporting Requirements [326 IAC 10-4-4(e)]
E.8 Liability [326 IAC 10-4-4(f)]
E.9 Effect on Other Authorities [326 IAC 10-4-4(g)]

F Fugitive Dust Sources 126

F.1 Fugitive Dust Emissions [326 IAC 6.8-10]

G Iron and Steel MACT 131

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

Certification 154
Emergency Occurrence Report 155
Semi-Annual Natural Gas Fired Boiler Certification 157
Quarterly Report 158-159
Quarterly Deviation and Compliance Monitoring Report 160
Appendix A 162

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.2, 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 Iron and Steel Mill.

Source Address:	3210 Watling Street, East Chicago, Indiana 46312
Mailing Address:	3210 Watling Street MC 8-130, East Chicago, Indiana 46312
General Source Phone Number:	(219) 391-2133
SIC Code:	3312
County Location:	Lake County
Source Location Status:	Nonattainment for 8-hour ozone standard and PM2.5 Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD, Emission Offset, and Nonattainment NSR Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

The source includes ArcelorMittal USA, Inc. Plant ID 089-00316, an integrated steel mill collocated with the following on-site contractors:

(a) ArcelorMittal USA, Inc. (Plant ID 089-00316), the primary operation, is located at, 3210 Watling Street, East Chicago, Indiana and

(b) Fritz Enterprises Inc. (Plant ID 089-00465), the on-site contractor (an iron and steel recycling process and a coke screening plant), is located at 3210 Watling Street, East Chicago, Indiana

(c) Beemsterboer Slag and Ballast Corp. (Plant ID 089-00356), the on-site contractor (a slag crushing and sizing operation), is located at 3210 Watling Street, East Chicago, Indiana;

(d) East Chicago Recovery (Plant ID 089-00358), the on-site contractor (a briquetting facility), is located at 3236 Watling Street, East Chicago, Indiana.

(e) Heckett MultiServ (Plant ID 089-00367), the on-site contractor (a slag and kish processing plant and scarfing operation), is located at 3236 Watling Street, East Chicago, Indiana;

(f) Oil Technology (Plant ID 089-00369), the on-site contractor (a used oil recycling facility), is located at 3236 Watling Street, East Chicago, Indiana;

(g) Mid Continent Coal and Coke (Plant ID 089-00371), the on-site contractor (a metallurgical coke separation facility), is located at 3236 Watling Street, East Chicago, Indiana;

(h) Indiana Harbor Coke Company (IHCC) (Plant ID 089-00382), the on-site contractor (a heat recovery coal carbonization facility), is located at 3210 Watling Street, East Chicago, Indiana 46312;

(i) Cokenergy, Inc. (Plant ID 089-00383), the on-site contractor (a heated gas steam from coal carbonization operation), is located at 3210 Watling Street, East Chicago, Indiana;

(j) LAFARGE North America (Plant ID 089-00458), the on-site contractor (a slag granulator and pelletizer operation), is located at 3210 Watling Street, East Chicago, Indiana

(k) Heritage Slag Products, LLC (Plant ID 089-00481), the on-site contractor (a slag crushing and sizing operation), is located at 3210 Watling Street, East Chicago, Indiana 46312

Separate Part 70 permits will be issued to ArcelorMittal USA, Inc. and each on-site contractor, solely for administrative purposes. The companies may maintain separate reporting and compliance certification.

Company Name	TV Permit Number
ArcelorMittal USA, Inc.	089-6577- 00316
Fritz Enterprises Inc.	089-20315-00465
Beemsterboer Slag and Ballast Corp.	089-6580-00356
East Chicago Recovery	089-6583-00358
Heckett MultiServ	089-6581-00367
Oil Technology, Inc.	089-6579-00369
Mid Continent Coal and Coke	089-6582-00371
Indiana Harbor Coke Company	089-11311-00382
Cokenergy, Inc.	089-11135-00383
LAFARGE North America	089-14766-00458
Heritage Slag Products, LLC	089-21048-00481

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

ArcelorMittal USA, Inc. (Plant ID 089-00316), consists of the following permitted emission units and pollution control devices:

(a) No. 5 and 6 Blast Furnace processes, with a combined estimated maximum production rate of 2,506,000 tons per year of hot iron metal, comprised of the following facilities, process equipment and operational practices:

(1) One (1) Pulverized Coal Storage Bin with Bin Vent Filter H (191), having a 400 ton storage capacity, estimated maximum throughput of 325,000 tons per year of pulverized coal, and a flow rate of 3500 acfm, exhausting through stack 191 and constructed in 1991.

(2) No. 5 Blast Furnace, installed in 1939 consisting of:

(A) One (1) Stockhouse, including coke screening.

(B) No. 5 Blast Furnace Stoves (3 units) with an estimated maximum combined heat input rate of 293 MMBtu/hr, using natural gas and blast furnace gas as fuel, sending hot air blast to No. 5 Blast Furnace and exhausting combustion emissions through stack 5.

(C) No. 5 Blast Furnace with an integral blast furnace gas cleaning system and blast furnace gas combusted at either No. 2AC station or the No. 5 Blast Furnace Stoves.

(D) No. 5 Blast Furnace Casthouse with casting emissions controlled by two (2) No. 5 Blast Furnace Casthouse Collection System Scrubbers having a flow rate of 40,000 acfm, exhausting through stack 1 with construction upgrades in 1986 and 1991.

(E) One (1) No. 5 Blast Furnace Casthouse Roof Monitor.

(F) Slag pots and pits for handling slag waste.

(3) No. 6 Blast Furnace, installed in 1942, consisting of:

(A) One (1) Stockhouse, including coke screening.

(B) No. 6 Blast Furnace Stoves (4 units) with an estimated maximum combined heat input rate of 293 MMBtu/hr, using natural gas and blast furnace gas as fuel, sending hot air blast to No. 6 Blast Furnace and exhausting combustion emissions through stack 6.

(C) No. 6 Blast Furnace with an integral gas cleaning system and blast furnace gas combusted at either No. 2AC station or the No. 6 Blast Furnace Stoves.

(D) No. 6 Blast Furnace Casthouse with casting emission controlled by No. 6 Blast Furnace Casthouse Collection System Scrubber having a flow rate of 40,000 acfm, exhausting through stack 2, with a construction upgrade in 1986 on this equipment.

(E) No. 6 Blast Furnace Casthouse Roof Monitor.

(F) Slag pots and pits for handling slag waste.

(b) No. 7 Blast Furnace process is comprised of the following facilities, process equipment and operation practices:

(Significant Source Modification 089-16966-00316, issued on November 26, 2003 allows for the maximum production rate to increase to 4,417,000 tons per year of molten metal)

(1) Raw material handling and stockhouse material handling for receiving, storage and delivery of blast furnace raw material. The handling operation has an estimated maximum throughput of 7,704,971 tons of iron ore pellets per year; stored in four (4) storage bins with 8073 tons total capacity; 1,514, 604 tons of coke per year, stored in four (4) storage bins with 1314 tons total capacity; and 1,082,736 tons of flux and miscellaneous material per year, stored in six (6) storage bins with 4200 tons total capacity. Emissions are controlled by two (2) baghouses: (1) identified as 168-stockhouse pellet and flux handling baghouse, having a flow rate of 82,500 acfm and (2) identified as 172-stockhouse coke handling baghouse having a flow rate of 27, 500 acfm.

(2) Coke screening operation with emissions controlled by a baghouse, previously identified as 169, having a flow rate of 47,116 acfm and an average screening capacity of 400 tons per hour. (This equipment is not currently operating)

(3) One (1) blast furnace, identified as No. 7, constructed in 1980 with blast furnace gas processed by a gas cleaning system and equipped with three (3) flares, each

with a 1.15 MMBtu per hour igniter capacity of flaring one-third of the maximum generated blast furnace gas through stack 195.

(4) No. 7 Blast Furnace Casthouse constructed in 1980 with casting emissions controlled by two (2) baghouses: identified as 166 (West baghouse) having a flow rate of 500,000 acfm; and 167 (East baghouse) having a flow rate of 300,000 acfm. Emissions from No. 7 blast furnace casthouse are also controlled by trough and runner covers and hoods over the tap holes and pugh ladle addition points.

(5) No. 7 Blast Furnace stoves (3 units) using blast furnace gas and natural gas as fuel with an estimated maximum combined heat input capacity of 953 MMBtu/ hr and emissions exhausting through stack 170. Significant Source Modification 089-16966-00316, issued on November 26, 2003 allows for a blast capacity increase and the construction of a fourth (4th) stove.

(6) One (1) Casthouse Roof Monitor 171.

(7) One (1) coke transfer tower (No.4), identified as164, installed in 1997, with a an estimated maximum throughput of 4020 tons of dry coke per day, enclosed and controlled by one (1) baghouse, and exhausting inside the tower.

(8) One (1) coke transfer point, identified as 169, installed in 1997, with an estimated maximum throughput of 4020 tons of dry coke per day, enclosed and controlled.

(9) Slag pits

(c) One (1) Sinter Plant, constructed in 1959, with an estimated maximum raw material usage of 1.4 million tons per year comprised of the following facilities, process equipment, and operational practices:

(1) Raw material handling and blend site.

(2) One (1)-sinter plant windbox, controlled by the main baghouse with emissions exhausting through stack 7.

(3) One (1) sinter plant discharge end, controlled by the discharge end baghouse, and one (1) cooler station, partially controlled by the discharge end baghouse, with emissions exhausting through stack 8, installed in 1959.

(4) One (1) sinter plant upper screening station, with conveyors, screen hoods, and duct system routed to and controlled by the upper screening station baghouse with emissions exhausting through stack 11. This equipment was constructed in 1998.

(5) Sinter loading, unloading, and transfer operations.

(d) One (1) pulverized coal injection (PCI) system with a maximum capacity of 132 tons per hour for Nos. 5, 6 and 7 blast furnaces, constructed in 1991, comprised of the following facilities, process equipment, and operational practices:

(1) Raw coal handling, including rail car unloading facilities and 50,000 ton capacity storage pile (stack 192).

(2) System A- RC-1 and RC-2 conveyors with a maximum throughput of 400 tons per hour, used to move coal to raw coal storage bins, with a baghouse to control emissions at transfer points and exhausting through stack 185.

(3) System C- RC-2, RC-3 and RC-4 conveyors and two (2) Raw Coal Storage Bins with a storage capacity of 750 tons each, with a baghouse to control emissions at transfer points and exhausting through stack 186.

(4) System D and E-Two (2) 66 ton per hour Pulverizers, with a recovery cyclone and baghouse D and E in series on each unit exhausting through stack 187,

(5) System F and G- Two (2) 66 ton per hour Conveyors to two (2) Pulverized Coal Storage Bins with a total storage capacity of 30,000 cubic feet, each controlled by a baghouse F and G, exhausting through stack 189 and 190, respectively.

(e) The No. 2 Basic Oxygen Furnace (BOF) Shop, comprised of the following facilities, process equipment, and operational practices:

(1) Raw material handling, ladle additive truck hopper loading system having an estimated maximum throughput of 328,000 tons per year of alloy and flux. Emissions from the truck hopper are controlled by a baghouse, which has a flow rate of 75,000-acfm exhausting through stack 150. Emissions from the alloy and flux storage and handling system are controlled by a baghouse, which has a flow rate of 50,000-acfm, exhausting through stack 151. Both baghouses were constructed in 1974.

(2) One (1) Hot metal station containing reladling, desulfurization, and slag skimming operations having an estimated maximum capacity of 4,029,600 tons of hot metal per year. Captured emissions from the hot metal station and charging aisle are controlled by a baghouse having a flow rate of 360,000-acfm, exhausting through stack 152. Original construction was 1974 and an upgrade was completed in August 1994 as part of a consent decree.

(3) Two (2) BOFs, identified as No. 10 and No. 20, and operations including charging, oxygen blowing, tapping, and alloy addition with a total estimated maximum capacity of 4,543,600 tons of hot metal and scrap per year. Captured emissions controlled by two (2) off-gas scrubber systems with flares having a flow rate of 1,500,000-acfm each, exhausting through flare stacks 147 and 148. Construction commenced on this equipment in 1970. Uncaptured emissions exhausting through roof monitor 153 and charging and miscellaneous furnace emissions exhausting through a secondary ventilation scrubber having a flow rate of 194,000-acfm, exhausting through stack 149. The Off-gas scrubber systems were constructed in 1974 and the Secondary Vent scrubber was replaced in 2003.

(4) One (1) ladle metallurgy facility (LMF) station consisting of alloy addition, electric arc reheat, slag skimming, and raw material handling specifically for the metallurgy station with an estimated maximum throughput of 4,029,600 tons per year of steel. Captured emissions are controlled by a baghouse having a flow rate of 135,000-acfm, exhausting through stack 154. This equipment was constructed in 1985.

(5) One (1) Continuous casting operations consisting of slab casters, and three (3) torch cutoff machines. Leaded emissions from the casters exhaust through the caster fume baghouse, which has a flow rate of 171,000 acfm, exhausting through stack 159. Steam from the water spray cooling exhausts through three (3) vents along the caster, identified as stacks 160, 161, and 162. Fugitive emissions from the casting operations exhaust through a roof monitor, identified as 158. This equipment was constructed in 1985. (Bloom caster at this site is permanently shutdown)

(6) A tundish dump and repair station with leaded emissions controlled by a baghouse, which has a flow rate of 50,000 acfm, exhausting through stack 156. This equipment was constructed in 1989.

(7) Miscellaneous natural gas combustion used for ladle preheating, exhausting through stack 157, and tundish and ladle shroud preheating and drying, exhausting through No.2 BOF Shop Roof Monitors 155.

(8) Slag skimming into slag pots.

(f) No.4 Basic Oxygen Furnace (BOF) comprised of the following facilities, process equipment, and operational practices:

(1) Flux, alloy and waste oxide briquettes (WOB) unloading, hopper house and storage/handling facility.

(2) Scrap metal unloading/storage (scrap yard) and scrap metal charging box.

(3) Two (2) Hot metal transfer and desulfurization operations having an estimated maximum capacity of 4,222,320 tons of hot metal per year with captured emissions controlled by two (2) baghouses having flow rates of 190,000 and 220,000 acfm, exhausting through stacks 26 and 27. This equipment was constructed in 1977.

(4) Two (2) BOFs, identified as No. 50 and No. 60 and operations including charging, blowing, tapping, flux and alloy additions, and slag skimming with a total estimated maximum capacity of 5,676,366 tons of hot metal and scrap per year with uncaptured emissions exhausting through a roof monitor (stack 29), and captured emissions controlled by a four (4) off-gas scrubber system, exhausting through stack 38. This equipment was constructed in 1966. Charging, tapping, and miscellaneous furnace emissions are controlled by a secondary ventilation baghouse having a flow rate of 600,000 acfm, exhausting through stack 37. This equipment was constructed in 1977 and modified in 1996.

(5) Raw material handling system for the RHOB facility, including hopper house, alloy and flux storage bins having an estimated maximum throughput of 4,700,000 tons per year and dust emissions controlled by a baghouse having a flow rate of 48,100 acfm and exhausting through stack 33.

(6) One (1) RHOB vacuum degasser with natural gas-fired flare for exhaust gas control with an estimated maximum throughput of 4,686,600 tons/year of steel, exhausting through stack 32. This equipment was constructed in 1987.

(7) Ladle and tundish preheaters (stack 36).

(8) Two (2) argon stirring stations and one (1) continuous caster with tundish, caster mold exhausting through one (1) mold fume baghouse (stack 214) for housekeeping purposes only, and casting machine with cutoff, with steam vents exhausting through stacks 24 and 25.

(9) Torch cutoff exhausting into the building (stack 31).

(10) Maintenance and miscellaneous operations associated with the BOF.

(11) Furnace Additives Transfer House Baghouses, exhausting inside the buildings (stacks 28 and 35).

(12) Slag dumping.

(g) No. 1 Lime Plant was constructed in 1973 with an estimated maximum capacity of 569,400 tons per year of lime comprised of the following facilities, process equipment, and operational practices:

(1) Limestone unloading, storage and screening area.

(2) Two (2) Limestone preheaters, two (2) rotary kilns with an estimated maximum heat input rate of 207 MMBtu/hr fueled by natural gas or residual fuel oil, with exhaust from kilns routed back to preheaters and then to a set of multicyclones. The emissions from the multicyclone are controlled by two (2) baghouses exhausting through stacks 45 and 49.

(3) Dust fines are sent to a dust bin, with emissions controlled by a baghouse and exhausting through stack 46.

(4) Ten (10) storage silos receive an estimated maximum of 569,400 tons per year of finished lime, with fines controlled by lime handling baghouses and exhausting through stack 47.

(5) Fugitive control project including loadout spout on rejection bin controlled by existing kiln baghouse, preheater area enclosure around two (2) kiln feed hood/ ram loadout dribbles, preheater area loading spouts for truck loading with displaced air controlled by existing kiln baghouse and ten (10) loading spouts with emissions controlled by baghouse and truck loadout area with exhaust controlled by loadout baghouse and exhausting through stack 48. This equipment was upgraded in 1997.

(h) No. 1 Electric Arc Furnace comprised of the following facilities, process equipment, and operational practices:

(1) Bulk alloy handling: Raw material unloading, piling, and transporting of scrap metal, fluxes, and alloys.

(2) Raw material charging to the electric arc furnace.

(3) One (1) electric arc furnace with eccentric bottom tapping (EBT), having an estimated maximum annual capacity of 975,000 tons with emissions controlled by a baghouse having a flow rate of 500,000 acfm exhausting through baghouse roof monitor (141) commencing operation in 1970 and upgraded in 1996.

(4) One (1) ladle metallurgical facility (LMF) station constructed in 1989 with a maximum annual capacity of 975,900 tons with emissions controlled by a baghouse having a flow rate of 40,000 acfm exhausting through stack 143.

(5) Five (5) natural gas ladle preheaters constructed in 1990, each has one (1) or two (2) burners with a 15 MMBtu per hour combined maximum heat input and emissions uncontrolled exhausting through stack 140.

(6) One (1) continuous casting tundish and one (1) continuous casting mold operations controlled by a baghouse during leaded steel production having a flow rate of 70,000 acfm and exhausting through stack 137.

(7) Cooling operation exhausting through stack 145.

(8) Slag handling operations.

(9) EAF Shop Roof Monitor (stack 142).

(10) One (1) leaded steel torch cutoff operation controlled by a baghouse during leaded steel production having a flow rate of 70,000 acfm and exhausting through stack 138.

(11) One (1) leaded steel LMF ladle dump and repair station controlled by a baghouse during breakout and removal of lead-contaminated refractory materials having a flow rate of 100,000 acfm and exhausting through stack 136.

(i) Direct Reduced Iron (DRI) storage and conveying system constructed in 2001, comprised of the following facilities, process equipment, and operational practices:

(1) One (1) enclosed truck/trailer unloading area identified as 213 with a maximum throughput of 400,000 tons per year of DRI.

(2) A DRI conveyor system consisting of:

(A) One (1) 20,000 cu. ft. capacity enclosed DRI storage silo with excess air vented through the roof and then through one of the bin vents.
(B) One (1) horizontal trough belt stocking conveyor.
(C) Multiple Delivery Conveyors.

(3) Emission control system for (1) and (2) to remove particulate matter consisting of:

(A) Bin Vent Filter No. 1 (210)
(B) Bin Vent Filter No. 2 (211)
(C) Bin Vent Filter No. 3 (212)

(j) 80" Hot Strip Mill comprised of the following facilities, process equipment, and

(1) One (1) No. 4 Walking Beam Furnace, with an estimated maximum heat input rate of 720 MMBtu/hr, equipped with low NOx burners and using natural gas as fuel, exhausting through stack 101 and 102, installed in 2001.

(2) One (1) No. 5 Walking Beam Furnace, with an estimated maximum heat input rate of 685.6 MMBtu/hr, exhausting through stack 107, installed in 1995.

(3) One (1) No. 6 Walking Beam Furnace, with an estimated maximum heat input rate of 685.6 MMBtu/hr, exhausting through stack 108, installed in 1995.

(4) One (1) Hot Rolling Mill Operation, including roughing mill with cooling water spray, crop shear and finishing stands exhausting to roof monitor 109.

(k) 12" Bar Mill comprised of the following facilities, process equipment, and operational practices:

(1) One (1) Billet Inspection Line Shotblaster, installed in 1994 with emissions controlled by a baghouse having an estimated maximum flow rate of 5000 acfm vented inside the building.

(2) One (1) Billet Grinding installed in 1977 exhausting through stack 87.

(3) One (1) natural gas fired Billet Reheat Furnace, installed in 1977, having an estimated maximum heat input of 375 MMBtu/hr, exhausting through stack 89

(4) One (1) 23 Stand Rolling Mill exhausting to roof monitor 88.

(l) No. 3 Cold Strip Mill comprised of the following facilities, process equipment, and operational practices:

(1) No. 4 Pickling Line, constructed in 1958, including acid tanks and cascade rinse box with emissions controlled by a scrubber exhausting through stack 178.

(2) No. 5 Picking Line, including scale breaker mill, acid tanks and cascade rinse box with emissions controlled by a scrubber exhausting through stack 176.

(3) 56 inch Tandem Mill (4 Stands) controlled by a mist eliminator exhausting through stack 177.

(4) 80 inch Tandem Mill (5 Stands) controlled by a mist eliminator exhausting through stack 175.

(5) Temper Mill No. 28 exhausting through stack 180.

(6) Temper Mill No. 29 exhausting through stack 181.

(m) Coated Products comprised of the following facilities, process equipment, and operational practices:

(1) No. 3 Galvanizing Line constructed in 1955, including:

(A) One (1) natural gas fired Non-Oxidizing Furnace with an estimated maximum heat input of 62 MMBtu/hr, equipped with recuperators waste gas burners exhausting through stack 81.

(B) One (1) natural gas fired reducing furnace with an estimated maximum heat input of 12.8 MMBtu/hr, hydrogen and nitrogen (static atmosphere), vented inside the building (open roof monitor-81A).

(2) No. 5 Galvanizing Line constructed in 1968, including:

(A) One (1) natural gas fired Radiant tube reducing furnace utilizing recuperative radiant tube burners with a an estimated maximum heat input of 112.6 MMBtu/hr, exhausting through stack 182.

(B) One (1) natural gas fired Galvanneal Furnace with an estimated maximum heat input of 36 MMBtu/hr, exhausting inside the building (open roof monitor)-182A.

(3) No. 4 Aluminizing Line constructed in 1955, including:

(A) One (1) natural gas fired Oxidizing Furnace with an estimated maximum heat input of 27 MMBtu/hr exhausting through stack 84.

(B) One (1) natural gas fired 4-line radiant tube reducing furnace section with an estimated maximum heat input of 19.14 MMBtu/hr, equipped with low NOx twin regenerative burners, exhausting through stack 84.

(C) hot dip Al/Si Pot, roll preheater and premelt furnace.

(4) No. 1 Normalizer constructed in 1957, including:

(A) One (1) natural gas fired reducing furnace with 193 natural gas fired Eclipse SER burners with a total heat input of 31.652 MMBtu/hr exhausting through stack 183.

(B) One (1) natural gas fired flame heater furnace with an estimated maximum heat input of 28 MMBtu/hr annealing furnace exhausting through stack 183

(C) One (1) acid cleaning tank using hydrochloric acid and one (1) cascade rinse tank with emissions controlled by a fume scrubber and exhausting through stack 184.

(5) No. 3 Continuous Anneal Line constructed in 1982, including:

(A) One (1) natural gas fired Annealing Furnace and One (1) natural gas fired Age Furnace with an estimated total maximum heat input of 108 MMBtu/hr, hydrogen and nitrogen (static atmosphere), vented through stack 173.

(B) One (1) acid cleaning tank using hydrochloric acid with emissions controlled by a fume scrubber and exhausting through stack 174.

(6) Batch Anneal Facilities including:

(A) No. 5 Batch Anneal constructed in 1958, equipped with annealing furnaces and hydrogen anneal bases, purge and inner cover with an estimated maximum heat input of 136 MMBtu/hr exhausting through stack 112.

(B) No. 6 Batch Anneal constructed in 1970, equipped with annealing furnaces and hydrogen anneal bases, purge and inner cover with an estimated maximum heat input of 205 MMBtu/hr exhausting through stack 113.

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

(1) No. 2 AC Station including:

(A) Three (3) Boilers identified as 211-213, fired by natural gas and blast furnace gas from No. 5 and No. 6 blast furnaces:

(i) Boiler 211 with an estimated maximum heat input of 468 MMBtu/hr, installed in 1948 exhausting through stacks 125 and 126.

(ii) Boiler 212 with an estimated maximum heat input of 468 MMBtu/hr, installed in 1948 exhausting through stacks 127 and 128.

(iii) Boiler 213 with an estimated maximum heat input of 468 MMBtu/hr, installed in 1949 exhausting through stacks 129 and 130.

(B) Two (2) Blast Furnace Gas Flares to burn excess blast furnace gas from No. 5 and No. 6 Blast Furnaces exhausting through stack 131.

(C) Nine (9) turbo blowers and five (5) electricity generators.

(2) No. 5 Boilerhouse installed in 1976, including Boilers 501-503 fired by blast furnace gas from No. 7 blast furnace and mixed gas, each with an estimated maximum heat input of 520 MMBtu/hr exhausting through stack 134. The boilers produce steam, which is used in three turbo blowers to produce blast air, at generators to produce electrical power, and for general plant use.

(o) Shops comprised of the following facilities, process equipment, and operational practices:

(1) Mold Foundry Building: Pugh Ladle Car Preparation, dekishing, debricking and drying fired by natural gas (44) and Pugh ladle lancing fired by natural gas with emissions controlled by former mold foundry baghouse exhausting through stack 43. This baghouse also controls Pugh Ladle pigging emissions resulting from the adjacent contractor’s operation.

(2) No. 6 Roll shop for 12 inch bar mill including shotblaster with emissions controlled by a baghouse and exhausting through stack 200.

(3) Electric Shop including shotblaster with emissions controlled by a baghouse and exhausting through stack 201, blaster baghouse unloading, paint booth, varnish dip tanks and undercutting booth.

(4) No. 4 Roll Shop including Ervin shotblaster with emissions controlled by a baghouse and exhausting through stack 203, Wheelabrator shotblaster with emissions controlled by a baghouse and exhausting through stack 204.

(5) No. 4 A Roll Shop including Ervin shotblaster with emissions controlled by a baghouse and exhausting through stack 205 and Pangborn shotblaster with emissions controlled by a baghouse and exhausting through stack 206.

(6) No. 5 Roll Shop.

(7) Mobile Equipment shop including refrigerant recovery and parts cleaning.

(8) Equipment Repair Shop including Machine Shop (Plant 2).

(9) Mason Building Shop.

(10) Refrigeration Shop.

(11) Fabrication and Repair Shop (Plant 1).

(12) No. 2 Slab Yard including one grinder, constructed in 2006, with a maximum capacity of 250,000 tons per year, using a baghouse as PM/PM-10 control, and exhausting to stack 95.

(p) Storage Vessels:

(1) One (1) 21,380 gallon tank (T19K1) containing Diesel No. 2, located at the “E” Yard – Internal Logistics, constructed prior to 1972.

(2) One (1) 21,380 gallon tank (T-8H1) containing Diesel No. 2, located at the “B” Yard – 2 BOF, constructed prior to 1972.

(3) One (1) 10,000 gallon tank (T20K-1) containing Diesel No. 2, located at the Main Shop Fueling Station – Internal Logistics, constructed in 1997.

(4) One (1) 8,000 gallon tank (T02E-1) containing Diesel No. 2, located south of the bar company scrap yard - 12” Bar Mill constructed in 1999.

(5) One (1) 7,500 gallon tank (T1G-1) containing Diesel No. 2, located north of the Electric Furnace Billet Caster constructed in 1999.

(6) One (1) 6,000 gallon tank (T25E-1) containing Diesel No. 2, located at the No. 7 Blast Furnace Emergency Pump House, constructed in 1994.

(7) One (1) 5,000 gallon tank (T17P-1) containing Diesel No. 2, located at the 80” Hot Strip Mill coil carrier fuel station, constructed in 1994.

(8) One (1) 4,200 gallon tank (T10-200) containing Diesel No. 2, located at the No. 3 Cold Strip East bulk oil storage area constructed in 1970.

(9) One (1) 3,355 gallon tank (T18E-1) containing Diesel No. 2, located at the #4 BOF Mobile Equipment Shop, constructed in 1994.

(10) Two (2) 3,000 gallon tanks (T10-232a & T10-232b) containing Power Clean, located at the No. 3 Cold Strip East, Nos. 4 and 5 Hydraulic System, constructed in 1970.

(11) One (1) 130,000 gallon tank (T-17F1) containing Reclaimed oil, located at the Lime Plant, constructed in 1973.

(12) One (1) 1,016,000 gallon tank (T-6E1) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1992.

(13) One (1) 1,016,000 gallon tank (T-6F1) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1976.

(14) One (1) 1,016,000 gallon tank (T-6F2) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1976.

(15) One (1) 500,000 gallon tank (T-6F3) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1975.

(16) One (1) 100,000 gallon tank (T-02F1) containing #6 fuel oil, located at the 12” Bar Mill, constructed in 1977.

(17) Two (2) 30,000 gallon tanks (T11-12a & T11-12b) containing regenerated Hydrochloric Acid located north of bulk storage building No. 3 Cold Strip West, designated as #1 elevated tank and #2 elevated tank, constructed in 1970.

(18) Two (2) 30,000 gallon tanks (T11-12c & T11-12d) containing regenerated Hydrochloric Acid located west of bulk storage building No. 3 Cold Strip West, designated as Tank #4 and Tank #5, constructed in 1999.

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

ArcelorMittal USA, Inc. (Plant ID 089-00316) also includes the following insignificant activities as defined in 326 IAC 2-7-1(21), with specifically regulated insignificant activities identified in Section D.16:

(a) Space heaters, process heaters, or boilers using the following fuels:

(1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.

(3) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.

(b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(c) 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.

(d) 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]

(2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(e) Refractory storage not requiring air pollution control equipment.

(f) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.

(g) Machining where an aqueous cutting coolant continuously floods the machining interface.

(h) 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]

(i) Cleaners and solvents characterized as follows:

(1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;

(2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20EC (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(j) 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]

(k) Closed loop heating and cooling systems.

(l) Rolling oil recovery systems.

(m) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(n) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the Permittee, that is, an on-site sewage treatment facility.

(o) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs.

(p) Noncontact cooling tower systems with either of the following:

(1) Natural draft cooling towers not regulated under a NESHAP.

(2) Forced and induced draft cooling tower system not regulated under a NESHAP.

(q) Quenching operations used with heat treating processes.

(r) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(s) Heat exchanger cleaning and repair.

(t) Process vessel degreasing and cleaning to prepare for internal repairs.

(u) Paved and unpaved roads and parking lots with public access.

(v) Conveyors as follows:

(1) Covered conveyor for coal or coke conveying of less than or equal to 360 tons per day;

(2) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983;

(3) Uncovered coal conveying of less than or equal to 120 tons per day.

(4) Underground conveyors.

(w) Asbestos abatement projects regulated by 326 IAC 14-10.

(x) Purging of gas lines and vessels that is related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(y) Flue gas conditioning systems and associated chemicals such as the following: sodium sulfate, ammonia, and sulfur trioxide.

(z) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(aa) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(bb) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume.

(cc) On-site fire and emergency response training approved by the department.

(dd) 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]

(ee) Purge double block and bleed valves.

(ff) Filter or coalescer media change out.

(gg) Vents from ash transport systems not operated at positive pressure.

(hh) A laboratory as defined in 326 IAC 2-7-1(21)(D)

(ii) Any unit emitting greater than 1 pound per day but less than 5 pounds per day or 1 ton per year of a single HAP

(1) Process Water Cooling Towers (chlorine addition)

A.5 Fugitive Dust Sources

ArcelorMittal USA, Inc. (Plant ID 089-00316) also includes Fugitive Dust Sources consisting of, but not limited to the following:

(a) Paved Roads and Parking Lots

(b) Unpaved Roads and Parking Lots

(c) Batch Transfer-Loading and Unloading Operations

(d) Continuous Transfer In and Out of Storage Piles

(e) Batch Transfer Operations-Slag and Kish Handling

(f) Wind Erosion from Storage Piles and Open Areas

(g) In Plant Transfer by Truck or Rail

(h) In Plant Transfer by Front End Loader or Skip Hoist

(i) Material Processing Facility (except Crusher Fugitive Emissions)

(j) Crusher Fugitive Emissions

(k) Material Processing Facility Building Openings

(l) Dust Handling Equipment

A.6 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)][13-15-3-6(a)]

(a) This permit, T089-6577-00316, 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 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.4 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.5 Severability [326 IAC 2-7-5(5)]

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by 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.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) For compliance certification purposes, the term “source” refers to ArcelorMittal USA, Inc. (Plant ID 089-00316).

(b) The Permittee shall annually submit a compliance certification report which addresses the status of ArcelorMittal USA, Inc. (Plant ID 089-00316) compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

and

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

(c) 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.

(d) 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 ArcelorMittal USA, Inc. (Plant ID 089-00316), 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 ArcelorMittal USA, Inc. (Plant ID 089-00316).

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

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

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

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

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

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

(b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) To the extent the Permittee is required by 40 CFR Part 60 or 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.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, 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 No.: 317-233-0178 (ask for Compliance Section)
Facsimile No.: 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
MC 61-53 IGCN 1003

Indianapolis, Indiana 46204-2251

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

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

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

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

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

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

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

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, as well as the Federal Statutes from the Clean Air Act and the federal rules from 40 CFR, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

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

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

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

(a) All terms and conditions of permits established prior to T089-6577-00316 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

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

(b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

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

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

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

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

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

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

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

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

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

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

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

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

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

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

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

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]

The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2][326 IAC 2-3-2]

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

(b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2-2 and/or 326 IAC 2-3-2.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

B.25 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.

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

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

C.1 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

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

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

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

C.5 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.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

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

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

C.7 Performance Testing [326 IAC 3-6]

(a) All testing required pursuant to the conditions of this permit 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 for such required testing, except as provided elsewhere in this permit, shall be submitted to:

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

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

(b) For such required testing 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), such test reports for testing required by this permit 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.8 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. Such 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.9 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

C.10 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8)]

(a) Pursuant to 326 IAC 326 IAC 6.8-8-1 (formerly 326 IAC 6-1-10.1(l)), 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 (formerly 326 IAC 6-1-10.1 (p)) through 326 IAC 6.8-8-7 (formerly 326 IAC 6-1-10.1 (r)) or applicable procedures in the CCP.

(b) Pursuant to 326 IAC 6.8-8-8 (formerly 326 IAC 6-1-10.1(u)), the Permittee shall update the CCP, as needed, retain a copy of 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 6.8-8 (formerly 326 IAC 6-1-10.1), failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8 (formerly 326 IAC 6-1-10.1).

C.11 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.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.13 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

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

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

C.14 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.15 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.16 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.17 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
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

(c) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2 2 1(qq) and/or 326 IAC 2 3 1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2 2 1(ee) and/or 326 IAC 2 3 1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2 2 1(rr) and/or 326 IAC 2 3 1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll) at an existing emissions unit, document and maintain the following records:
- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
  - (i) Baseline actual emissions;
  - (ii) Projected actual emissions;
  - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1(mm)(2)(A)(iii)); and
  - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(2) 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

(3) 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.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

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

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C- General Record Keeping Requirements for any "project" as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll) *at an existing emissions unit*, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).

(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.20 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.0 FACILITY OPERATION CONDITIONS-
No.7 Blast Furnace operation modification project

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

Increase in production of hot metal by detailed reline project and addition of 4th stove:

(a) Modifications to existing Blast Furnace identified as No.7, by a detailed reline and the addition of a fourth blast air heating stove to provide additional blast capacity, exhausting to stack 170. This modification is intended to increase production of hot metal from this furnace by 772,620 tons per year.

(b) Additional 373,155 tons per year of pulverized coal for injection into the No.7 Blast Furnace will be supplied by the existing pulverized coal injection system without any changes to the existing equipment.

(c) The usage of iron bearing self-fluxing pellets as raw material for molten metal production at No.7 Blast Furnace will increase by 1,295,275 tons per year.

(d) Increased consumption of coke at No.7 Blast Furnace by 296,686 tons per year, either from the on-site coke plant operated by Indiana Harbor Coke Company or purchased from an offsite producer.

(e) Utilization of an additional 28,082 MMSCF per year of blast furnace gas at the No.5 Boiler House to generate steam. This usage of additional blast furnace gas will likely reduce the use of natural gas at the No.5 Boiler House

(f) Any additional blast furnace gas, which cannot be utilized, will be consumed in the three velocity nozzle flare identified as stack 195 at No.7 Blast Furnace.

(g) Increased lime production at No.1 lime plant and consumption at No.2 and/or No.4 BOF shop by 50,355 tons per year. This will result in an increase of natural gas usage by 247 MMSCF per year.

(h) The increased hot metal production at No.7 Blast Furnace will be processed at the existing No.2 and/or No.4 Basic Oxygen Furnaces (BOF) shops to produce additional steel. The steel production will increase by approximately 908,965 tons per year.

(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.0.1 Non-applicability of Major Modification [326 IAC 2-2-1 (x)]

Pursuant to SSM #089-21207-00316, in order to make requirements of 326 IAC 2-2-1 (x) (Major Modification), not applicable to this modification, the cumulative emissions from emissions units listed in D.0.5 of particulate matter (PM), oxides of nitrogen (NO_x) and Lead (Pb) associated with (when handling material to or from) the No.7 Blast Furnace operations shall be less than the following limitations:

Pollutant	Emissions (in tons per 12 consecutive month period with compliance demonstrated at the end of each month)
PM	1,250
NOx	3,082
Pb	5.17

D.0.2 Non-applicability of Major Modification [326 IAC 2-3-1 (s)]

Pursuant to SSM #089-21207-00316 and in order to make the requirements of 326 IAC 2-3-1 (s) (Major Modification) not applicable to this modification, the cumulative emissions from emissions units listed in D.0.5 of particulate matter less than 10 microns diameter (including filterable and condensable components) (PM_{10}) and sulfur dioxide (SO_2) associated with (when handling

material to or from) the No.7 Blast Furnace operation shall be less than the following limitations:

Pollutant	Emissions (in tons per 12 consecutive month period with compliance demonstrated at the end of each month)
PM_{10}	1,566
SO_2	2,375

D.0.3 Volatile Organic Compounds (VOC)– non-applicability of De-minimis [326 IAC 2-3-1 (l)]

Pursuant to SSM #089-21207-00316 and in order to make the requirements of 326 IAC 2-3-1 (l) (De-minimis) not applicable to this modification, the cumulative emissions from emissions units listed in D.0.5 of VOC associated with (when handling material to or from) the No.7 Blast Furnace operation shall be less than 58.3 tons per 12 consecutive month period with compliance demonstrated at the end of each month.

D.0.4 Carbon Monoxide (CO)– Air quality impacts and increment consumption [326 IAC 2-2-4, 5 and 6]

Pursuant to SSM #089-21207-00316, 326 IAC 2-2-4, 2-2-5, and 2-2-6 (PSD Requirements: Air quality analysis, Air quality impacts and increment consumption), the cumulative emissions from emissions units listed in D.0.5 of CO associated with (when handling material to or from) No.7 Blast Furnace operation shall not exceed 39,566 tons per 12 consecutive month period with compliance demonstrated at the end of each month.

D.0.5 Emissions units subject to the emissions limitations [326 IAC 2-2-1 (x)] [326 IAC 2-3-1 (s)] [326 IAC 2-3-1 (l)] [326 IAC 2-2-4, 5 and 6]

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003, the emissions limitations shown in D.0.1, D.0.2, D.0.3 and D.0.4 apply to the combined emissions from the following emissions units only to the extent that the operation and throughput of these emissions units can be directly attributed to (when handling material to or from) the operation and throughput at the No.7 Blast Furnace:

1. No.7 Blast Furnace:
   - (a) Casthouse No.7 Blast Furnace controlled by:
     - (A) east baghouse exhausting to stack 167
     - (B) west baghouse exhausting to stack 166
   - (b) Coke screening station controlled by baghouse exhausting to stack 169
   - (c) Stockhouse coke handling controlled by baghouse exhausting to stack 172
   - (d) Stockhouse pellet handling controlled by baghouse exhausting to stack 168
   - (e) No.7 Blast Furnace stoves exhausting to stack 170
   - (f) Slag pit operation
   - (g) Slag granulator and pelletizer operation
   - (h) Gas Cleaning System
   - (i) Flare stack 195
   - (j) Roof Monitor 171

2. No.5 Boiler House:
   No.5 Boiler House exhausting to stack 134, to the extent increases in the usage of blast furnace gas from No.7 Blast Furnace at this unit.

3. Pulverized Coal Injection plant:
   - (a) Coal transfer A controlled by baghouse exhausting to stack 185
   - (b) Coal storage C controlled by baghouse exhausting to stack 186
   - (c) Coal pulverizer D controlled by baghouse exhausting to stack 187
   - (d) Coal pulverizer E controlled by baghouse exhausting to stack 188
   - (e) Coal storage F controlled by baghouse exhausting to stack 189
   - (f) Coal storage G controlled by baghouse exhausting to stack 190
   - (g) Coal unloading system exhausting to stack 192

4. No.1 Lime Plant:
   - (a) Lime plant storage silo controlled by baghouse exhausting to stack 47

(b) No.1 and No.2 Lime Kiln controlled by two (2) baghouses exhausting to stack 45 and 49
(c) Lime plant fugitive control micro-pulse controlled by baghouse exhausting to stack 46
(d) Lime plant truck loadout controlled by baghouse exhausting to stack 48

5. No.2 BOF shop:
(a) No.10 Basic Oxygen Furnace controlled by scrubber exhausting to stack 147
(b) No.20 Basic Oxygen Furnace controlled by scrubber exhausting to stack 148
(c) Ladle metallurgy facility station controlled by baghouse exhausting to stack 154
(d) Secondary ventilation system for No.2 BOF shop controlled by scrubber exhausting to stack 149
(e) Charge Aisle and Hot Metal Station controlled by baghouse exhausting to stack 152
(f) Truck and ladle hopper controlled by baghouse exhausting to stack 150
(g) Flux storage batch controlled by baghouse exhausting to stack 151
(h) Gas Cleaning System
(i) No.2 BOF Roof Monitor 153
(j) No.2 BOF Caster Roof Monitor 158

6. No.4 BOF shop:
(a) No.4 BOF shop off gas controlled by scrubber exhausting to stack 38
(b) Secondary ventilation system for No.4 BOF shop controlled by a baghouse exhausting to stack 37
(c) Hot Metal Station baghouse (North) exhausting to stack 26
(d) Hot Metal Station baghouse (South) exhausting to stack 27
(e) RHOB condensers stack exhausting to stack 32
(f) RHOB material handling stack exhausting to stack 33
(g) Gas Cleaning System 4 BOF
(h) Gas Cleaning System 4 BOF RHOB
(i) Furnace additive bin loading exhausting to stack 28
(j) Torch cut exhausting to stack 31
(k) Furnace additive hopper house exhausting to stack 35
(l) No.4 BOF Roof Monitor 29

D.0.6 Operation Condition [326 IAC 2-2-3] [326 IAC 2-2-1 (x)] [326 IAC 2-3-1 (s)] [326 IAC 2-3-1 (l)] [326 IAC 2-2-4, 5 and 6]

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003, 326 IAC 2-2-3, 326 IAC 2-2-1 (x), 326 IAC 2-3-1 (s), 326 IAC 2-3-1 (l), 326 IAC 2-2-4, 5 and 6, the production of hot molten metal from the No.7 Blast Furnace shall not exceed four million four hundred and seventeen thousand (4,417,000) tons per 365 consecutive days, with compliance demonstrated at the end of each day (a consecutive 24 hour period).

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

D.0.7 Emissions Factors and Performance Testing

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003:

(a) The Permittee shall use the emissions factors documented in Appendix-A of this permit in conjunction with the actual throughput of the emissions units in D.0.5 directly attributed to the operation of No.7 Blast Furnace to determine compliance with emissions limitations in conditions D.0.1, D.0.2, D.0.3 and D.0.4.

(b) Pursuant to IC 13-15-7-1, IC 13-15-7-2, 326 IC 2-1.1-9(2) and 326 IAC 2-1.1-11 the IDEM, OAQ reserves the authority to require the Permittee to conduct performance tests to verify the emissions factors in Appendix-A of this permit.

(c) After issuance of this permit, if the performance test results indicate a discrepancy between the emission factors in Appendix-A and the actual emissions rate observed

during the test, the Permittee shall inform IDEM, OAQ, Permits Branch of such variation within 90 days of the submission of performance test report to IDEM.

(d) Pursuant to IC 13-15-7-1, IC 13-15-7-2 and 326 IC 2-1.1-9(2), the IDEM, OAQ may re-evaluate the permit conditions and emissions factors in Appendix-A. IDEM, OAQ may, at its discretion, use the authority under IC 13-15-7-2, IC 13-15-7-2 and/or 326 IAC 2-1.1-9(2) to re-open and revise the permit to more closely reflect the actual performance test results using permit amendment or modification procedures.

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

D.0.8 Record Keeping Requirements

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003:

(a) To document compliance with D.0.6, the Permittee shall keep records of molten metal produced at the No.7 Blast Furnace in terms of tons of metal per three hundred and sixty five (365) days. These records shall be kept for at least a period of 60 months.

(b) In order to document compliance with conditions D.0.1, D.0.2, D.0.3, D.0.4 and D.0.5 the Permittee shall:

(1) Maintain records of the throughput or production that is directly attributed to (when handling material to or from) the operation and throughput at No.7 Blast Furnace at the emissions units listed in D.0.5.

(2) Maintain records of the emissions on monthly basis using the emissions factors in Appendix A in conjunction with throughput or production in item (1) of this sub-condition to calculate emissions from No.7 Blast Furnace operation modification project on monthly basis.

(3) These records shall be kept for at least a period of 60 months.

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

D.0.9 Reporting Requirements

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003, in the event the emissions recorded per D.0.8 (b)(2) in any consecutive 12 month period exceed the emissions limitations specified in D.0.1, D.0.2, D.0.3 or D.0.4, the Permittee shall submit detailed report along with pertinent records to the addresses listed in Section C - General Reporting Requirements and IDEM, OAQ, Permits Branch, within sixty (60) days of end of period 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).

D.0.10 Permit Expiration Date [326 IAC 2-2-8(a)(1)]

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003 and 326 IAC 2-2-8(a)(1) (PSD Requirements: Source Obligation) Significant Source Modification 089-16966-00316 to construct shall expire if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is discontinued for a continuous period of eighteen (18) months or more, or if construction is not completed within reasonable time. IDEM may extend the eighteen (18) month period upon satisfactory showing that an extension is justified.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

(a) No. 5 and 6 Blast Furnace processes, with a combined estimated maximum production rate of 2,506,000 tons per year of hot iron metal, comprised of the following facilities, process equipment and operational practices:

(1) One (1) Pulverized Coal Storage Bin with baghouse H (191), having a 400 ton storage capacity, estimated maximum throughput of 325,000 tons per year of pulverized coal, and a flow rate of 3500 acfm, exhausting through stack 191 and constructed in 1991.

(2) No. 5 Blast Furnace, installed in 1939 consisting of:

(A) One (1) Stockhouse, including coke screening.

(B) No. 5 Blast Furnace Stoves (3 units) with an estimated maximum combined heat input rate of 293 MMBtu/hr, using natural gas and blast furnace gas as fuel, sending hot air blast to No. 5 Blast Furnace and exhausting combustion emissions through stack 5.

(C) No. 5 Blast Furnace with an integral blast furnace gas cleaning system and blast furnace gas combusted at either No. 2AC station or the No. 5 Blast Furnace Stoves.

(D) No. 5 Blast Furnace Casthouse with casting emissions controlled by two (2) No. 5 Blast Furnace Casthouse Collection System Scrubbers having a flow rate of 40,000 acfm, exhausting through stack 1 with construction upgrades in 1986 and 1991.

(E) One (1) No. 5 Blast Furnace Casthouse Roof Monitor.

(F) Slag pots and pits for handling slag waste.

(3) No. 6 Blast Furnace, installed in 1942, consisting of:

(A) One (1) Stockhouse, including coke screening.

(B) No. 6 Blast Furnace Stoves (4 units) with an estimated maximum combined heat input rate of 293 MMBtu/hr, using natural gas and blast furnace gas as fuel, sending hot air blast to No. 6 Blast Furnace and exhausting combustion emissions through stack 6.

(C) No. 6 Blast Furnace with an integral gas cleaning system and blast furnace gas combusted at either No. 2AC station or the No. 6 Blast Furnace Stoves.

(D) No. 6 Blast Furnace Casthouse with casting emission controlled by No. 6 Blast Furnace Casthouse Collection System Scrubber having a flow rate of 40,000 acfm, exhausting through stack 2, with a construction upgrade in 1986 on this equipment.

(E) No. 6 Blast Furnace Casthouse Roof Monitor.

(F) Slag pots and pits for handling slag waste.

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 Lake County PM10 emission requirements [326 IAC 6.8-2-17]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)), the allowable PM10 emissions from No.5 and No. 6 Blast Furnace processes shall not exceed the following:

(a) PM10 emissions from pulverized coal storage Bin Vent Filter H (191) shall not exceed 0.003 grains per dry standard cubic foot, 0.09 pounds per hour.

(b) PM10 emissions from the stack serving No. 5 Blast Furnace Stoves (3 units) (stack 5), shall not exceed 0.016 pounds/MMBtu and 4.70 pounds per hour.

(c) PM10 emissions from the stack serving No. 6 Blast Furnace Stoves (4 units) (stack 6), shall not exceed 0.016 pounds/MMBtu and 3.64 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.1.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2), No. 5 Blast Furnace Casthouse Collection System Scrubbers (1), No. 6 Blast Furnace Casthouse Collection System Scrubber (2), the No. 5 Blast Furnace Casthouse Roof Monitor and No. 6 Blast Furnace Casthouse Roof Monitor 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.1.3 Sulfur Dioxide (SO_2)[326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a)(3), the sulfur dioxide emission rate from these units shall not exceed the following:

(a) SO_2 emissions from the stack serving No. 5 Blast Furnace Stoves (3 units) (stack 5) shall not exceed 0.140 pounds per MMBtu and 41.02 lbs/hour.

(b) SO_2 emissions from the stack serving No. 6 Blast Furnace Stoves (4 units) (stack 6) shall not exceed 0.140 pounds per MMBtu and 41.02 lbs/hour.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.1.5 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with D.1.1 (a), the coal storage bin baghouse H (191) for PM control shall be in operation and control emissions from the Pulverized Coal Storage Bin at all times that the No. 5 and No. 6 Blast Furnaces are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.1.6 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the scrubber and the flow rate of the scrubber used in conjunction with the No. 5 Blast Furnace Casthouse Collection System North Scrubber (1) and South Scrubber (1), and No. 6 Blast Furnace Casthouse Collection System Scrubber (2) at least once per day when the applicable Blast Furnace Casthouse is in operation and is venting to the atmosphere. The scrubbers shall be operated as follows:

(a) When for any one reading, the pressure drop across the No. 5 Blast Furnace Casthouse North scrubber (1) is outside the normal range of 6.5-9.0 kPa 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. When for any one reading, the flow rate of the scrubber is below the minimum of 22 liters per second 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) When for any one reading, the pressure drop across the No. 5 Blast Furnace Casthouse South scrubber (1) is outside the normal range of 6.5-9.0 kPa 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. When for any one reading, the flow rate of the scrubber is below the minimum of 22 liters per second 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.

(c) When for any one reading, the pressure drop across the No. 6 Blast Furnace Casthouse scrubber (2) is outside the normal range of 6.0-9.0kPa 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. When for any one reading, the flow rate of the scrubber is below the minimum of 20 liters per second 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 shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated at least once every six (6) months.

D.1.7 Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In the event that a scrubber system failure has been observed:

The feed to the process must be shut off immediately, and the process shall be shut down as soon as practicable, 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 C- Emergency Provisions).

D.1.8 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.1.3, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b) (1).

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

D.1.9 Record Keeping Requirements

(a) To document compliance with Conditions D. 1.3 and D.1.8, 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. 5 and No. 6 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.1.6, the Permittee shall maintain once per day records of the pressure drop across the scrubber and minimum flowrate during normal operation when venting to the atmosphere.

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

D.1.10 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO_2 emission rate in lb/MM Btu for each facility for each day in quarter, total fuel usage for each type at each facility each day and any violations of the limits in Condition D.1.3 in order to document compliance with Conditions D. 1.3 and D.1.9 (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) No. 7 Blast Furnace process is comprised of the following facilities, process equipment and operation practices:

(Significant Source Modification 089-16966-00316, issued on November 26, 2003 allows for the maximum production rate to increase to 4,417,000 tons per year of molten metal)

(1) Raw material handling and stockhouse material handling for receiving, storage and delivery of blast furnace raw material. The handling operation has an estimated maximum throughput of 7,704,971 tons of iron ore pellets per year; stored in four (4) storage bins with 8073 tons total capacity; 1,514, 604 tons of coke per year, stored in four (4) storage bins with 1314 tons total capacity; and 1,082,736 tons of flux and miscellaneous material per year, stored in six (6) storage bins with 4200 tons total capacity. Emissions are controlled by two (2) baghouses: (1) identified as 168-stockhouse pellet and flux handling baghouse, having a flow rate of 82,500 acfm and (2) identified as 172-stockhouse coke handling baghouse having a flow rate of 27, 500 acfm.

(2) Coke screening operation with emissions controlled by a baghouse, previously identified as 169, having a flow rate of 47,116 acfm and an average screening capacity of 400 tons per hour. (This equipment is not currently operating)

(3) One (1) blast furnace, identified as No. 7, constructed in 1980 with blast furnace gas processed by a gas cleaning system and equipped with three (3) flares, each with a 1.15 MMBtu per hour igniter capacity of flaring one-third of the maximum generated blast furnace gas through stack 195.

(4) No. 7 Blast Furnace Casthouse constructed in 1980 with casting emissions controlled by two (2) baghouses: identified as 166 (West baghouse) having a flow rate of 500,000 acfm; and 167 (East baghouse) having a flow rate of 300,000 acfm. Emissions from No. 7 blast furnace casthouse are also controlled by trough and runner covers and hoods over the tap holes and pugh ladle addition points.

(5) No. 7 Blast Furnace stoves (3 units) using blast furnace gas and natural gas as fuel with an estimated maximum combined heat input capacity of 953 MMBtu/ hr and emissions exhausting through stack 170. Significant Source Modification 089-16966-00316, issued on November 26, 2003 allows for a blast capacity increase and the construction of a fourth (4th) stove.

(6) One (1) Casthouse Roof Monitor 171.

(7) One (1) coke transfer tower (No.4), identified as164, installed in 1997, with a an estimated maximum throughput of 4020 tons of dry coke per day, enclosed and controlled by one (1) baghouse, and exhausting inside the tower.

(8) One (1) coke transfer point, identified as 169, installed in 1997, with an estimated maximum throughput of 4020 tons of dry coke per day, enclosed and controlled .

(9) Slag pits

(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 Lake County PM10 emission requirements [326 IAC 6.8-2-17]

Pursuant to 326 IAC 6.8-2-17, PM10 and total suspended particulate (TSP) emissions from the No. 7 Blast Furnace process including the increased capacity shall not exceed the following:

(a) PM10 emissions from the No. 7 blast furnace stockhouse pellet baghouse (168) shall not exceed 0.0052 grains per dry standard cubic foot and 4.00 pounds per hour.

(b) TSP emissions from the No. 7 blast furnace stockhouse coke baghouse (172) shall not exceed 0.01 grains per dry standard cubic foot and 2.00 pounds per hour.

(c) TSP emissions from the No. 7 blast furnace coke screening baghouse (169) shall not exceed 0.007 grains per dry standard cubic foot and 4.200 pounds per hour.

(d) PM10 emissions from the No. 7 blast furnace Casthouse West canopy baghouse (166) shall not exceed 0.003 grains per dry standard cubic foot and 11.22 pounds per hour.

(e) TSP emissions from the No. 7 blast furnace Casthouse East baghouse (167) shall not exceed 0.011 grains per dry standard cubic foot and 22.00 pounds per hour.

(f) PM10 emissions from the stack serving No. 7 blast furnace stove (3 units) stack (170) shall not exceed 0.0076 pounds/MMBtu and 6.32 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.2.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant 326 IAC 6.8-1-2, the No. 7 Blast Furnace Casthouse Roof Monitor (171) and No. 7 Blast Furnace flare (195) 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.2.3 Opacity [326 IAC 6.8-3]

Pursuant to 326 IAC 6.8-3, 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 for the No. 7 Blast Furnace operations (Casthouse Roof Monitor (171)) shall not exceed fifteen percent (15%), six (6) minute average.

D.2.4 Opacity

Pursuant to construction permit 089-9033-00316, issued on February 26, 1998, visible emissions from the coke transfer towers controlled by baghouses (Stack IDS 164 and 169) shall not exceed an opacity of five percent (5%), six minute average.

D.2.5 Particulate Matter (PM) [326 IAC 2-3]

Pursuant to construction permit 089-9033-00316, issued on February 26, 1998, PM emissions from the coal and coke handling equipment shall be limited as follows:

(a) the coke transfer tower (Stack ID 164) shall not exceed 0.075 pounds per hour, and

(b) the coke transfer point (Stack ID 169) shall not exceed 0.092 pounds per hour.

D.2.6 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2-3]

(a) Pursuant to Significant Source Modification (SSM) #089-16966-00316, issued on November 26, 2003 and 326 IAC 2-2-3 (Control Technology Review: Requirements), the carbon monoxide emissions from stack 167 associated with the east baghouse for No.7 Blast Furnace casthouse shall not exceed the following limitation:

Stack ID, associated equipment	CO emissions limitations	Units
167, Casthouse No.7 Blast Furnace east baghouse	0.56	pound/ton of hot metal produced

(b) Pursuant to SSM #089-21207-00316 and 326 IAC 2-2-3 (PSD BACT), the CO emissions from Stack 166 for Casthouse No. 7 Blast Furnace West Baghouse shall not exceed 2.22 pounds per ton of hot metal produced.

(c) Pursuant to SSM #089-21207-00316 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following for No. 7 Blast Furnace Stoves (Stack 170):

(1) The CO emissions from the No. 7 blast furnace stoves (stack 170) shall not exceed 3,968 lbs/hr based on a rolling 30-day average.

(2) No later than January 31, 2009, the Permittee shall install a continuous emissions monitoring system (CEMS) with stack 170 to monitor the CO emissions from No. 7 blast furnace stoves.

(3) The Permittee shall utilize a computerized monitoring system for the No. 7 blast furnace stoves to assist operational control and energy conservation.

(4) The Permittee shall complete the stove rebuild project (rebuilding the existing stoves No. 1 through 3) no later than March 30, 2011.

(5) After the stove rebuild project is complete, the Permittee shall submit a permit application with PSD BACT analysis to re-evaluate the PSD BACT requirements for the No. 7 blast furnace stoves based on monitoring data from the CO CEMS associated with Stack 170.

D.2.7 Operation Condition – Best Available Control Technology [326 IAC 2-2-3]

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003 and 326 IAC 2-2-3 (Control Technology Review: Requirements) the production of hot molten metal from the No.7 Blast Furnace shall not exceed four million four hundred and seventeen thousand (4,417,000) tons per 365 consecutive days, with compliance demonstrated at the end of each day (a consecutive 24 hour period).

D.2.8 Operation Restriction – Curtailment of slag pits operation [326 IAC 2-2][326 IAC 2-3]

In order to make requirements of 326 IAC 2-2 (PSD) not applicable, and pursuant to SSM# 089-21207-00316, the operation of the slag pits at No.7 Blast Furnace shall be curtailed to 662,550 tons of slag processed at these facilities per 12 consecutive month period with compliance demonstrated at the end of each month.

D.2.9 Operational Condition [326 IAC 2-2][326 IAC 2-3]

Pursuant to construction permit 089-9033-00316, issued on February 26, 1998, the requirements below shall be met to obtain the necessary credit for netting requirements:

(a) The following facilities must be permanently shutdown:

(1) the No. 4 BOF Teeming Facility,

(2) the foundry operations in the Mold Foundry Building,

(3) the No. 3AC Station Boiler 305,

(4) the 76 inch hot strip mill,

(5) the 100 inch plate mill,

(6) the No. 4 slabber mill (soaking pits 1-45), and the No. 4 slabber scarfer.

D.2.10 No.7 Blast Furnace Specific Control Requirements [326 IAC 6.8-7-5]

Pursuant to 326 IAC 6.8-7-5, tapping emissions from the No. 7 blast furnace casthouse shall be controlled by a hood vented to a baghouse. Canopy hoods shall be installed above each of the four (4) furnace tap holes. The hoods shall be ducted to a new three hundred seventy thousand (370,000) actual cubic feet per minute minimum design flow rate baghouse. Each hood shall be located just above the casthouse crane and extend via vertical sheeting to the casthouse roof. The system shall provide a minimum of one hundred eighty-five thousand (185,000) actual cubic feet per minute of air flow (fume capture) to each hood, when the corresponding tap hole is being drilled or plugged.

D.2.11 Carbon Monoxide [326 IAC 9-1-2(2)]

Pursuant to 326 IAC 9-1-2(2), the No.7 Blast Furnace waste gas stream shall be burned in one of the following: a direct-flame afterburner, boiler or recuperative incinerator. In instances where carbon monoxide destruction is not required, carbon monoxide emissions shall be released at such elevation that the maximum ground level concentration from a single source shall not exceed twenty percent (20%) of the maximum one (1) hour Indiana ambient air quality value for carbon monoxide.

D.2.12 Sulfur Dioxide [326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the SO_2 emissions from these units shall not exceed the following:

(a) SO_2 emissions from the No. 7 blast furnace stoves stack (170) shall not exceed 0.195 pounds per MMBtu and 162 lbs/hour.

(b) SO_2 emissions from the No. 7 blast furnace canopy shall not exceed 0.220 lbs/ton and 50.400 lbs/hour.

(c) SO_2 emissions from the No. 7 blast furnace casthouse baghouse shall not exceed 0.220 lbs/ton and 50.400 lbs/hour.

D.2.13 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.2.14 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]

(a) Within thirty (30) months of issuance of this permit, or from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform PM10 testing on the No. 7 blast furnace (West baghouse) (166) utilizing a testing method approved by the Commissioner to show compliance with conditions D.2.1, in accordance with Section C - Performance Testing. Testing shall be performed using a test method that is listed in 326 IAC 6.8-4-1 and is approved by the Commissioner. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

(b) Within thirty (30) months of issuance of this permit, or from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform TSP testing on the No. 7 blast furnace (East baghouse) (167) utilizing a testing method approved by the Commissioner to show compliance with condition D.2.1, in accordance with Section C - Performance Testing. Testing shall be performed using a test method that is listed in 326 IAC 6.8-4-1 and is approved by the Commissioner. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

(c) In order to demonstrate compliance with Conditions D.2.6(a) and D.2.6(b), within thirty (30) months from the date of the last valid compliance test, the Permittee shall perform CO testing on Stacks 166 and 167 for Casthouse Baghouses for No. 7 Blast Furnace utilizing a testing method approved by the Commissioner, in accordance with Section C - Performance Testing. These tests shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

D.2.15 Carbon monoxide emissions – Compliance Requirements [326 IAC 2-2-3]

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003 and 326 IAC 2-2-3 (Control Technology Review: Requirements) the carbon monoxide emissions, associated with the No.7 Blast Furnace shall be minimized, by utilizing the Blast Furnace Gas (BFG) produced at No. 7 Blast Furnace in the stoves at No.7 Blast Furnace or at No. 5 Boiler

House. When the excess BFG (not burned in the stoves) cannot be beneficially used for steam generation, it will be burned at the No. 7 Blast Furnace flare stack (195).

D.2.16 Particulate Control [326 IAC 2-7-6(6)]

(a) The No. 7 blast furnace stockhouse pellet baghouse (168) for PM control shall be in operation at all times that the stockhouse pellet process is in operation.

(b) The No. 7 blast furnace stockhouse coke baghouse (172) for PM control shall be in operation at all times that the No. 7 blast furnace coke screening process is in operation.

(c) The No. 7 blast furnace casthouse west baghouse (166) for PM control shall be in operation at all times that the No. 7 blast furnace is casting #3 and #4 tapholes.

(d) The No. 7 blast furnace casthouse east baghouse (167) for PM control shall be in operation at all times that the No. 7 blast furnace casthouse is casting #1 and #2 tapholes.

(e) Pursuant to construction permit 089-9033-00316, issued on February 26, 1998, the baghouses for the coke handling equipment (Stack IDs 268 and 269) shall be operated at all times when its associated process is in operation.

(f) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.2.17 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) Visible emission notations of the No. 7 blast furnace casthouse west baghouse (166) and No. 7 blast furnace casthouse east baghouse (167) stack exhausts 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 steps in accordance with Section C-Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.2.18 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the No. 7 blast furnace casthouse west baghouse (166), 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 range of 2.5-8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or

Exceedances. A 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 baghouse used in conjunction with the No. 7 blast furnace casthouse east baghouse (167), 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 range of 0.5-2.5 kPa 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 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.2.19 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

D.2.20 Blast Furnace Gas Flare Monitoring [326 IAC 9-1-2][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall install and maintain a monitor to detect the presence of a flame at the flare tips (3 flares) at the No. 7 Blast Furnace flare (195). The presence of a flame at the flare tip shall be monitored at all times when the vapors are being vented to the flare. The monitor shall be equipped with an automatic alarm, which activates when the presence of a flame is not detected during periods when vapors are being vented to the flare. Whenever the alarm is activated, 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.

D.2.21 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.2.12, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

D.2.22 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-2-3]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 326 IAC 2-2-3 (PSD BACT), the Permittee is required to calibrate, certify, operate and maintain a continuous emission monitoring system (CEMS) for measuring CO emissions rate from the No. 7 Blast Furnace stack (stack 170) in accordance with 326 IAC 3-5 and Condition D.2.23 to demonstrate compliance with Condition D.2.6(c)(1).

(b) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) The 30-day rolling average calculation shall be conducted as follows:

(i) The average CO emissions, for each hour, shall be recorded by completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period anytime the monitor is in service and is not malfunctioning or being calibrated. For any hour in which required maintenance or quality assurance activities occur a valid hour of data shall consist of valid CEM data from no less than two (2) 15-minute periods within the hour.

(ii) Daily average CO emissions will be calculated by taking the summation of the quality assured hourly average, obtained by Condition D.2.22(c)(i), and dividing by the number of hours in which there was a quality assured hourly average, to determine the average CO emissions for a particular day.

(iii) The 30-day rolling average will be calculated each day by summing the daily average CO emission rates for the previous 30 days and dividing by 30.

(d) Pursuant to 326 IAC 3-5-4(a), if revisions are made to the continuous monitoring standard operating procedures (SOP), the Permittee shall submit updates to the department biennially.

D.2.23 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(b) Within 180 days of date of installation of CO CEM system, the Permittee shall develop and implement a CO CEM operation and maintenance plan (O&M Plan) that includes an alternate procedure for quantifying CO emissions any time the CEMs is down for four (4) or more hours. The backup system will include a calibrated online process control CO analyzer on a representative portion of the stack gas flow. The primary CEMS shall be returned to operation as soon as practicable.

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5.

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

D.2.24 Record Keeping Requirements

(a) To document compliance with Condition D.2.6(c)(1), the Permittee shall maintain the CO CEMS data for the emissions from stack 170 for No. 7 Blast Furnace Stoves in accordance with D.2.22(c).

(b) To document compliance with Conditions D.2.12 and D.2.21, 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. 7 Blast Furnace.

(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.

(c) To document compliance with D.2.7, the Permittee shall keep records of molten metal produced at the No.7 Blast Furnace in terms of tons of metal per three hundred and sixty five (365) days. These records shall be kept for at least a period of 60 months.

(d) To document compliance with D.2.8, the Permittee shall keep records of slag produced at the No.7 Blast Furnace and processed at the slag pits in terms of tons of slag per month. These records shall be kept for at least a period of 60 months.

(e) In order to document compliance with Condition D.2.17, the Permittee shall maintain records of once per day visible emission notations of the No. 7 blast furnace casthouse west baghouse (166) and No. 7 blast furnace casthouse east baghouse (167) stack exhaust(s). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(f) In order to document compliance with condition D.2.18, the Permittee shall maintain once per day records of pressure drop across the baghouse during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(g) In order to document compliance with condition D.2.20, the Permittee shall maintain records of the occurrence of alarm events at the flare and response steps taken to correct the same.

(h) To document compliance with Conditions D.2.22 and D.2.23, the Permittee shall maintain records, including raw data of all monitoring data and supporting information, for a minimum of five (5) years from the date described in 326 IAC 3-5-7(a). The records shall include the information described in 326 IAC 3-5-7(b).

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

D.2.25 Reporting Requirements

(a) A quarterly report shall be submitted containing the calculated SO_2 emission rate in lb/MM Btu 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 7-4.1-11 (b)(2), in order to document compliance with Conditions D.2.12 and D.2.21. 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).

(b) A semi-annual summary of the information to document compliance with Condition D.2.8 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period 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.3 FACILITY OPERATION CONDITIONS

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

(c) One (1) Sinter Plant, constructed in 1959, with a an estimated maximum raw material usage of 1.4 million tons per year comprised of the following facilities, process equipment, and operational practices:

(1) Raw material handling and blend site.

(2) One (1) sinter plant windbox, controlled by the main baghouse with emissions exhausting through stack 7.

(3) One (1) sinter plant discharge end, controlled by the discharge end baghouse, and one (1) cooler station, partially controlled by the discharge end baghouse, with emissions exhausting through stack 8, installed in 1959.

(4) One (1) sinter plant upper screening station, with conveyors, screen hoods, and duct routed to and controlled by the upper screening station baghouse with emissions exhausting through stack 11. This equipment was constructed in 1998.

(5) Sinter loading, unloading, and transfer operations.

(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 Lake County PM Emission Requirements [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)), Total Suspended Particulate (TSP) emissions at the Sinter Plant shall not exceed the following:

(a) TSP emissions from the Windbox baghouse (7) shall not exceed 0.007 grains per dry standard cubic foot and 17.00 pounds per hour.

(b) TSP emissions from the Discharge end and cooler baghouse (8) shall not exceed 0.01 grains per dry standard cubic foot and 11.70 pounds per hour.

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.3.2 Particulate Matter (PM) [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1(d)), the PM10 emissions from the upper screening station baghouse (11) shall not exceed 0.022 grains per dry standard cubic foot of exhaust air.

D.3.3 Lake County Sulfur Dioxide (SO_2) Emission Limitations [326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a)(13), the SO_2 emissions from the sinter plant windbox (7) shall not exceed 180.000 pounds per hour.

D.3.4 Sinter Plant Volatile Organic Compounds (VOCs) [326 IAC 8-13-3]

Pursuant to 326 IAC 8-13-3(b) and (c), the sinter plant windbox exhaust gas VOC emissions shall not exceed the VOC emission limits calculated as follows:

(a) During the period May 1 through September 30, the total VOC emissions (the seasonal cap) shall not exceed the VOC emission limit of 150,973 pounds of VOC.

(b) Except as provided in 326 IAC 8-13-3(b)(3), on any day from May 1 through September 30, the sinter plant windbox exhaust VOC emissions (the maximum daily limit) shall not exceed 1162 pounds of VOC emissions.

(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 (either one (1) hour or eight (8) hour), the sinter plant windbox exhaust VOC emissions (the lower daily limit) shall not exceed the VOC emission limit of 987 lbs VOC/day.

(d) From October 1 through April 30, sinter plant windbox exhaust gas VOC emissions shall be limited to thirty-six hundredths (0.36) pound per ton of sinter produced. The limit shall be complied with on an operating day average basis.

(e) Pursuant to 326 IAC 8-13-4(b)(8) and an Ozone Action Plan, the Permittee shall do the following:

(1) Use a VOC continuous emissions monitoring system consistent with the continuous emissions monitoring requirements specified in 326 IAC 8-13-8 to ensure compliance with the applicable emission limits.

(2) Measure sinter at the P2 scale.

(3) Control mill scale oil and grease content before its removal from scale pits for use at the sinter plant. Control will be achieved by removing a portion of the oil and grease at the scale pits to help achieve compliance with the emission limits in 326 IAC 8-13-3. Removal may consist of skimming, vacuuming or other methods capable of reducing the amount of oil and grease becoming entrained on scale.

(4) Maintain the removal efficiency that is currently estimated at 90% at this value. ArcelorMittal USA, Inc. will continue operations to prevent “blinding” of the sinter plant windbox baghouse bags. The continuous emissions monitoring system will provide feedback on VOC emissions, if oil and grease content needs to be controlled. This procedure reflects current operation only and is subject to change while still meeting the emission limits in 326 IAC 8-13-3.

(5) Provide timely VOC emissions data to sinter plant operators during production. This information will be used to reduce the likelihood of an exceedance. In the event VOC emissions approach or exceed limits, sinter production will be reduced, burden characteristic will be changed, sinter process equipment operations will be modified or some other activity determined to be effective and that helps prevent an exceedance or reduces the length of exceedance.

(6) To predict high ozone days: the Permittee is a participant in IDEM’s Partners for Clean Air Program and receives notification of Ozone Action Days from IDEM - OAQ. The Permittee will initiate the ozone action plan. A high ozone level day shall be predicted by the Permittee by using notification from IDEM, OAQ of an ozone action day.

D.3.5 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.3.6 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 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.3.1 and D.3.3. Testing shall be performed using a test method that is listed in 326 IAC 6.8-4-1 (formerly 326 IAC 6-1-10.1(f)(2)) 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.3.7 Particulate Control [326 IAC 2-7-6(6)]

(a) The main and discharge end baghouses for particulate control shall be in operation at all times when the windbox, crusher, and cooler are in operation. During startup situations the windbox exhaust will not be initially directed to the main stack baghouse to prevent condensation damage to the baghouse. The exhaust will be redirected to the baghouse before the exhaust temperature exceeds 160 degrees F.

(b) Pursuant to Ispat's No. 3 Sinter Plant Fugitive Control Project which received an Exempt Construction and Operation Status Letter, CP 089-9176-00316 issued on March 30, 1998, the upper screening station baghouse operates when required by product fugitives.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.3.8 Continuous Emissions Monitoring [326 IAC 8-13-8]

(a) Pursuant to 326 IAC 8-13-8(a)(1) and (2), the Permittee shall demonstrate compliance with the emission limits in D.3.4 by continuously monitoring VOC emissions and

(b) comply with the CEM maintenance, operating procedures , quality assurance procedures, and performance specifications in 326 IAC 3-5.

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

D.3.9 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

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

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable 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.3.10 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the windbox main baghouse (7) used in conjunction with the sinter plant operations, at least once per day when the windbox is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the windbox main baghouse is outside the normal range of 2.0 and 15.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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 discharge end baghouse (8) used in conjunction with the sinter plant operations, at least once per day when the crusher~~,~~ and cooler are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the discharge end baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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.3.11 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

D.3.12 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.3.3, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

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

D.3.13 Record Keeping Requirements

(a) To document compliance with Conditions D.3.3 and D.3.12, the Permittee shall maintain the following records:

(1) Records of the total fuel usage for each type of fuel used, each day at the Sinter 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.

(b) To document compliance with Condition D.3.9, the Permittee shall maintain records of once per day visible emission notations of the windbox main baghouse (7), and discharge end baghouse (8) stack exhausts.

(c) To document compliance with Condition D.3.10, the Permittee shall maintain once per day records of pressure drop across the baghouse during normal operation when venting to the atmosphere.

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

D.3.14 Continuous Emission Monitoring - Record Keeping and Reporting [326 IAC 8-13]

(a) The Permittee shall comply with the record keeping and reporting requirements in 326 IAC 3-5 for continuous emissions monitoring system for VOC on sinter windbox (7). In addition, the Permittee shall comply with the following record keeping and reporting requirements:

(1) For the period May 1 through September 30, maintain the following records:

(A) The VOC emitted each day.

(B) The cumulative total of VOC emitted.

(C) The sinter produced each operating day.

(2) Within thirty (30) days of the exceedance of an applicable emission limit in 326 IAC 8-13-3, submit a report containing the following:

(A) The name and location of the source.

(B) The nature of the exceedance.

(C) The date of the occurrence.

(D) The cause of the exceedance, such as, but not limited to, production rates or characteristics of the sinter burden.

(E) The corrective action taken according to the corrective action plan in 326 IAC 8-13-4(b)(5).

(b) Submit the CEM certification reports according to the procedures and schedule in 326 IAC 3-5.

D.3.15 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO_2 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 7-4.1-11 (b)(2), in order to document compliance with Conditions D.3.3 and D.3.13 (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.4 FACILITY OPERATION CONDITIONS

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

(d) One (1) pulverized coal injection (PCI) system with a maximum capacity of 132 tons per hour for Nos. 5, 6 and 7 blast furnaces, constructed in 1991, comprised of the following facilities, process equipment, and operational practices:

(1) Raw coal handling, including rail car unloading facilities and 50,000 ton capacity storage pile (stack 192).

(2) System A- RC-1 and RC-2 conveyors with a maximum throughput of 400 tons per hour, used to move coal to raw coal storage bins, with a baghouse to control emissions at transfer points and exhausting through stack 185.

(3) System C- RC-2, RC-3 and RC-4 conveyors and two (2) Raw Coal Storage Bins with a storage capacity of 750 tons each, with a baghouse to control emissions at transfer points and exhausting through stack 186.

(4) System D and E-Two (2) 66 ton per hour Pulverizers, with a recovery cyclone and baghouse D and E in series on each unit exhausting through stack 187.

(5) System F and G- Two (2) 66 ton per hour Conveyors to two (2) Pulverized Coal Storage Bins with a total storage capacity of 30,000 cubic feet, each controlled by a baghouse F and G, exhausting through stack 189 and 190, respectively.

(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]

Pursuant to 326 IAC 6.8-2 (formerly 326 IAC 6-1-10.1(d)(19)), PM10 emissions from the PCI system shall not exceed the following:

(a) System A-conveyor transfer with baghouse control (185) shall not exceed 0.003 grains per dry standard cubic foot, 0.17 pounds per hour

(b) System C-conveyors and raw coal bins with baghouse control (186) shall not exceed 0.003 grains per dry standard cubic foot, 0.23 pounds per hour

(c) System D-coal pulverizer with cyclone and baghouse control (187) shall not exceed 0.0015 grains per dry standard cubic foot, 0.93 pounds per hour

(d) System E-coal pulverizer with cyclone and baghouse control (188) shall not exceed 0.0015 grains per dry standard cubic foot, 0.93 pounds per hour

(e) System F-No. 7 blast furnace coal storage bin No. 1 with baghouse control (189) shall not exceed 0.003 grains per dry standard cubic foot, 0.09 pounds per hour

(f) System G-No. 7 blast furnace coal storage bin No. 2 with baghouse control (190) shall not exceed 0.003 grains per dry standard cubic foot, 0.09 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.4.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2), the Coal unloading system exhausting to stack (192) 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.4.3 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.4.4 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with D.4.1, the baghouses for PM_{10} control shall be in operation and control the PCI Systems A-G except B (which was never built) are in operation.

(b) Pursuant to CP 089-2016-00316 issued on August 22, 1991, the equipment listed in the start of this section shall be operated and maintained in accordance with the manufacturer's specifications.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.4.5 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) Visible emission notations of the Coal pulverizer D baghouse (187) and Coal pulverizer E baghouse (188) exhausts 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 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.4.6 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the baghouses used in conjunction with the Coal pulverizer D (187) and Coal pulverizer E (188) at least once per day when the coal pulverizers are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.25 -1.5 kPa 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 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.4.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

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

D.4.8 Record Keeping Requirements

(a) In order to document compliance with Condition D.4.5, the Permittee shall maintain records of once per day visible emission notations of the Coal pulverizer D baghouse (187) and Coal pulverizer E baghouse (188) exhausts.

(b) In order to document compliance with Condition D.4.6, the Permittee shall maintain the records once per day of the pressure drop across the baghouse during normal operation.

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

SECTION D.5 FACILITY OPERATION CONDITIONS

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

(e) The No. 2 Basic Oxygen Furnace (BOF) Shop, comprised of the following facilities, process equipment, and operational practices:

(1) Raw material handling, ladle additive truck hopper loading system having an estimated maximum throughput of 328,000 tons per year of alloy and flux. Emissions from the truck hopper controlled by a baghouse, which has a flow rate of 75,000-acfm exhausting through stack 150. Emissions from the alloy and flux storage and handling system are controlled by a baghouse, which has a flow rate of 50,000-acfm, exhausting through stack 151. Both baghouses were constructed in 1974.

(2) One (1) Hot metal station containing reladling, desulfurization, and slag skimming operations having an estimated maximum capacity of 4,029,600 tons of hot metal per year. Captured emissions from the hot metal station and charging aisle are controlled by a baghouse having a flow rate of 360,000-acfm, exhausting through stack 152. Original construction was 1974 and an upgrade was completed in August 1994 as part of a consent decree.

(3) Two (2) BOFs, identified as No. 10 and No. 20, and operations including charging, oxygen blowing, tapping, and alloy addition with a total estimated maximum capacity of 4,543,600 tons of hot metal and scrap per year. Captured emissions controlled by two (2) off-gas scrubber systems with flares having a flow rate of 1,500,000-acfm each, exhausting through flare stacks 147 and 148. Construction commenced on this equipment in 1970. Uncaptured emissions exhausting through roof monitor 153 and charging and miscellaneous furnace emissions exhausting through a secondary ventilation scrubber having a flow rate of 194,000-acfm, exhausting through stack 149. The Off-gas scrubber systems were constructed in 1974 and the Secondary Vent scrubber was replaced in 2003.

(4) One (1) ladle metallurgy facility (LMF) station consisting of alloy addition, electric arc reheat, slag skimming, and raw material handling specifically for the metallurgy station with an estimated maximum throughput of 4,029,600 tons per year of steel. Captured emissions are controlled by a baghouse having a flow rate of 135,000-acfm, exhausting through stack 154. This equipment was constructed in 1985.

(5) One (1) Continuous casting operations consisting of slab casters, and three (3) torch cutoff machines. Leaded emissions from the casters exhaust through the caster fume baghouse, which has a flow rate of 171,000 acfm, exhausting through stack 159. Steam from the water spray cooling exhausts through three (3) vents along the caster, identified as stacks 160, 161, and 162. Fugitive emissions from the casting operations exhaust through a roof monitor, identified as 158. This equipment was constructed in 1985. (Bloom caster at this site is permanently shutdown)

(6) A tundish dump and repair station with leaded emissions controlled by a baghouse, which has a flow rate of 50,000 acfm, exhausting through stack 156. This equipment was constructed in 1989.

(7) Miscellaneous natural gas combustion used for ladle preheating, exhausting through stack 157, and tundish and ladle shroud preheating and drying, exhausting through No.2 BOF Shop Roof Monitors 155.

(8) Slag skimming into slag pots.

(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 PM Emission Requirements [326 IAC 6.8-2-17]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)), Total Suspended Particulates (TSP) emissions from the BOF Shop operations shall not exceed the following:

(a) TSP emissions from the No. 2 BOF truck and ladle hopper baghouse (150) shall not exceed 0.0052 grains per dry standard cubic foot and 0.800 pounds per hour.

(b) TSP emissions from the No. 2 BOF alloy and flux storage baghouse (151) shall not exceed 0.0052 grains per dry standard cubic foot and 0.530 pounds per hour.

(c) TSP emissions from the No. 2 BOF charging aisle reladling and desulfurization baghouse (152) shall not exceed 0.011 grains per dry standard cubic foot and 28.30 pounds per hour.

(d) TSP emissions from the No. 2 BOF No. 10 off-gas scrubber stack (147) shall not exceed 0.058 pounds per ton and 16.00 pounds per hour.

(e) TSP emissions from the No. 2 BOF No. 20 off-gas scrubber stack (148) shall not exceed 0.058 pounds per ton and 16.00 pounds per hour.

(f) TSP emissions from the No. 2 BOF secondary ventilation system scrubber (149) shall not exceed 0.015 grains per dry standard cubic foot and 12.00 pounds per hour.

(g) TSP emissions from the No. 2 BOF ladle metallurgical station baghouse (154) shall not exceed 0.0052 grains per dry standard cubic foot and 2.00 pounds per hour.

(h) TSP emissions from the No. 2 BOF caster fume collection baghouse (159) shall not exceed 0.0052 grains per dry standard cubic foot and 2.00 pounds per hour.

(i) TSP emissions from the No. 2 BOF tundish dump baghouse (156) shall not exceed 0.0052 grains per dry standard cubic foot and 2.200 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.5.2 Opacity [326 IAC 6.8-3]

Pursuant to 326 IAC 6.8-3 (formerly 326 IAC 6-1-10.1(e)), 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 limited as follows:

(a) The opacity for the No. 2 BOF truck and ladle hopper baghouse (150) shall not exceed five percent (5%), three (3) minute average.

(b) The opacity for the No. 2 BOF alloy and flux storage baghouse (151) shall not exceed five percent (5%), three (3) minute average.

(c) The opacity for the No. 2 BOF charging aisle reladling and desulfurization baghouse (152) shall not exceed five percent (5%), three (3) minute average.

(d) The opacity for the No. 2 BOF No. 10 off-gas scrubber stack (147) shall not exceed twenty percent (20%), six (6) minute average.

(e) The opacity for the No. 2 BOF No. 20 off-gas scrubber stack (148) shall not exceed twenty percent (20%), six (6) minute average.

(f) The opacity for the No. 2 BOF roof monitor (153) shall not exceed twenty percent (20%), three (3) minute average.

(g) The opacity for the No. 2 BOF secondary ventilation system scrubber (149) shall not exceed twenty percent (20%), six (6) minute average.

(h) The opacity for the No. 2 BOF ladle metallurgical station baghouse (154) shall not exceed five percent (5%), three (3) minute average.

(i) The opacity for the No. 2 BOF caster fume collection baghouse (159) shall not exceed five percent (5%), three (3) minute average.

(j) The opacity for the No. 2 BOF tundish dump baghouse (156) shall not exceed five percent (5%), three (3) minute average.

D.5.3 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), the particulate matter emissions from the No.2 BOF Furnace Roof Monitor (153), Continuous casting operations (160, 161, 162), No. 2 BOF Continuous Caster Roof Monitor (158), ladle reheating (157) and No. 2 BOF Shop Roof Monitor (155) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.5.4 Sulfur Dioxide (SO_2)[326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the sulfur dioxide emission rate from these units shall not exceed the following:

(a) SO_2 emissions from the stack serving No. 2 BOF secondary vent (149) shall not exceed 0.014 lbs/ton and 6.440 lbs/hour.

(b) SO_2 emissions from the stack serving No. 2 BOF charge aisle and HMS baghouse (152) shall not exceed 0.151 lbs/ton and 69.460 lbs/hour.

(c) SO_2 emissions from the stack serving No. 2 BOF ladle metal baghouse (154) shall not exceed 0.0.25 lbs/ton and 11.500 lbs/hour.

D.5.5 Carbon Monoxide [326 IAC 9-1-2(2)]

Pursuant to 326 IAC 9-1-2(2), the No. 2 BOF off-gas waste gas stream shall be burned in one of the following: a direct-flame afterburner, boiler or recuperative incinerator. In instances where carbon monoxide destruction is not required, carbon monoxide emissions shall be released at such elevation that the maximum ground level concentration from a single source shall not exceed twenty percent (20%) of the maximum one (1) hour Indiana ambient air quality value for carbon monoxide.

D.5.6 Operation restriction – shutdown of 2 A Blooming Mill and 21 inch Bar Mill [326 IAC 2-3] [326 IAC 2-2]

(a) Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003, 326 IAC 2-3 and 326 IAC 2-2, the 2A Blooming Mill and 21 inch Bar Mill shall be shutdown permanently before the restart of the No.7 Blast Furnace operation after the completion of the reline project in 2003. In addition within 180 days of restart of the No.7 Blast Furnace operation after the reline project in 2003, these emissions units shall be physically disconnected and permanently removed from service.

(b) On and after the date of issuance of this permit, the Permittee shall request the IDEM, OAQ to remove the 2A Blooming Mill and 21 inch Bar Mill and all the associated equipment permanently from the emissions inventory maintained by the State.

(c) This condition supercedes all conditions in previous permits that allow the operation of the 2A Blooming Mill and 21 inch Bar Mill and its associated equipment.

D.5.7 Operation Restriction – Relocation of Leaded Steel Production [326 IAC 2-3] [326 IAC 2-2]

Pursuant to Significant Source Modification No.: 089-25598-00316, the No. 2 BOF Shop shall not produce leaded steel. The equipment used to produce leaded steel shall be moved to the No. 1 EAF Shop.

D.5.8 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.5.9 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 from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform TSP and opacity testing on the No.2 BOF No.10 and No. 20 furnaces (stacks 147 and 148) utilizing a testing method approved by the Commissioner to show compliance with conditions D.5.1 and 5.2, in accordance with Section C - Performance Testing. Testing shall be performed using a test method that is listed in 326 IAC 6.8-3-1 (formerly 326 IAC 6-1-10.1(f)(2)) and is approved by the Commissioner. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

D.5.10 Particulate Control [326 IAC 2-7-6(6)]

(a) The No. 2 BOF truck and ladle hopper baghouse (150) for PM control shall be in operation at all times that any alloy unloading or handling is in process in the related controlled areas.

(b) The No. 2 BOF alloy and flux storage baghouse (151) for PM control shall be in operation at all times that any alloy unloading or handling is in process in the related controlled areas.

(c) The No. 2 BOF charging aisle reladling and desulfurization baghouse (152) for PM control shall be in operation at all times that the Hot metal station is in operation.

(d) The No. 2 BOF secondary ventilation system scrubber (149) for PM control shall be in operation at all times that either of the furnaces are in operation.

(e) The No. 2 BOF ladle metallurgical station baghouse (154) for PM control shall be in operation at all times that the ladle metallurgy facility station is in operation.

(f) The No. 2 BOF caster fume collection baghouse (159) for PM control shall be in operation all times that the continuous caster is in operation producing leaded steel/blooms.

(g) The No. 2 BOF tundish dump baghouse (156) for PM control shall be in operation at all times that the tundish dump and repair station are handling leaded steel/bloom tundishes. (This baghouse is only used for dumping leaded steel/bloom tundishes.)

(h) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.5.11 Particulate Matter (PM) and Carbon Monoxide (CO)

No. 2 BOF shop No. 10 BOF off-gas scrubber (147) and No. 20 BOF off-gas scrubber (148) system and the flare equipped with flare igniter for carbon monoxide control shall be in operation at all times that respective furnaces are in operation.

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

D.5.12 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) Visible emission notations of the No. 2 BOF shop charging aisle reladling and desulfurization (Hot Metal Station) baghouse (152), No. 2 BOF shop No. 10 BOF and No. 20 BOF off-gas scrubber stacks (147) and (148), and No. 2 BOF shop secondary ventilation system scrubber (149) exhausts 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 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.5.13 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop and flow rate of the scrubber used in conjunction with the No.2 BOF shop, 10 BOF (147), at least once per day when the 10 BOF is in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range of 10 and 15 kPA or a range established during the latest stack test and the flow rate of the scrubber is below the minimum of 80 liter per second, or a minimum rate 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 and flow rate of the scrubber used in conjunction with the No.2 BOF shop, 20 BOF (148), at least once per day when the 20 BOF is in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range of 10 and 15 kPA or a range established during the latest stack test and the flow rate of the scrubber is below the minimum of 80 liter per second, or a minimum rate 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.

(c) The Permittee shall record the pressure drop and flow rate of the scrubber used in conjunction with the No.2 BOF shop secondary ventilation system (149), at least once per day. When for any one reading, the pressure drop across the scrubber is outside the normal range of 25 and 45 inches of water or a range established during the latest stack test and the flow rate of the scrubber is below the minimum of 1250 gallons per minute, or a minimum rate 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.5.14 Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In the event that a scrubber system failure has been observed:

The feed to the process must be shut off immediately, and the process shall be shut down as soon as practicable, 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 C- Emergency Provisions).

D.5.15 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 No. 2 BOF shop charging aisle reladling and desulfurization (Hot Metal Station) (152) at least once per day when the Hot metal station in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0-10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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.5.16 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

D.5.17 No.2 BOF Flare Monitoring [326 IAC 9-1-2][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall install and maintain a monitor to detect the presence of a flame at the flare at the No. 2 BOF shop, 10 BOF (147), and 20 BOF (148). The presence of a flame at the flare tip shall be monitored at all times when the vapors are being vented to the flare. The monitor shall be equipped with an automatic alarm, which activates when the presence of a flame is not detected during periods when vapors are being vented to the flare. Whenever the alarm is activated, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.5.18 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.5.4, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

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

D.5.19 Record Keeping Requirements

(a) In order to document compliance with Condition D.5.12, the Permittee shall maintain records of once per day visible emission notations of the No. 2 BOF charging aisle reladling and desulfurization baghouse (152), No. 2 BOF No. 10 off-gas scrubber stack (147), No. 2 BOF No. 20 off-gas scrubber stack (148), and No. 2 BOF secondary ventilation system scrubber (149) stack exhaust(s).

(b) In order to document compliance with condition D.5.13(a) and D.5.13(b), the Permittee shall maintain records of the pressure drop across the scrubbers and flowrate once per day during the blow portion of the steel production cycle and with condition D.5.13(c), the Permittee shall maintain records of the pressure drop across the scrubbers and flowrate once per day during normal operation.

(c) In order to document compliance with condition D.5.15, the Permittee shall maintain once per day records of the pressure drop across the baghouse during normal operation when venting to the atmosphere.

(d) To document compliance with Conditions D.5.4 and D.5.18, the Permittee shall maintain the following records:

(1) Records of the total fuel usage for each type of fuel used, each day at the No. 2 BOF.

(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.

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

D.5.20 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO_2 emission rate in lb/MM Btu for each facility for each day in quarter, total fuel usage for each type at each facility each day and any violations of the limits in Condition D.5.4, in order to document compliance with Conditions D. 5.4 and D.5.19(d). 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.6 FACILITY OPERATION CONDITIONS

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

(f) No.4 Basic Oxygen Furnace (BOF) comprised of the following facilities, process equipment, and operational practices:

(1) Flux, alloy and waste oxide briquettes (WOB) unloading, hopper house and storage/handling facility.

(2) Scrap metal unloading/storage (scrap yard) and scrap metal charging box.

(3) Two (2) Hot metal transfer and desulfurization operations having an estimated maximum capacity of 4,222,320 tons of hot metal per year with captured emissions controlled by two (2) baghouses having flow rates of 190,000 and 220,000 acfm, exhausting through stacks 26 and 27. This equipment was constructed in 1977.

(4) Two (2) BOFs, identified as No. 50 and No. 60 and operations including charging, blowing, tapping, flux and alloy additions, and slag skimming with a total estimated maximum capacity of 5,676,366 tons of hot metal and scrap per year with uncaptured emissions exhausting through a roof monitor (stack 29), and captured emissions controlled by a four (4) off-gas scrubber system, exhausting through stack 38. This equipment was constructed in 1966. Charging, tapping, and miscellaneous furnace emissions are controlled by a secondary ventilation baghouse having a flow rate of 600,000 acfm, exhausting through stack 37. This equipment was constructed in 1977 and modified in 1996.

(5) Raw material handling system for the RHOB facility, including hopper house, alloy and flux storage bins having an estimated maximum throughput of 4,700,000 tons per year and dust emissions controlled by a baghouse having a flow rate of 48,100 acfm and exhausting through stack 33.

(6) One (1) RHOB vacuum degasser with natural gas-fired flare for exhaust gas control with an estimated maximum throughput of 4,686,600 tons/year of steel, exhausting through stack 32. This equipment was constructed in 1987.

(7) Ladle and tundish preheaters (stack 36).

(8) Two (2) argon stirring stations and one (1) continuous caster with tundish, caster mold exhausting through one (1) mold fume baghouse (stack 214) for housekeeping purposes only, and casting machine with cutoff, with steam vents exhausting through stacks 24 and 25.

(9) Torch cutoff exhausting into the building (stack 31).

(10) Maintenance and miscellaneous operations associated with the BOF.

(11) Furnace Additives Transfer House Baghouses, exhausting inside the buildings (stacks 28 and 35).

(12) Slag dumping.

(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][40 CFR 63, Subpart A] [Table 4 to 40 CFR 63, Subpart FFFFF]

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, No. 4 Basic Oxygen Furnace (BOF), except when otherwise specified by Table 4 to 40 CFR 63, Subpart FFFFF.

D.6.2 National Emissions Standards for Hazardous Air pollutants from Integrated Iron and Steel Manufacturing - Emission Limitations for Basic Oxygen Furnace (BOF) [40 CFR 63, Subpart FFFFF]

(a) The provisions of affected source is subject to the 40 CFR 63, Subpart FFFFF National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing (40 CFR 63, Subpart FFFFF) as of May 20, 2003. apply to the affected sources. A copy of this rule is available on the US EPA Air Toxics Website at http://www.epa.gov/ttn/atw/eparules.html. Pursuant to 40 CFR 63.7783(a), the Permittee must comply with these requirements on and after May 22, 2006.

(b) The following emission units comprise the affected source which is subject to 40 CFR 63, Subpart FFFFF:

No. 4 Basic Oxygen Furnace (BOF)

(c) The definitions of 40 CFR 63. Subpart FFFFF at 40 CFR 63.7852 are applicable to the affected source.

(d) 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.

D.6.3 Lake County PM10 emission requirements [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)) Total Suspended Particulate (TSP) emissions from the No. 4 BOF operations shall not exceed the following:

(a) TSP emissions from the No. 4 BOF hot metal transfer and desulfurization baghouses stack (26 and 27) shall not exceed 0.0052 grains per dry standard cubic foot and 8.26 pounds per hour

(b) TSP emissions from the No. 4 BOF shop off-gas scrubber stack (38) shall not exceed 0.187 pounds per ton and 100.00 pounds per hour.

(c) TSP emissions from the No. 4 BOF shop secondary ventilation system baghouse (37) shall not exceed 0.006 grains per dry standard cubic foot and 22.30 pounds per hour.

(d) TSP emissions from the No. 4 BOF shop vacuum degassing baghouse (33) shall not exceed 0.01 grains per dry standard cubic foot and 4.280 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.6.4 Opacity [326 IAC 6.8-3]

Pursuant to 326 IAC 6.8-3 (formerly 326 IAC 6-1-10.1(e)), 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 visible emissions from the BOF operations shall be limited as follows:

(a) Opacity from the No. 4 BOF hot metal transfer and desulfurization baghouses (26 and 27) shall not exceed five percent (5%), three (3) minute average.

(b) Opacity from the No. 4 BOF shop roof monitor (29) shall not exceed twenty percent (20%), three (3) minute average.

(c) Opacity from the No. 4 BOF shop off-gas scrubber (38) shall not exceed twenty percent (20%), six (6) minute average.

(d) Opacity from the No. 4 BOF shop secondary ventilation system baghouse (37) shall not exceed five percent (5%), three (3) minute average.

(e) Opacity from the No. 4 BOF shop vacuum degassing material handling baghouse (33) shall not exceed five percent (5%), three (3) minute average.

D.6.5 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), the particulate matter emissions from the No.4 BOF Furnace Roof Monitor (29), RHOB vacuum degassers (32), ladle reheating (36), mold fume baghouse (stack 214), continuous caster (24 and 25) and Furnace Additive Hopper baghouse (35) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.6.6 Sulfur Dioxide (SO_2)[326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the sulfur dioxide emission rate from these units shall not exceed the following:

(a) SO_2 emissions from the stack serving No. 4 BOF HMS baghouse S and N (26 and 27) shall not exceed 0.151 lbs/ton and 36.391 lbs/hour.

(b) SO_2 emissions from the stack serving No. 2 BOF secondary vent stack (37) shall not exceed 0.001 lbs/ton and 0.535 lbs/hour.

D.6.7 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.6.8 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 from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform TSP and opacity testing on the No. 4 BOF (stack 38) utilizing a testing method approved by the Commissioner to show compliance with conditions D.6.3 and D.6.4, in accordance with Section C - Performance Testing. Testing shall be performed using a test method that is listed in 326 IAC 6.8-4-1 (formerly 326 IAC 6-1-10.1(f)(2)) and as approved by the Commissioner. 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.6.9 Particulate Control [326 IAC 2-7-6(6)]

(a) The hot metal transfer and desulfurization operation baghouses (26 and 27) for PM control shall be in operation at all times that any of the respective processes are in operation.

(b) The BOF and process off-gas scrubber system (38) and secondary ventilation baghouse (37) shall be in operation at all times that either of the furnaces are in operation.

(c) Raw material handling for RHOB facility baghouse (33) shall be in operation at all times that any of the processes are in operation.

(d) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.6.10 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) Visible emission notations of the No. 4 BOF shop off-gas scrubber (38), No. 4 BOF shop secondary ventilation system baghouse (37), No. 4 BOF shop reladling and desulfurization (Hot Metal Station) baghouse north (26) and No. 4 BOF reladling and desulfurization (Hot Metal Station) baghouse south (27) 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 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.6.11 Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop and flow rate of the scrubber used in conjunction with the No. 4 BOF shop off-gas scrubber (38), at least once per day when the 4 BOF shop is in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range of 25 and 40 inches of water or a range established during the latest stack test and the flow rate of the scrubber is below the minimum of 600 gallons per minute, or a minimum rate 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.6.12 Failure Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

In the event that a scrubber system failure has been observed:

The feed to the process must be shut off immediately, and the process shall be shut down as soon as practicable, 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 C- Emergency Provisions).

D.6.13 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the No. 4 BOF hot metal transfer and desulfurization baghouse north (26) at least once per day when the Hot metal station is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.5-10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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 baghouse used in conjunction with the No. 4 BOF hot metal transfer and desulfurization baghouse south (27) at least once per day when the Hot metal station is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0-12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C-Response to Excursions or Exceedances. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C-Response to Excursions or Exceedances, shall be considered a deviation of this permit.

(c) The Permittee shall record the pressure drop across the baghouse used in conjunction with No. 4 BOF shop secondary ventilation system baghouse (37) at least once per day when the Hot metal station is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.5-10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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.6.14 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

D.6.15 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.6.6, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

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

D.6.16 Record Keeping Requirements

(a) In order to document compliance with Condition D.6.10, the Permittee shall maintain records of once per day visible emission notations of the No. 4 BOF shop off-gas scrubber (38), No. 4 BOF shop secondary ventilation system baghouse (37) and No. 4 BOF hot metal transfer and desulfurization baghouses (26 and 27) stack exhausts.

(b) To document compliance with Condition D.6.11, the Permittee shall maintain the records, once per day of the pressure drop across the scrubber and flow rate during normal operation.

(c) In order to document compliance with condition D.6.13, the Permittee shall maintain the records once per day of the pressure drop across the baghouses during normal operation.

(d) To document compliance with Conditions D.5.4 and D.5.17, the Permittee shall maintain the following records:

(1) Records of the total fuel usage for each type of fuel used, each day at the No. 4 BOF.

(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.

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

D.6.17 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 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 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 for affected source shall be submitted no later than May 22, 2006.

(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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

D.6.18 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO_2 emission rate in lb/MM Btu for each facility for each day in quarter, total fuel usage for each type at each facility each day and any violations of the limits in Condition D.6.6, in order to document compliance with Conditions D. 6.6 and D.6.16 (d). 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.7 FACILITY OPERATION CONDITIONS

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

(g) No. 1 Lime Plant was constructed in 1973 with an estimated maximum capacity of 569,400 tons per year of lime comprised of the following facilities, process equipment, and operational practices:

(1) Limestone unloading, storage and screening area.

(2) Two (2) Limestone preheaters, two (2) rotary kilns with an estimated maximum heat input rate of 207 MMBtu/hr fueled by natural gas or residual fuel oil, with exhaust from kilns routed back to preheaters and then to a set of multicyclones. The emissions from the multicyclone are controlled by two (2) baghouses exhausting through stacks 45 and 49.

(3) Dust fines are sent to a dust bin, with emissions controlled by a baghouse and exhausting through stack 46.

(4) Ten (10) storage silos receive an estimated maximum of 569,400 tons per year of finished lime, with fines controlled by lime handling baghouses and exhausting through stack 47.

(5) Fugitive control project including loadout spout on rejection bin controlled by existing kiln baghouse, preheater area enclosure around two (2) kiln feed hood/ ram loadout dribbles, preheater area loading spouts for truck loading with displaced air controlled by existing kiln baghouse and ten (10) loading spouts with emissions controlled by baghouse and truck loadout area with exhaust controlled by loadout baghouse and exhausting through stack 48. This equipment was upgraded in 1997.

(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 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 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 affected source except when otherwise specified in Table 8 to 40 CFR 63 Subpart AAAAA.

D.7.2 National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants [40 CFR 63, Subpart AAAAA]

(a) The affected source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Lime Manufacturing Plants, (40 CFR 63, Subpart AAAAA), as of January 5, 2004. A copy of this rule is available on the US EPA Air Toxics Website at http://www.epa.gov/ttn/atw/eparules.html. Pursuant to 40 CFR 63.7083(b), the Permittee must comply with these requirements on and after January 5, 2007.

(b) The following emissions units comprise the affected source that is subject to 40 CFR 63, Subpart AAAAA:

The No.1 and No. 2 Kiln baghouses (45), (49), and their associated cooler(s), and processed stone handling (PSH) operation system(s)

(c) The definitions of 40 CFR 63. Subpart AAAAA at 40 CFR 63.7143 is applicable to the affected source

(d) 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.

D.7.3 Lake County PM10 emission requirements [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)), PM10 emissions from the No. 1 Lime Plant operations shall not exceed the following:

(a) Combined PM_{10} emissions from the No.1 and No. 2 Kiln baghouses stacks (45) and (49) shall not exceed 0.110 pounds per ton and 7.149 pounds per hour

(b) PM10 emissions from the Storage Silo baghouse (47) shall not exceed 0.085 pounds per ton and 5.530 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.7.4 Sulfur Dioxide [326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the allowable sulfur dioxide (SO_2) emission rate from the No. 1 and No. 2 Kiln baghouses (45 & 49) shall not exceed 0.46 lb/MMBtu and 32.08 lbs/hour.

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 Particulate Control [326 IAC 2-7-6(6)]

(a) The No.1 and No. 2 Kiln baghouses (45), (49), Storage Silo baghouse (47), micro-pulse baghouse (46) and Truck loadout baghouse (48) for PM control shall be in operation and control emissions from the No. 1 Lime Plant operations at all times that the No. 1 Lime Plant is in operation and associated equipment is also in operation. Lime kiln operation begins when stone is charged to the kiln.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.7.7 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) Visible emission notations of the No.1 and No. 2 Kiln baghouses stacks (45) and (49) exhausts 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 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.7.8 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the No.1 and No. 2 Kiln baghouses (45) and (49) and Storage Silo baghouse (47) at least once per day when the No.1 and No. 2 Kiln and Storage Silo are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C-Response to Excursions or Exceedances. A 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.7.9 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

D.7.10 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.7.4, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

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

D.7.11 Record Keeping Requirements

(a) In order to document compliance with Condition D.7.7, the Permittee shall maintain records of once per day visible emission notations of the No.1 and No. 2 Kiln baghouses stacks (45) and (49).

(b) To document compliance with Condition D.7.8, the Permittee shall maintain the records of the pressure drop across the baghouses once per day during normal operation.

(c) To document compliance with Conditions D.7.4 and D.7.10, 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.1 and No. 2 Kilns.

(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.7.12 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 regarding which compliance option or options will be chosen in the Part 70 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 permit the applicable requirements of 40 CFR 63, Subpart AAAAA, 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 twenty-seven months after the effective date of January 5, 2007.

(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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

D.7.13 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO_2 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 the limits in Condition D.7.4 in order to document compliance with Conditions D.7.4 and D.7.11(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.8 FACILITY OPERATION CONDITIONS

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

(h) No. 1 Electric Arc Furnace comprised of the following facilities, process equipment, and operational practices:

(1) Bulk alloy handling: Raw material unloading, piling, and transporting of scrap metal, fluxes, and alloys.

(2) Raw material charging to the electric arc furnace.

(3) One (1) electric arc furnace with eccentric bottom tapping (EBT), having an estimated maximum annual capacity of 975,000 tons with emissions controlled by a baghouse having a flow rate of 500,000 acfm exhausting through baghouse roof monitor (141) commencing operation in 1970 and upgraded in 1996.

(4) One (1) ladle metallurgical facility (LMF) station constructed in 1989 with a maximum annual capacity of 975,900 tons with emissions controlled by a baghouse having a flow rate of 40,000 acfm exhausting through stack 143.

(5) Five (5) natural gas ladle preheaters constructed in 1990, each has one (1) or two (2) burners with a 15 MMBtu per hour combined maximum heat input and emissions uncontrolled exhausting through stack 140.

(6) One (1) continuous casting tundish and one (1) continuous casting mold operations controlled by a baghouse during leaded steel production having a flow rate of 70,000 acfm and exhausting through stack 137.

(7) Cooling operation exhausting through stack 145.

(8) Slag handling operations.

(9) EAF Shop Roof Monitor (stack 142).

(10) One (1) leaded steel torch cutoff operation controlled by a baghouse during leaded steel production having a flow rate of 70,000 acfm and exhausting through stack 138.

(11) One (1) leaded steel LMF ladle dump and repair station controlled by a baghouse during breakout and removal of lead-contaminated refractory materials having a flow rate of 100,000 acfm and exhausting through stack 136.

(i) Direct Reduced Iron (DRI) storage and conveying system constructed in 2001, comprised of the following facilities, process equipment, and operational practices:

(1) One (1) enclosed truck/trailer unloading area identified as 213 with a maximum throughput of 400,000 tons per year of DRI.

(2) A DRI conveyor system consisting of:

(A) One (1) 20,000 cu. ft. capacity enclosed DRI storage silo with excess air vented through the roof and then through one of the bin vents.
(B) One (1) horizontal trough belt stocking conveyor.
(C) Multiple Delivery Conveyors.

(3) Emission control system for (1) and (2) to remove particulate matter consisting of:

(A) Bin Vent Filter No. 1 (210)
(B) Bin Vent Filter No. 2 (211)
(C) Bin Vent Filter No. 3 (212)

(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 Lake County PM10 emission requirements [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)), PM10 emissions from the electric arc furnace operations shall not exceed the following:

(a) PM10 emissions from the electric arc furnace shop ladle metallurgical station baghouse (143) shall not exceed 0.01 grains per dry standard cubic foot and 0.820 pounds per hour.

(b) PM10 emissions from the electric arc furnace shop direct shell evacuation system baghouse roof monitor (141) shall not exceed 0.0052 grains per dry standard cubic foot and 17.14 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.8.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), the particulate matter emissions from the regenerative horizontal ladle preheaters (140), continuous casting and cooling operations (138 and 145), EAF Shop Roof Monitor (142) and DRI Bin Vent Filters (210-212) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.8.3 Opacity [326 IAC 6.8-3]

Pursuant to326 IAC 6.8-3 (formerly 326 IAC 6-1-10.1(e)), 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 from the electric arc furnace operations shall be limited as follows:

(a) Opacity from the electric arc furnace direct shell evacuation system baghouse (141) shall not exceed five percent (5%), six (6) minute average.

(b) Opacity from the electric arc furnace shop roof monitor (142) shall not exceed twenty percent (20%), six (6) minute average.

(c) Opacity from the electric arc furnace shop ladle metallurgical station baghouse (143) shall not exceed five percent (5%), six (6) minute average.

D.8.4 Sulfur Dioxide Emissions Limitations [326 IAC 2-2][326 IAC 2-3]

Pursuant to Construction Permit 089-3630-00316 issued March 20, 1995, the sulfur dioxide (SO_2) emissions from the No. 1 electric arc furnace (EAF) and ladle metallurgy facility (LMF) shall be limited as follows:

(a) SO_2 emissions from the EAF shall be less than 336.7 tons per 12 consecutive months with compliance determined at the end of each month, based on the total tons of each series steel produced times the pounds of SO_2 per ton of steel (pounds of SO_2 divided by tons of steel);

(b) The EAF pounds of SO_2 divided by tons of steel for calculation purposes shall be: 0.083 pounds of SO_2 per ton of steel for non-sulfur bearing heats, 0.531 pounds of SO_2 per ton of steel for 1100 series steel, and 1.752 pounds of SO_2 per ton of steel for 1200 series steel; and

(c) The amount of molten steel to be processed in the LMF (SS-2) shall be less than 975,900 tons per 12 consecutive months with compliance determined at the end of each month and SO_2 shall not exceed 0.107 pounds per ton.

The above limits will maintain emissions below 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset) level requirements.

D.8.5 Sulfur Dioxide - Combustion Fuel Usage [326 IAC 2-2][326 IAC 2-3]

Pursuant to CP 089-3630-00316 issued March 20, 1995, combustion sulfur dioxide emissions from the Electric Arc Furnace shall be limited by using natural gas-fired burners.

D.8.6 Sulfur Dioxide [326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the sulfur dioxide (SO_2) emissions from the EAF shop ladle metal baghouse (143) shall not exceed 0.125 lbs/ton and 13.90 lbs/hour.

D.8.7 Ladle Preheater Limits [326 IAC 2-2][326 IAC 2-3]

Pursuant to Amendment 089-9155, issued January 7, 1998, the regenerative ladle preheaters shall not exceed the following:

(a) the five ladle preheaters shall be fired by natural gas and limited to firing 130.9 million cubic feet per year;

(b) combined nitrogen oxide emissions shall not exceed 37.50 pounds per hour, and 42.65 tons per year;

(c) carbon monoxide emissions shall not exceed 1.15 pounds per hour and 1.31 tons per year.

D.8.8 Carbon Monoxide Emissions [326 IAC 2-2]

Pursuant to Construction Permit 089-3630-00316 issued March 20, 1995, the required amount of oxygen shall be supplied to the EAF to ensure that the carbon monoxide emissions shall not exceed 4.67 pounds per ton.

This limit will maintain emissions below 326 IAC 2-2 (Prevention of Significant Deterioration)

D.8.9 Prevention of Significant Deterioration and Emission Offset [326 IAC 2-2][326 IAC 2-3]

(a) Pursuant to Construction Permit (45) 1856 issued October 17, 1990, that prior to the start of operation of the five natural gas ladle preheaters, the existing three cold combustion type horizontal ladle preheaters at the No. 1 Electric Furnace shop will be removed from operation.

(b) Pursuant to Construction Permit 089-9033-00316 issued on February 26, 1998, the No. 80 furnace at the No. 1 Electric Arc Furnace Shop and the No. 2AC boiler 207-10 shall be permanently shutdown as required in CP No. 089-3630, issued on March 20, 1995. Also, as required in CP No. 089-6919-00316 issued on December 30, 1996, the emissions from the No. 1 Electric Arc Furnace shop (stacks 141 and 143) shall be limited as follows in tons per year:

TSP	PM_{10}	SO_2	Lead	VOC	NO_x	CO
133.2	108.0	336.7	1.23	11.3	159.6	2303.5

(c) Pursuant to CP 089-3630-00316 issued March 20, 1995, the 70.6 tons per year of sulfur dioxide shall be offset by 77 tons per year credit from the permanent shutdown of the 2AC boiler No. 207-10.

(d) Pursuant to Significant Source Modification No.: 089-25598-00316, the production of leaded steel at the No. 1 Electric Arc Furnace Shop shall not exceed 640,900 tons per twelve (12) consecutive months with compliance determined at the end of each month, and the lead emission from the No. 1 Electric Arc Furnace Shop shall be limited as follows:

EAF Related Emissions	Stack	Limit in lbs lead/ton of leaded steel
No. 1 EAF Shop LMF	Stack 143 with baghouse	0.00028
No. 1 EAF Caster Tundish & Mold	Stack 137 with baghouse	0.00007
No. 1 EAF Caster Torch Cutoff	Stack 138 with baghouse	0.00028

EAF Related Emissions	Stack	Limit in lbs lead/hr
No. 1 EAF LMF Ladle Repair	Stack 136 with baghouse	0.0094

The above limits and conditions will maintain emissions below 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset) level requirements.

D.8.10 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.8.11 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) Within thirty (30) months of issuance of this permit (T089-6577-00316), or from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform SO2 and opacity testing on the electric arc furnace baghouse (stack 141) and the Ladle Metallurgical Facility (stack 143) utilizing a testing method approved by the Commissioner conditions D.8.6 and D.8.8, in accordance with Section C - Performance Testing. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

(b) Pursuant to Significant Source Modification 089-25598-00316, within 60 days of maximum leaded steel production, but no later than 180 days after the start of leaded steel production at the No. 1 Electric Arc Furnace, the Permittee shall perform lead (Pb) emissions testing, utilizing methods approved by the Commissioner to show compliance with condition D.8.9 for stacks 136, 137, and 138 for the No. 1 Electric Arc Furnace Shop. Testing shall be conducted in accordance with Section C –Performance Testing. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

D.8.12 Particulate Control [326 IAC 2-7-6(6)]

(a) The electric arc furnace baghouse (141) for PM10 control shall be in operation at all times that the electric arc furnace is in operation.

(b) The ladle metallurgical station baghouse (143) for PM10 control shall be in operation at all times that the ladle metallurgical station is in operation.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.8.13 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) Visible emission notations of the electric arc furnace shop baghouses (141, 136, 137, and 138) exhausts shall be performed once per day during normal daylight operations. 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 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.8.14 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the electric arc furnace (141) at least once per day when the electric arc furnace is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0-10.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C-Response to Excursions or Exceedances. A 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 baghouse used in conjunction with the ladle metallurgical station processes (143) at least once per day when the ladle metallurgical station processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0-10.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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.

(c) The Permittee shall record the pressure drop across the baghouses used in conjunction with the No. 1 EAF Shop Caster Tundish and Mold (137), Caster Torch Cutoff (138), and Ladle Dump and Repair (136) processes at least once per day when the No. 1 EAF Shop Caster Tundish and Mold (137), Caster Torch Cutoff (138), and Ladle Dump and Repair (136) processes are in operation producing leaded steel. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0-10.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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.8.15 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

D.8.16 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.8.9, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

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

D.8.17 Record Keeping Requirements

(a) To document compliance with Conditions D.8.6 and D.8.16, 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 EAF.

(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) In order to document compliance with Condition D.8.9(d), the Permittee shall maintain records of the tons of leaded steel produced at the No. 1 EAF Shop.

(c) In order to document compliance with Condition D.8.13, the Permittee shall maintain records of once per day visible emission notations of the electric arc furnace operations baghouse stack exhaust(s). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(d) In order to document compliance with condition D.8.14, the Permittee shall maintain the once per day records of the pressure drop across the baghouse during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day).

(e) Pursuant to CP 089-3630, issued March 20, 1995, a log of the information necessary to document compliance with Conditions D.8.4 (a), (b), (c), D.8.5, and D.8.9(c), shall be maintained.

(f) A log of the information necessary to document compliance with Condition D.8.7 shall be maintained. The records shall include the cumulative amount of natural gas fired by the ladle preheaters for each month of operation.

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

D.8.18 Reporting Requirements

(a) A quarterly report shall be submitted containing the calculated SO_2 emission rate in lb/MM Btu 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 7-4.1-11 (b)(2), in order to document compliance with Conditions D. 8.6 and D.8.17 (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).

(b) A quarterly summary of the information to document compliance with Condition D.8.9(d) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.9 FACILITY OPERATION CONDITIONS

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

(j) 80" Hot Strip Mill comprised of the following facilities, process equipment, and operational practices:

(1) One (1) No. 4 Walking Beam Furnace, with an estimated maximum heat input rate of 720 MMBtu/hr, equipped with low NOx burners and using natural gas as fuel, exhausting through stack 101 and 102, installed in 2001.

(2) One (1) No. 5 Walking Beam Furnace, with an estimated maximum heat input rate of 685.6 MMBtu/hr, exhausting through stack 107, installed in 1995.

(3) One (1) No. 6 Walking Beam Furnace, with an estimated maximum heat input rate of 685.6 MMBtu/hr, exhausting through stack 108, installed in 1995.

(4) One (1) Hot Rolling Mill Operation, including roughing mill with cooling water spray, crop shear and finishing stands exhausting to roof monitor 109.

(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.9.1 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), the particulate matter emissions from the No. 5 Walking Beam Furnace, No. 6 Walking Beam Furnace, No. 4 Walking Beam Furnace and Hot rolling mill operation shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.9.2 Walking Beam Furnace Limitations [326 IAC 2-2][326 IAC 2-3]

Pursuant to CP 089-4400 issued on August 23, 1995, the Walking Beam Furnaces shall be limited as follows:

(a) NOx emissions shall not exceed 357 pounds per million cubic feet of natural gas.

(b) Carbon monoxide emissions shall not exceed 13 pounds per million cubic feet of natural gas

(c) the total heat input to the three walking furnaces shall not exceed an hourly rate of 1371.2 MMBtu/hr

D.9.3 Fuel Usage Limit [326 IAC 2-2]

Pursuant to CP 089-4400 issued on August 23, 1995, the amount of natural gas-fired shall be limited to twelve billion ($12X10^9$) cubic feet per 12 consecutive months with compliance determined at the end of each month.

D.9.4 Sulfur Dioxide [326 IAC 2-2]

Pursuant to CP 089-4400 issued on August 23, 1995, SO2 emissions from the 80" Hot Strip Mill, Walking Beam Furnaces shall be minimized by using natural gas only as fuel.

D.9.5 PSD and Emissions Offset Credit Limits [326 IAC 2-2 and 326 IAC 2-3]

(a) Pursuant to 326 IAC 2-2, 326 IAC 2-3 and CP 089-4400 issued on August 23, 1995, the permanent shutdown of the following facilities shall continue in effect:

(1) “C” Coke Battery underfire

(2) “C” Coke Battery preheater

(3) “C” Coke Battery process fugitives

(4) “C” Coke Battery NH4 destruct

(5) No. 3 Blast Furnace Stoves

(6) 80" Hot Strip Mill Pusher Furnaces

(7) No. 3 Bloom Mill reheat

(8) 14" Bar Mill reheat furnaces

(9) 24" Bar Mill reheat furnaces

(10) No. 3 Open Hearth

(11) 10" Bar Mill Reheat Furnace

(12) 44" Hot Strip Mill reheat

(b) The reactivated two (2) natural gas fired Pusher Furnaces in CP 089-3192**,** issued on October 26, 1994**,** and the previously restricted backup Furnaces in PC (45) 1717**,** issued on December 15, 1988**,** at the 80" Hot Strip Mill shall be permanently removed from service.

These conditions will satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emissions Offset).

D.9.6 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.9.7 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 from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform NOx testing on the No. 4 Walking Beam Furnace (stacks 101 and 102), No.5 Walking Beam Furnace (107) and No. 6 Walking Beam Furnace (108) utilizing a testing method approved by the Commissioner to show compliance with condition D.9.2(a), in accordance with Section C - Performance Testing. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

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

D.9.8 Record Keeping Requirements

(a) To document compliance with Condition D.9.3, the Permittee shall maintain records of natural gas use.

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

D.9.9 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.9.3 and D.9.8 (a) 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.

SECTION D.10 FACILITY OPERATION CONDITIONS

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

(k) 12" Bar Mill comprised of the following facilities, process equipment, and operational practices:

(1) One (1) Billet Inspection Line Shotblaster, installed in 1994 with emissions controlled by a baghouse having an estimated maximum flow rate of 5000 acfm vented inside the building.

(2) One (1) Billet Grinding installed in 1977 exhausting through stack 87.

(3) One (1) natural gas fired Billet Reheat Furnace, installed in 1977, having an estimated maximum heat input of 375 MMBtu/hr, exhausting through stack 89

(4) One (1) 23 Stand Rolling Mill exhausting to roof monitor 88.

(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 Particulate Matter [326 IAC 6.8-2-6]

Pursuant to 326 IAC 6.8-6-10 (formerly 326 IAC 6-1-10.1(h)(13)), the 12" Bar Mill billet reheat furnace (89) shall fire natural gas only and shall not exceed PM10 emissions of 0.003 lbs/MMBtu and 1.090 lbs/hour

D.10.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), the particulate matter emissions from the Billet Inspection Line Shotblaster (90), Billet Grinding (87) and the 23 Stand Rolling Mill (88) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.10.3 Sulfur Dioxide [326 IAC 7-4.1-1]

Pursuant to 326 IAC 7-4.1-1, SO2 emissions from the 12" Bar Mill Billet reheat furnace (89), shall be minimized by use of natural gas only.

D.10.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

Compliance Determination Requirements

D.10.5 Particulate Control [326 IAC 2-7-6(6)]

Pursuant to CP-089-2545, issued on February 4, 1994, the Billet Inspection Line Shotblaster baghouse shall be operated at all times that the shotblaster is operating.

SECTION D.11 FACILITY OPERATION CONDITIONS

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

(l) No. 3 Cold Strip Mill comprised of the following facilities, process equipment, and operational practices:

(1) No. 4 Pickling Line, constructed in 1958, including acid tanks and cascade rinse box with emissions controlled by a scrubber exhausting through stack 178.

(2) No. 5 Picking Line, including scale breaker mill, acid tanks and cascade rinse box with emissions controlled by a scrubber exhausting through stack 176.

(3) 56 inch Tandem Mill (4 Stands) controlled by a mist eliminator exhausting through stack 177.

(4) 80 inch Tandem Mill (5 Stands) controlled by a mist eliminator exhausting through stack 175.

(5) Temper Mill No. 28 exhausting through stack 180.

(6) Temper Mill No. 29 exhausting through stack 181.

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

The provisions of 40 CFR Part 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 Part 63, Subpart CCC.

D.11.2 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.11.3 NESHAP Maintenance Requirements [40 CFR Part 63.1160, Subpart CCC]

The Permittee shall comply with the operation and maintenance requirements of 40 CFR Part 63.6(e) (Subpart A, General Provisions) at the No. 4 Pickling Line and No. 5 Pickling Line. 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 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 shift 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 airflow.

(e) If the scrubber is not equipped with a viewport 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.11.4 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), the particulate matter emissions from each No.4 Pickling Line (178), No. 5 Pickling Line (176), 56 in Tandem Mill (177), 80 in. Tandem Mill (175), Temper Mill No. 28 (180) and Temper Mill No. 29 (181) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.11.5 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.11.6 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.11.7 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 shift 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 Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.11.8 Record Keeping Requirements

(a) To document compliance with Condition D.11.3, the Permittee shall maintain the following records pursuant to 40 CFR Part 63.1165:

(1) The Permittee, as required by 40 CFR Part 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 Part 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 Part 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 Part 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 Part 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.11.9 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 the 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.12 FACILITY OPERATION CONDITIONS

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

(m) Coated Products comprised of the following facilities, process equipment, and operational practices:

(1) No. 3 Galvanizing Line constructed in 1955, including:

(A) One (1) natural gas fired Non-Oxidizing Furnace with an estimated maximum heat input of 62 MMBtu/hr, equipped with recuperators waste gas burners exhausting through stack 81.

(B) One (1) natural gas fired reducing furnace with an estimated maximum heat input of 12.8 MMBtu/hr, hydrogen and nitrogen (static atmosphere), vented inside the building (open roof monitor-81A).

(2) No. 5 Galvanizing Line constructed in 1968, including:

(A) One (1) natural gas fired Radiant tube reducing furnace utilizing recuperative radiant tube burners with a an estimated maximum heat input of 112.6 MMBtu/hr, exhausting through stack 182.

(B) One (1) natural gas fired Galvanneal Furnace with an estimated maximum heat input of 36 MMBtu/hr, exhausting inside the building (open roof monitor)-182A.

(3) No. 4 Aluminizing Line constructed in 1955, including:

(A) One (1) natural gas fired Oxidizing Furnace with an estimated maximum heat input of 27 MMBtu/hr exhausting through stack 84.

(B) One (1) natural gas fired 4-line radiant tube reducing furnace section with an estimated maximum heat input of 19.14 MMBtu/hr, equipped with low NOx twin regenerative burners, exhausting through stack 84.

(C) hot dip Al/Si Pot, roll preheater and premelt furnace.

(4) No. 1 Normalizer constructed in 1957, including:

(A) One (1) natural gas fired reducing furnace with 193 natural gas fired Eclipse SER burners with a total heat input of 31.652 MMBtu/hr exhausting through stack 183.

(B) One (1) natural gas fired flame heater furnace with an estimated maximum heat input of 28 MMBtu/hr annealing furnace exhausting through stack 183

(C) One (1) acid cleaning tank using hydrochloric acid and one (1) cascade rinse tank with emissions controlled by a fume scrubber and exhausting through stack 184.

(5) No. 3 Continuous Anneal Line constructed in 1982, including:

(A) One (1) natural gas fired Annealing Furnace and One (1) natural gas fired Age Furnace with an estimated total maximum heat input of 108 MMBtu/hr, hydrogen and nitrogen (static atmosphere), vented through stack 173.

(B) One (1) acid cleaning tank using hydrochloric acid with emissions controlled by a fume scrubber and exhausting through stack 174.

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

(6) Batch Anneal Facilities including:

(A) No. 5 Batch Anneal constructed in 1958, equipped with annealing furnaces and hydrogen anneal bases, purge and inner cover with an estimated maximum heat input of 136 MMBtu/hr exhausting through stack 112.

(B) No. 6 Batch Anneal constructed in 1970, equipped with annealing furnaces and hydrogen anneal bases, purge and inner cover with an estimated maximum heat input of 205 MMBtu/hr exhausting through stack 113.

(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 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 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 affected source, as designated by 40 CFR 63.7506(b). The Permittee must comply with these requirements on and after the effective date of 40 CFR 63, Subpart DDDDD.

D.12.2 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

(a) The affected source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD), as of November 12, 2004. A copy of this rule is available on the US EPA Air Toxics Website at http://www.epa.gov/ttn/atw/eparules.html. Pursuant to 40 CFR 63.7495(b), the Permittee must comply with these requirements on and after September 13, 2007.

(b) The following emissions unit comprises the affected source for the large gaseous fuel subcategory:

No. 3 Galvanizing Line Radiant Tube Reducing Furnace (13 MMBtu/hr)
No. 4 Aluminizing Line Radiant Tube Reducing Furnace (19 MMBtu/hr)
No. 5 Galvanizing Line Radiant Tube Reducing Furnace (113 MMBtu/hr)
No. 3 Continuous Annealing and Aging Furnaces (85 MMBtu/hr)
No. 5 Batch Annealing Furnaces (136 MMBtu/hr)

(c) The definitions of 40 CFR 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected source.

(d) 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.

D.12.3 Particulate Matter [326 IAC 6.8-6]

Pursuant to326 IAC 6.8-6-10 (formerly 326 IAC 6-1-10.1(h)(13)), the following combustion sources shall fire natural gas only and comply with the following:

(a) No.3 Galvanizing Line (81) shall not exceed PM10 emissions of 0.003 lbs/MMBtu and 0.51 lbs/hour

(b) No. 5 Galvanizing Line (182) shall not exceed PM10 emissions of 0.003 lbs/MMBtu and 0.44 lbs/hour

(c) No. 1 Normalizing Line (184) shall not exceed PM10 emissions of 0.003 lbs/MMBtu and 0.13 lbs/hour

(d) No. 3 Continuous Anneal Line (173) shall not exceed PM10 emissions of 0.003 lbs/MMBtu and 0.25 lbs/hour

(e) No. 5 and No. 6 Batch Anneals (112 and 113) shall not exceed PM10 emissions of 0.003 lbs/MMBtu and 0.987 lbs/hour

D.12.4 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), the particulate matter emissions from the reducing furnace (81A), galvanneal furnace (182A), No.4 Aluminizing line (84), flame heating furnace (183) and annealling furnace (174) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.12.5 No. 4 Aluminizing Line Radiant Tube Reducing Furnace Limitations

Pursuant to CP 45-1854, issued on July 11, 1990, the furnace shall be fired by natural gas and rated at 19.136 MMBtu/hr heat input.

D.12.6 Opacity

Pursuant to CP 45-1854, issued on July 11, 1990, opacity from any stack, other process exhaust, building roof monitor, or building opening due to operation of the No. 4 Aluminizing line radiant tube furnace shall not exceed 5% opacity, per 40 CFR, Part 60, Appendix A, Method 9 and 326 IAC 5-1.

D.12.7 Sulfur Dioxide (SO2) [326 IAC 7-4.1-1]

(a) Pursuant to CP 089-3551, issued on October 28, 1994 and 326 IAC 7-4.1-1, SO2 emissions from burners at the No. 1 Normalizer Line (184) shall be minimized by firing natural gas only.

(b) Pursuant to 326 IAC 7-4.1-1, SO2 emissions from the No. 5 and No.6 Batch Anneal furnaces (112 and 113), shall be minimized by firing natural gas only.

D.12.8 Nitrogen Oxide (NOx) [326 IAC 2-2]

(a) Pursuant to CP 089-4940, issued on June 19, 1996, only natural gas shall be fired in the No. 5 Galvanizing Line recuperative radiant tube burners and NOx emissions shall not exceed three hundred-fifty (350) pounds per million cubic feet of natural gas burned and existing burners shall be removed. The total maximum heat input shall not exceed 74.9 MMBtu/hr.

(b) Pursuant to CP 45-1854, issued on July 11, 1990, No. 4 Aluminizing Line radiant tube furnace NOx emissions shall be limited to 0.375 lb/MMBtu, 7.2 lb/hr and 31.43 tpy.

(c) Pursuant to CP 089-3551, issued on October 28, 1994, the NOx from the No. 1 Normalizer radiant tube annealing furnace shall not exceed 0.43 lbs/MMBtu heat input.

(d) Pursuant to CP 089-8672, issued on June 15, 1998, NOx potential to emit from No. 5 and No.6 Batch Anneal facilities shall not exceed a total of 0.2 lbs/MMBtu. This is equivalent to 20.19 tons per year.

D.12.9 Carbon Monoxide (CO)[326 IAC 2-2]

Pursuant to CP 45-1854, issued on July 11, 1990, No. 4 Aluminizing Line radiant tube furnace CO emissions shall be limited to 0.02 lb/MMBtu, 0.4 lb/hr and 1.7 tpy.

D.12.10 Emission Offsets [326 IAC 2-3]

(a) Pursuant to CP 089-3551, issued on October 28, 1994, a total reduction of NOx, 140.7 tons per year (54.1 X 2.6) shall be achieved by the use of credited reduction from the permanent shutdown of the No. 2 AC Station Boilers 207-210 to achieve an internal offset

of a 1.3 tons of NOx decrease for each 1.0 ton of NOx increase in lieu of the implementation of lowest achievable emission rate (LAER) to comply with 326 IAC 2-3-2(b)(3) and an additional minimum offset at the No. 2 AC Station Boilers 207-210 of 1.3 tons of NOx decrease for each 1.0 ton of NOx increase to comply with 326 IAC 2-3-3(a)(5).

(b) Pursuant to CP 089-3551, issued on October 28, 1994, the Permittee shall:

(1) maintain a permanent shutdown of its Nos.6, 7, 8, 9, 10 and 11 Coke Oven Batteries

(2) maintain a permanent shutdown of its No. 2 Bloomer and shall not restart the No. 2 Bloomer without obtaining approved construction permits from IDEM OAQ

(3) not restart Nos. 1 and 2 Blast Furnaces

(4) not restart No. 3 Open Coil Anneal

(5) maintain a permanent shut down of six (6) pits at its No. 4 Slabber and not restart any of the pits without first obtaining approved construction permits from IDEM OAQ

(c) Pursuant to CP 089-4940, issued on June 19, 1996, the 234.5 ton per year NOx reduction at No. 5 Galvanizing Line radiant tube furnaces required by 326 IAC 2-3-3(a) (2) shall be achieved by the shutdown of the following: 7.2 ton per year from open coil annealing furnace, 87.2 ton per year from No. 2 Bloomer, 67.7 ton per year from No. 1 Galvanizing line, 50.6 ton per year from No. 4 Slab Pits 1-18 and 22 ton per year from No. 8 Coke Battery.

(d) Pursuant to CP 089-8672, issued on June 15, 1998 and 326 IAC 2-3-3(a)(5)(B), the NOx emissions from the No. 5 and No. 6 Batch Anneal Facilities are additionally offset by a ratio of 1.3 to 1.0 as a substitute for lowest achievable emission rate (LAER). This requires a reduction of 10.83 tons per year of NOx, which will be deducted from the NOx emission decrease credit from the retirement of the No. 3 AC Station.

(e) Pursuant to CP 089-8672, issued on June 15, 1998 and 326 IAC 2-3, the anneal bases (No's 903-908) and three (3) new attendant furnaces (each furnace rated at 5.94 MMBtu/hr) at No. 6 Annealing Furnace shall not begin operation until the old facilities (bases No. 6-9, 16-19 and 26-29) and their attendant eight (8) old furnaces (each furnace rated at 4.8 MMBtu/hr) are removed from service.

D.12.11 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.12.12 Particulate Matter (PM)

The scrubbers used in conjunction with the No. 1 Normalizing Line (184) Cleaning Line and No. 3 Continuous Anneal Line (173) Cleaning Line shall be operated at all times that the respective Lines are operating.

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

D.12.13 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 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 permit the applicable requirements of 40 CFR 63, Subpart DDDDD, 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 September 13, 2007.

(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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

SECTION D.13 FACILITY OPERATION CONDITIONS

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

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

(1) No. 2 AC Station including:

(A) Three (3) Boilers identified as 211-213, fired by natural gas and blast furnace gas from No. 5 and No. 6 blast furnaces:

(i) Boiler 211 with an estimated maximum heat input of 468 MMBtu/hr, installed in 1948 exhausting through stacks 125 and 126.

(ii) Boiler 212 with an estimated maximum heat input of 468 MMBtu/hr, installed in 1948 exhausting through stacks 127 and 128.

(iii) Boiler 213 with an estimated maximum heat input of 468 MMBtu/hr, installed in 1949 exhausting through stacks 129 and 130.

(B) Two (2) Blast Furnace Gas Flares to burn excess blast furnace gas from No. 5 and No. 6 Blast Furnaces exhausting through stack 131.

(C) Nine (9) turbo blowers and five (5) electricity generators.

(2) No. 5 Boilerhouse installed in 1976, including Boilers 501-503 fired by blast furnace gas from No. 7 blast furnace and mixed gas, each with an estimated maximum heat input of 520 MMBtu/hr exhausting through stack 134. The boilers produce steam, which is used in three turbo blowers to produce blast air, at generators to produce electrical power, and for general plant use.

(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.13.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 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 affected source, as designated by 40 CFR 63.7506(b). The Permittee must comply with these requirements on and after the effective date of 40 CFR 63, Subpart DDDDD.

D.13.2 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

(a) The affected source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD), as of November 12, 2004. A copy of this rule is available on the US EPA Air Toxics Website at http://www.epa.gov/ttn/atw/eparules.html. Pursuant to 40 CFR 63.7495(b), the Permittee must comply with these requirements on and after September 13, 2007.

(b) The following emissions unit comprises the affected source for the large gaseous fuel subcategory:

No.2 AC Station Boilers 211-213
No. 5 Boilerhouse 501-503.

(c) The definitions of 40 CFR 63, Subpart DDDDD at 40 CFR 63.7575 are applicable to the affected source.

(d) 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.

D.13.3 Particulate Matter [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)) (Lake County PM10 Requirements), PM10 emissions from the Utilities operations shall not exceed the following:

(a) PM10 emissions from the No.2 AC Station Boilers 211-213 shall not exceed 0.018 lbs/ MMBtu and 16.20 pounds per hour

(b) PM10 emissions from the No. 5 Boilerhouse 501-503 shall not exceed 0.013 lbs/ MMBtu 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.13.4 Sulfur Dioxide (SO_2) [326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the sulfur dioxide emission rate from these units shall be limited to the following:

(a) SO_2 emissions from No.2 AC Station Boilers 211-213, shall not exceed 0.140 lbs/ MMBtu each and 168 lbs/hour total.

(b) SO_2 emissions from No. 5 Boilerhouse 501-503, shall not exceed 0.198 lbs/MMBtu and 265.2 lbs/hour.

D.13.5 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2-3]

(a) Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003 and 326 IAC 2-2-3 (Control Technology Review: Requirements) the carbon monoxide emissions from the various stacks associated with the No.7 Blast Furnace shall not exceed the following limitations:

Stack ID, associated equipment	Type of fuel combusted at the equipment	CO emissions limitations (pound/MMSCF of fuel)
134, No.5 Boiler House	Blast Furnace Gas	13.7
	Natural Gas	84
	Combination gas (a mix of natural gas and blast furnace gas)	$\frac{\text{13.7 X Usage of BFG (MMSCF)+ 84 X Usage of NG (MMSCF)}}{\text{Total usage of BFG and NG (MMSCF)}}$

(b) Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003, if the stack tests required under condition D.13.10 show that the CO emission limitations in condition D.13.5 are not achievable in practice, the Permittee can request the Department to re-evaluate the CO emissions limitations in D.13.5(a). The department may, at its discretion, use the authority under IC 13-15-7-2 to re-open and revise the limit to more closely reflect the actual stack test results. The Department will provide an opportunity for public notice and comment prior to finalizing any permit decision. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to this permit modification.

D.13.6 NOx Budget Unit Exemption [326 IAC 10-4-3]

Pursuant to 326 IAC 10-4-3 (Retired unit exemption), No. 4 AC Boilers 401 through 405 shall be exempt from the NOx Budget trading program, except for the provisions of 326 IAC 10-4-3 and 326 IAC 10-4-1, 10-4-2, 10-4-5, 10-4-9, 10-4-10, and 10-4-11. The Permittee submitted a NOx Budget Retired Unit Exemption notice on May 28, 2003 for No. 4 AC Boilers 401 through 405.

The notice stated No. 4 AC Boilers 401 through 405 are permanently retired as of June 30, 2003. Therefore, the Permittee shall comply with the following:

(a) The units shall not emit any nitrogen oxides, starting on June 30, 2003.

(b) The owners and operators of the units shall be allocated allowances in accordance with 326 IAC 10-4-9. For each ozone control period for which the unit is allocated one (1) or more NOx allowances, the owners and operators of the unit shall specify a general account, in which U.S. EPA will record the NOx allowances.

(c) The unit shall not resume operation unless the NOx authorized account representative of the source submits a complete NOx budget permit application under 326 IAC 10-4-7(c) for the unit not less than two hundred seventy (270) days prior to the later of:

(1) May 31, 2004; or

(2) the date on which the unit is to first resume operation.

(d) The owners and operators and, to the extent applicable, the NOx authorized account representative shall comply with the requirements of the NOx budget trading program concerning all periods for which the exemption is not in effect, even if the requirements arise, or must be complied with, after the exemption takes effect.

(e) A unit that is exempt under this section is not eligible to be a NOx budget opt-in unit under 326 IAC 10-4-13.

(f) A unit exempt under 326 IAC 10-4-3(b) shall lose its exemption on the earlier of the following dates:

(1) The date on which the NOx authorized account representative submits a NOx budget permit application under subdivision (3) or (4).

(2) The date on which the NOx authorized account representative is required under subdivision (3) or (4) to submit a NOx budget permit application.

For the purpose of applying monitoring requirements under 40 CFR 75, Subpart H, a unit that loses its exemption under this section shall be treated as a unit that commences operation or commercial operation on the first date on which the unit resumes operation.

D.13.7 Equipment and Operational Specifications [326 IAC 2-2]

Pursuant to CP 089-3551 issued on October 28, 1994, the Permittee shall limit the use of Blast Furnace Gas and natural gas up to a maximum of 1410 MMBtu/hr in all boilers inclusive or in any boiler combination in lieu of oil as fuel at No. 2 AC Station.

D.13.8 Operation Restriction – Shutdown of No.4 AC Station [326 IAC 2-2][326 IAC 2-3]

(a) Pursuant to 326 IAC 2-2 and 326 IAC 2-3, within 30 days after the date of issuance of Significant Source Modification 089-16966-00316, issued on November 26, 2003, five (5) coal fired boilers identified as 401, 402, 403, 404 and 405 that form the part of 4 AC station and all the associated equipment for the operation of these boilers shall be shutdown permanently. In addition within 180 days of issuance of Significant Source Modification 089-16966-00316, issued on November 26, 2003 or before the restart of the No.7 Blast Furnace operation after the reline project in 2003, these boilers shall be physically disconnected and permanently removed from service.

(b) On and after the date of issuance of Significant Source Modification 089-16966-00316, issued on November 26, 2003, the Permittee shall request the IDEM, OAQ to remove the 4 AC station and all the associated equipment permanently from the emissions inventory maintained by the State.

(c) This condition supercedes all conditions in previous permits that allow the operation of the 4 AC station and its associated equipment.

D.13.9 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.13.10 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]

Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003, within 60 days of achieving stable production rate after the start of four stove operation, but no later than 180 days after the start of four stove operation at the No.7 Blast Furnace the Permittee shall perform CO emissions testing, utilizing methods approved by the Commissioner to show compliance with condition D.13.3 for stack 134 for the No.5 Boiler House. Testing for the fuel combustion emission units shall be performed when the fuel having worst case emission factor is utilized. Testing shall be conducted in accordance with Section C –Performance Testing.

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

D.13.11 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.13.4, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

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

D.13.12 Record Keeping Requirements

(a) To document compliance with Conditions D.13.4 and D.13.11, 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.2 AC Station Boilers 211-213 and No. 5 Boilerhouse 501-503.

(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 D.13.6 and 326 IAC 10-4-3(e)(7), the Permittee shall retain records at the source, or at a central location within Indiana for those owners or operators with unattended sources, demonstrating that the units are permanently retired for a period of five (5) years. The five (5) year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the department of the U.S. EPA. Records retained at a central location within Indiana shall be available immediately at the location and submitted to the department or U.S. EPA within three (3) business days following receipt of a written request.

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

D.13.13 Reporting Requirements

A quarterly report shall be submitted containing the calculated SO_2 emission rate in lb/MM Btu 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 7-4.1-11 (b)(2), in order to document compliance with Conditions D.13.4 and D.13.12 (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).

D.13.14 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 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 permit the applicable requirements of 40 CFR 63, Subpart DDDDD, 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 September 13, 2007.

(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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

SECTION D.14 FACILITY OPERATION CONDITIONS

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

(o) Shops comprised of the following facilities, process equipment, and operational practices:

(1) Mold Foundry Building: Pugh Ladle Car Preparation, dekishing, debricking and drying fired by natural gas (44) and Pugh ladle lancing fired by natural gas with emissions controlled by former mold foundry baghouse exhausting through stack 43. This baghouse also controls Pugh Ladle pigging emissions resulting from the adjacent contractor's operation.

(2) No. 6 Roll shop for 12 inch bar mill including shotblaster with emissions controlled by a baghouse and exhausting through stack 200.

(3) Electric Shop including shotblaster with emissions controlled by a baghouse and exhausting through stack 201, blaster baghouse unloading, paint booth, varnish dip tanks and undercutting booth.

(4) No. 4 Roll Shop including Ervin shotblaster with emissions controlled by a baghouse and exhausting through stack 203, Wheelabrator shotblaster with emissions controlled by a baghouse and exhausting through stack 204.

(5) No. 4 A Roll Shop including Ervin shotblaster with emissions controlled by a baghouse and exhausting through stack 205 and Pangborn shotblaster with emissions controlled by a baghouse and exhausting through stack 206.

(6) No. 5 Roll Shop.

(7) Mobile Equipment shop including refrigerant recovery and parts cleaning.

(8) Equipment Repair Shop including Machine Shop (Plant 2).

(9) Mason Building Shop.

(10) Refrigeration Shop.

(11) Fabrication and Repair Shop (Plant 1).

(12) No. 2 Slab Yard including one grinder, constructed in 2006, with a maximum capacity of 250,000 tons per year, using a baghouse as PM/PM-10 control, and exhausting to stack 95.

(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.14.1 Lake County PM10 emission requirements [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17 (formerly 326 IAC 6-1-10.1(d)(19)), TSP and PM10 emissions from the Shop operations shall not exceed the following:

(a) PM10 emissions from the former mold foundry baghouse (43) shall not exceed 0.011 gr/dscf and 26 lbs/hr.

(b) TSP emissions from the No. 6 roll shop rollshot blaster baghouse (200) shall not exceed 0.0052 gr/dscf and 0.200 lbs/hr.

(c) TSP emissions from the Electric shop shotblaster baghouse (201) shall not exceed 0.0052 gr/dscf and 1.070 lbs/hr.

(d) TSP emissions from the No. 4 roll shop Ervin shotblaster baghouse (203) shall not exceed 0.0052 gr/dscf and 0.210 lbs/hr.

(e) TSP emissions from the No. 4 roll shop Wheelabrator shotblaster (204) baghouse shall not exceed 0.0052 gr/dscf and 0.260 lbs/hr.

(f) TSP emissions from the No. 4A roll shop Ervin shotblaster baghouse (205) shall not exceed 0.0052 gr/dscf and 0.210 lbs/hr.

(g) TSP emissions from the No. 4A roll shop Pangborn shotblaster (206) baghouse shall not exceed 0.0052 gr/dscf and 0.260 lbs/hr.

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.14.2 Particulate Matter Limitations [326 IAC 2-2] [326 IAC 2-1.1-5]

(a) The PM emissions from No. 2 Slab Yard Grinder (including PM emissions captured by the collection system and PM emissions not captured by the control system) shall be limited to less than 5.7 lbs/hr.

(b) The PM10 emissions from No. 2 Slab Yard Grinder (including PM10 emissions captured by the collection system and PM10 emissions not captured by the control system) shall be limited to less than 3.42 lbs/hr.

(c) The minimum capture efficiency of the No. 2 Slab Yard Grinder Baghouse shall be 85% for PM and PM10.

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

D.14.3 Prevention of Significant Deterioration and Emission Offset [326 IAC 2-2][326 IAC 2-3]

The pugh car lancing operation and the dekishing and debricking operations shall be conducted inside the mold foundry building as required in CP No. 089-2905 issued on March 29, 1993. The emissions from the lancing operations, shall be captured and exhausted to the former mold foundry baghouse with particulate matter emissions not to exceed 26.0 pounds per hour and 0.011 grains per dry standard cubic foot of exhaust air. The iron dumping operation, which accompanied these operations has been replaced by pigging. However, in an emergency or when the pig machine is not available, iron dumping is used. Lancing of Pugh Ladles shall not occur simultaneously with Pugh ladle pigging operations at the adjacent contractor. Therefore, the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) do not apply.

D.14.4 Sulfur Dioxide (SO_2)[326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the SO_2 emissions from the pigging ladle facility (43) shall not exceed 0.020 lbs/ton and 4.000 lbs/hour.

D.14.5 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.14.6 Particulate Control [326 IAC 2-7-6(6)]

(a) The former Mold Foundry, No. 6 Roll shop, Electric shop, No. 4 Roll Shop, and No. 2 Slab Yard grinder baghouses shall be operated at all times that related processes at the subject facilities are operating. At the former Mold Foundry that equipment includes Pugh Ladle Car Lancing.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired, replaced, blanked or isolated. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.14.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 60 days after achieving maximum capacity but no later than 180 days after startup of the No. 2 Slab Yard grinder, in order to demonstrate compliance with Condition D.14.2(a) and (b), the Permittee shall perform PM and PM10 testing on the No. 2 Slab Yard grinder baghouse stack 95 utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. All associated facilities exhausting to a single stack must be operating when determining compliance with the limit. PM10 includes filterable and condensable PM10.

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

D.14.8 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) Visible emission notations of the former mold foundry baghouse (43) stack exhausts 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) Visible emission notations of the No. 2 Slab Yard grinder baghouse (95) stack exhausts 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.

(c) 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.

(d) 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.

(e) 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.

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

D.14.9 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 former mold foundry baghouse (43) stack and No. 2 Slab Yard grinder baghouse (95) stack once per day when the processes are in operation and venting to the atmosphere. When for any one

reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A 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.14.10 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(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).

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

D.14.11 Record Keeping Requirements

(a) To document compliance with Condition D.14.8 the Permittee shall maintain records of once per day visible emission notations of the former mold foundry baghouse (43) stack and No. 2 Slab Yard baghouse (95) stack exhausts.

(b) To document compliance with Condition D.14.9, the Permittee shall maintain once per day records of the pressure drop across the former mold foundry baghouse (43) and No. 2 Slab Yard baghouse (95) during normal operation when venting to the atmosphere.

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

SECTION D.15 FACILITY OPERATION CONDITIONS

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

(p) Storage Vessels:

(1) One (1) 21,380 gallon tank (T19K1) containing Diesel No. 2, located at the "E" Yard – Internal Logistics, constructed prior to 1972.

(2) One (1) 21,380 gallon tank (T-8H1) containing Diesel No. 2, located at the "B" Yard – 2 BOF, constructed prior to 1972.

(3) One (1) 10,000 gallon tank (T20K-1) containing Diesel No. 2, located at the Main Shop Fueling Station – Internal Logistics, constructed in 1997.

(4) One (1) 8,000 gallon tank (T02E-1) containing Diesel No. 2, located south of the bar company scrap yard - 12" Bar Mill constructed in 1999.

(5) One (1) 7,500 gallon tank (T1G-1) containing Diesel No. 2, located north of the Electric Furnace Billet Caster constructed in 1999.

(6) One (1) 6,000 gallon tank (T25E-1) containing Diesel No. 2, located at the No. 7 Blast Furnace Emergency Pump House, constructed in 1994.

(7) One (1) 5,000 gallon tank (T17P-1) containing Diesel No. 2, located at the 80" Hot Strip Mill coil carrier fuel station, constructed in 1994.

(8) One (1) 4,200 gallon tank (T10-200) containing Diesel No. 2, located at the No. 3 Cold Strip East bulk oil storage area constructed in 1970.

(9) One (1) 3,355 gallon tank (T18E-1) containing Diesel No. 2, located at the #4 BOF Mobile Equipment Shop, constructed in 1994.

(10) Two (2) 3,000 gallon tanks (T10-232a & T10-232b) containing Power Clean, located at the No. 3 Cold Strip East, Nos. 4 and 5 Hydraulic System, constructed in 1970.

(11) One (1) 130,000 gallon tank (T-17F1) containing Reclaimed oil, located at the Lime Plant, constructed in 1973.

(12) One (1) 1,016,000 gallon tank (T-6E1) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1992.

(13) One (1) 1,016,000 gallon tank (T-6F1) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1976.

(14) One (1) 1,016,000 gallon tank (T-6F2) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1976.

(15) One (1) 500,000 gallon tank (T-6F3) containing #6 fuel oil, located at Plant #1 Fuel Oil, constructed in 1975.

(16) One (1) 100,000 gallon tank (T-02F1) containing #6 fuel oil, located at the 12" Bar Mill, constructed in 1977.

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

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

(17) Two (2) 30,000 gallon tanks (T11-12a & T11-12b) containing regenerated Hydrochloric Acid located north of bulk storage building No. 3 Cold Strip West, designated as #1 elevated tank and #2 elevated tank, constructed in 1970.

(18) Two (2) 30,000 gallon tanks (T11-12c & T11-12d) containing regenerated Hydrochloric Acid located west of bulk storage building No. 3 Cold Strip West, designated as Tank #4 and Tank #5, constructed in 1999.

(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.15.1 Volatile Organic Storage Vessels [40 CFR Part 60, Subpart Kb]

The 1,016,000 gallon storage tank (T-6E1) is subject to 40 CFR Part 60, Subpart Kb because the maximum capacity of the tank is greater than 40 m^3 and is used to store volatile organic liquids for which construction, reconstruction, or modification commenced after July 23, 1984. Pursuant to this rule, the Permittee must maintain records as required by 40 CFR 60.116b(a) and 60.116b(b).

D.15.2 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 recycled oil, #2 fuel oil, #6 fuel oil, bunker oil and reclaim oil.

D.15.3 NESHAP Operational and equipment standards [40 CFR Part 63.63.1159, Subpart CCC] Hydrochloric acid storage vessels

The Permittee shall provide and operate, except during loading and unloading of acid, a closed-vent system for tanks T11-12a, T11-12b, T11-12c, and T11-12d. 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.15.4 Monitoring Requirements [40 CFR P art 63.1162]

The Permittee shall inspect tanks T11-12a, T11-12b, T11-12c, and T11-12d 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.15.5 Record Keeping Requirements

Pursuant to 40 CFR Part 60.116b the requirements for tank T-6E1 are as follows:

(a) The Permittee shall keep copies of all records required by 40 CFR Part 60.116b (a), except for the record required by 40 CFR Part 60.116b (b), for at least 2 years. The record required by 40 CFR Part 60.116b(b) will be kept for the life of the source.

(b) The Permittee of each storage vessel as specified in 40 CFR Part 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

D.15.6 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.

SECTION D.16 FACILITY OPERATION CONDITIONS

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

Specifically Regulated Insignificant Activities:

(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]

(2) 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]

(3) 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]

(4) 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]

(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.16.1 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (formerly 326 IAC 6-1-2) (Nonattainment Area Particulate Limitations), grinding and machining operations shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.16.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-1]

Pursuant to 326 IAC 8-9-1, the Permittee is required to keep records on the information in 326 IAC 8-9-6(a)-(b) for all Volatile Organic liquid storage vessels.

D.16.3 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 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.16.4 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 Lake, County, 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^{O}C) (one hundred twenty degrees Fahrenheit (120°F)):

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

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

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

Compliance Determination Requirement

D.16.5 Particulate Control

In order to comply with D.16.1, 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.16.6 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.16.7 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 E Units **Nitrogen Oxides Budget Trading Program - NO_X Budget Permit for NO_X Budget Under 326 IAC 10-4-1(a)**

ORIS Code: 10474

NO_X Budget Source [326 IAC 2-7-5(15)] (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Utilities comprised of the following facilities, emission units, process equipment, and operational practices:

(1) No. 2 AC Station including Boilers 211-213, fired by blast furnace gas from No. 5 and No. 6 blast furnaces and natural gas exhausting through combustion stacks 125-130, installed in 1948 and 1949

(2) No. 5 Boilerhouse including Boilers 501-503, fired by blast furnace gas from No. 7 blast furnace and mixed gas, exhausting through stack 134, installed in 1976

E.1 Automatic Incorporation of Definitions [326 IAC 10-4-7(e)]

This NO_X budget permit is deemed to incorporate automatically the definitions of terms under 326 IAC 10-4-2.

E.2 Standard Permit Requirements [326 IAC 10-4-4(a)]

(a) The owners and operators of the NO_X budget source and each NO_X budget unit shall operate each unit in compliance with this NO_X budget permit.

The NO_X budget units subject to this NO_X budget permit include the following: No. 2 AC Station, including Boilers 211-213, and No. 5 Boilerhouse, including Boilers 501-503.

E.3 Monitoring Requirements [326 IAC 10-4-4(b)]

(a) The owners and operators and, to the extent applicable, the NO_X authorized account representative of the NO_X budget source and each NO_X budget unit at the source shall comply with the monitoring requirements of 40 CFR 75 and 326 IAC 10-4-12.

The emissions measurements recorded and reported in accordance with 40 CFR 75 and 326 IAC 10-4-12 shall be used to determine compliance by each unit with the NO_X budget emissions limitation under 326 IAC 10-4-4(c) and Condition E.4, Nitrogen Oxides Requirements.

E.4 Nitrogen Oxides Requirements [326 IAC 10-4-4(c)]

(a) The owners and operators of the NO_X budget source and each NO_X budget unit at the source shall hold NO_X allowances available for compliance deductions under 326 IAC 10-4-10(j), as of the NO_X allowance transfer deadline, in each unit's compliance account and the source's overdraft account in an amount:

(1) Not less than the total NO_X emissions for the ozone control period from the unit, as determined in accordance with 40 CFR 75 and 326 IAC 10-4-12;

(2) To account for excess emissions for a prior ozone control period under 326 IAC 10-4-10(k)(5); or

(3) To account for withdrawal from the NO_X budget trading program, or a change in regulatory status of a NO_X budget opt-in unit.

(b) Each ton of NO_X emitted in excess of the NO_X budget emissions limitation shall constitute a separate violation of the Clean Air Act (CAA) and 326 IAC 10-4.

(c) Each NO_X budget unit shall be subject to the requirements under (a) above and 326 IAC 10-4-4(c)(1) starting on May 31, 2004.

(d) NO_X allowances shall be held in, deducted from, or transferred among NO_X allowance tracking system accounts in accordance with 326 IAC 10-4-9 through 11, 326 IAC 10-4-13, and 326 IAC 10-4-14.

(e) A NO_X allowance shall not be deducted, in order to comply with the requirements under (a) above and 326 IAC 10-4-4(c)(1), for an ozone control period in a year prior to the year for which the NO_X allowance was allocated.

(f) A NO_X allowance allocated under the NO_X budget trading program is a limited authorization to emit one (1) ton of NO_X in accordance with the NO_X budget trading program. No provision of the NO_X budget trading program, the NO_X budget permit application, the NO_X budget permit, or an exemption under 326 IAC 10-4-3 and no provision of law shall be construed to limit the authority of the U.S. EPA or IDEM, OAQ to terminate or limit the authorization.

(g) A NO_X allowance allocated under the NO_X budget trading program does not constitute a property right.

(h) Upon recordation by the U.S. EPA under 326 IAC 10-4-10, 326 IAC 10-4-11, or 326 IAC 10-4-13, every allocation, transfer, or deduction of a NO_X allowance to or from each NO_X budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, this NO_X budget permit of the NO_X budget unit by operation of law without any further review.

E.5 Excess Emissions Requirements [326 IAC 10-4-4(d)]

The owners and operators of each NO_X budget unit that has excess emissions in any ozone control period shall do the following:

(a) Surrender the NO_X allowances required for deduction under 326 IAC 10-4-10(k)(5).

(b) Pay any fine, penalty, or assessment or comply with any other remedy imposed under 326 IAC 10-4-10(k)(7).

E.6 Record Keeping Requirements [326 IAC 10-4-4(e)] [326 IAC 2-7-5(3)]

Unless otherwise provided, the owners and operators of the NO_X budget source and each NO_X budget unit at the source shall keep, either on site at the source or at a central location within Indiana for those owners or operators with unattended sources, each of the following documents for a period of five (5) years:

(a) The account certificate of representation for the NO_X authorized account representative for the source and each NO_X budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 326 IAC 10-4-6(h). The certificate and documents shall be retained either on site at the source or at a central location within Indiana for those owners or operators with unattended sources beyond the five (5) year period until the documents are superseded because of the submission of a new account certificate of representation changing the NO_X authorized account representative.

(b) All emissions monitoring information, in accordance with 40 CFR 75 and 326 IAC 10-4-12, provided that to the extent that 40 CFR 75 and 326 IAC 10-4-12 provide for a three (3) year period for record keeping, the three (3) year period shall apply.

(c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the NO_X budget trading program.

(d) Copies of all documents used to complete a NO_X budget permit application and any other submission under the NO_X budget trading program or to demonstrate compliance with the requirements of the NO_X budget trading program.

This period may be extended for cause, at any time prior to the end of five (5) years, in writing by IDEM, OAQ or the U.S. EPA. Records retained at a central location within Indiana shall be available immediately at the location and submitted to the department or U.S. EPA within three (3) business days following receipt of a written request. Nothing in 326 IAC 10-4-4(e) shall alter the record retention requirements for a source under 40 CFR 75. Unless otherwise provided, all records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

E.7 Reporting Requirements [326 IAC 10-4-4(e)]

(a) The NO_X authorized account representative of the NO_X budget source and each NO_X budget unit at the source shall submit the reports and compliance certifications required under the NO_X budget trading program, including those under 326 IAC 10-4-8, 326 IAC 10-4-12, or 326 IAC 10-4-13.

(b) Pursuant to 326 IAC 10-4-6(e), each submission shall include the following certification statement by the NO_X authorized account representative: "I am authorized to make this submission on behalf of the owners and operators of the NO_X budget sources or NO_X budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

Where 326 IAC 10-4 requires a submission to IDEM, OAQ, the NO_X authorized account representative shall submit required information to:

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

Where 326 IAC 10-4 requires a submission to U.S. EPA, the NO_X authorized account representative shall submit required information to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue, NW
Mail Code 6204N
Washington, DC 20460

E.8 Liability [326 IAC 10-4-4(f)]

The owners and operators of each NO_X budget source shall be liable as follows:

(a) Any person who knowingly violates any requirement or prohibition of the NO_X budget trading program, a NO_X budget permit, or an exemption under 326 IAC 10-4-3 shall be subject to enforcement pursuant to applicable state or federal law.

(b) Any person who knowingly makes a false material statement in any record, submission, or report under the NO_X budget trading program shall be subject to criminal enforcement pursuant to the applicable state or federal law.

(c) No permit revision shall excuse any violation of the requirements of the NO_X budget trading program that occurs prior to the date that the revision takes effect.

(d) Each NO_X budget source and each NO_X budget unit shall meet the requirements of the NO_X budget trading program.

(e) Any provision of the NO_X budget trading program that applies to a NO_X budget source, including a provision applicable to the NO_X authorized account representative of a NO_X budget source, shall also apply to the owners and operators of the source and of the NO_X budget units at the source.

(f) Any provision of the NO_X budget trading program that applies to a NO_X budget unit, including a provision applicable to the NO_X authorized account representative of a NO_X budget unit, shall also apply to the owners and operators of the unit. Except with regard to the requirements applicable to units with a common stack under 40 CFR 75 and 326 IAC 10-4-12, the owners and operators and the NO_X authorized account representative of one (1) NO_X budget unit shall not be liable for any violation by any other NO_X budget unit of which they are not owners or operators or the NO_X authorized account representative and that is located at a source of which they are not owners or operators or the NO_X authorized account representative.

E.9 Effect on Other Authorities [326 IAC 10-4-4(g)]

No provision of the NO_X budget trading program, a NO_X budget permit application, a NO_X budget permit, or an exemption under 326 IAC 10-4-3 shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the NO_X authorized account representative of a NO_X budget source or NO_X budget unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the CAA.

SECTION F FUGITIVE DUST SOURCES

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.)

F.1 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 Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

(1) Paved roads and Parking Lots.

(A) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%). 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:

(i) The first shall be taken at the time of emission generation.
(ii) The second shall be taken five (5) seconds later.
(iii) The third shall 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) The Permittee shall implement the control measures specified by 326 IAC 6.8-10-4 (formerly 326 IAC 6-1-11.1(e)(3)(F)) within twenty-four (24) hours after notification by the IDEM, OAQ or U.S.EPA of violating the average instantaneous opacity limit. A violation of the instantaneous average opacity limit is a violation of 326 IAC 6.8-10 (formerly 326 IAC 6-1-11.1).

(C) When requested by the department or the U.S. EPA, after an exceedance of the opacity limit is observed by a representative of either agency, the source shall initiate a compliance check with the surface silt loading limit. The department may require a revision of the control plan under subsection 326 IAC 6.8-10-4 (formerly 326 IAC 6-1-11.1(e)(8)), if the test shows an exceedance of the surface silt loading limit.

(2) Unpaved Roads and Parking Lots.

(A) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%). 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:

(i) The first shall be taken at the time of emission generation.
(ii) The second shall be taken five (5) seconds later.
(iii) The third shall 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) The fugitive particulate emissions from unpaved roads shall be controlled by the implementation of a work program and work practice under the control plan required in 326 IAC 6.8-10-4 (formerly 326 IAC 6-1-11.1 (e)). The department may request a revision of the control plan pursuant to 326 IAC 6.8-10 (formerly 326 IAC 6-1-11.1(e)(8)), if an observation shows an exceedance of the average instantaneous opacity limit. The revision may be in lieu of, or in addition to, pursuing an enforcement action for a violation of the limit.

(3) Material Transfer Limits.

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

(B) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%) three (3) minute average. This includes material transfer to the initial hopper of a material processing facility as defined in 326 IAC 6.8-10-2 (formerly 326 IAC 6-1-11.1(c)) 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:
(AA) From a storage pile to a front end loader; and
(BB) From a front end loader to a truck.

(ii) Transfer of sinter blend for use at the sinter plant:
(AA) From a storage pile to a front end loader;
(BB) From a front end loader to a truck; and
(CC) From a truck to the initial processing point.

(iii) Transfer of coal for use at a coal processing line:
(AA) From a storage pile to a front end loader; and
(BB) From a front end loader to the initial hopper of a coal processing line.

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

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

(i) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.

(ii) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1(d)(9)).

(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. 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.

(5) Wind erosion from storage piles and exposed areas.

(A) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average. 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. These limitations may not apply during periods when application of fugitive particulate control measures are either ineffective or unreasonable due to sustained very high wind speeds. During periods of sustained very high wind speeds, 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.

(B) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9. These

limitations may not apply during periods when application of fugitive particulate control measures are either ineffective or unreasonable due to sustained very high wind speeds. During periods of sustained very high wind speeds, 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) Inplant Transportation of Material by Truck or Rail.

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. 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.

(7) Inplant Transportation of Material by Front End Loader or Skip Hoist.

The opacity of fugitive particulate emissions from the in plant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%). 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:

(A) The first shall be taken at the time of emission generation.

(B) The second shall be taken five (5) seconds later.

(C) The third shall 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.

(8) Material Processing Facilities.

(A) The PM_{10} stack emissions from each material processing facility shall not exceed twenty-two thousandths (0.022) grain per dry standard cubic foot and ten percent (10%) opacity. Compliance with the concentration limitation shall be determined using the test methods found in 326 IAC 6.8-4-1 (formerly 326 IAC 6-1-10.1(f)). Compliance with the opacity limitation shall be determined by 40 CFR 60, Appendix A, Method 9.

(B) The opacity of fugitive particulate emissions from a material processing facility, except crusher at which a capture system is not used, shall not exceed ten percent (10%). Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 9.

(C) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%). Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 9.

(D) 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. Compliance

with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22.

(E) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grain per dry standard cubic foot and ten percent (10%) opacity. Compliance with the concentration standard shall be determined by 40 CFR 60, Appendix A, Method 5 or 17, and with the opacity standard by 40 CFR 60, Appendix A, Method 9.

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

(10) Any facility or operation not specified in 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1(d)(1)-(8)) shall meet a twenty percent (20%), three (3) minute opacity standard. Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 9, except that the opacity standard shall be determined as an average of twelve (12) consecutive observations recorded at fifteen (15) second intervals. Compliance of any operation lasting less than three (3) minutes shall be determined as an average of consecutive observations recorded at fifteen (15) second intervals for the duration of the operation.

(b) The Permittee is subject to 326 IAC 6.8-11-4, 326 IAC 6.8-11-5 and 326 IAC 6.8-11-6 (formerly 326 IAC 6-1-11.2(h), (i), (k), (l), (m), (o), (p) and (q)) (Lake County Particulate Matter Contingency Measures) because it is subject to the requirements of 326 IAC 6.8-10 (formerly 326 IAC 6-1-11.1).

(c) Permittee has submitted a Fugitive Dust Control Plan to the IDEM in accordance with 326 IAC 6.8-10 (formerly 326 IAC 6-1-11.1) and has been attached to the Part 70 Permit. Permittee shall keep records consistent with its Fugitive Dust Control Plan.

SECTION G

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

The affected sources are each new or existing sinter plant windbox exhaust, discharge end, and sinter cooler; the blast furnace casthouse; and the BOPF shop including each individual BOPF and shop ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy

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

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

(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, except when otherwise specified by Table 4 to 40 CFR 63, Subpart FFFFF. The Permittee must comply with the following requirements:

Subpart FFFFF—National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities

Source: 68 FR 27663, May 20, 2003, unless otherwise noted.

What This Subpart Covers

§ 63.7780 What is the purpose of this subpart?
This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for integrated iron and steel manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with all applicable emission limitations and operation and maintenance requirements in this subpart.

§ 63.7781 Am I subject to this subpart?
You are subject to this subpart if you own or operate an integrated iron and steel manufacturing facility that is (or is part of) a major source of hazardous air pollutants (HAP) emissions. Your integrated iron and steel manufacturing facility is a major source of HAP if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

§ 63.7782 What parts of my plant does this subpart cover?
(a) This subpart applies to each new and existing affected source at your integrated iron and steel manufacturing facility.
(b) The affected sources are each new or existing sinter plant, blast furnace, and basic oxygen process furnace (BOPF) shop at your integrated iron and steel manufacturing facility.
(c) This subpart covers emissions from the sinter plant windbox exhaust, discharge end, and sinter cooler; the blast furnace casthouse; and the BOPF shop including each individual BOPF and shop ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy).
(d) A sinter plant, blast furnace, or BOPF shop at your integrated iron and steel manufacturing facility is existing if you commenced construction or reconstruction of the affected source before July 13, 2001.

§ 63.7783 When do I have to comply with this subpart?

(a) If you have an existing affected source, you must comply with each emission limitation and operation and maintenance requirement in this subpart that applies to you by the dates specified in paragraphs (a) (1) and (2) of this section.
  (1) No later than May 22, 2006 for all emissions sources at an existing affected source except for a sinter cooler at an existing sinter plant.
  (2) No later than January 13, 2007 for a sinter cooler at an existing sinter plant.

Emission Limitations

§ 63.7790 What emission limitations must I meet?

(a) You must meet each emission limit and opacity limit in Table 1 to this subpart that applies to you.

(b) You must meet each operating limit for capture systems and control devices in paragraphs (b)(1) through (3) of this section that applies to you.

(1) You must operate each capture system applied to emissions from a sinter plant discharge end or blast furnace casthouse or to secondary emissions from a BOPF at or above the lowest value or settings established for the operating limits in your operation and maintenance plan;

(2) For each venturi scrubber applied to meet any particulate emission limit in Table 1 to this subpart, you must maintain the hourly average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.

(c) An owner or operator who uses an air pollution control device other than a baghouse, venturi scrubber, or electrostatic precipitator must submit a description of the device; test results collected in accordance with §63.7822 verifying the performance of the device for reducing emissions of particulate matter to the atmosphere to the levels required by this subpart; a copy of the operation and maintenance plan required in §63.7800(b); and appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emission limitation(s). The monitoring plan identifying the operating parameters to be monitored is subject to approval by the Administrator.

(d) For each sinter plant, you must either:

(1) Maintain the 30-day rolling average oil content of the feedstock at or below 0.02 percent; or

(2) Maintain the 30-day rolling average of volatile organic compound emissions from the windbox exhaust stream at or below 0.2 lb/ton of sinter.

Operation and Maintenance Requirements

§ 63.7800 What are my operation and maintenance requirements?

(a) As required by §63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture system or control device subject to an operating limit in §63.7790(b). Each plan must address the elements in paragraphs (b)(1) through (5) of this section.

(1) Monthly inspections of the equipment that is important to the performance of the total capture system (*e.g.,* pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.,* presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan also must include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.

(2) Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(3) Operating limits for each capture system applied to emissions from a sinter plant discharge end or blast furnace casthouse, or to secondary emissions from a BOPF. You must establish the operating limits according to the requirements in paragraphs (b)(3)(i) through (iii) of this section.

(i) Select operating limit parameters appropriate for the capture system design that are representative and reliable indicators of the performance of the capture system. At a minimum, you must use appropriate operating limit parameters that indicate the level of the ventilation draft and the damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. Appropriate operating limit parameters for ventilation draft include, but are not limited to, volumetric flow rate through each separately ducted hood, total volumetric flow rate at the inlet to the control device to which the capture system is vented, fan motor amperage, or static pressure.

(ii) For each operating limit parameter selected in paragraph (b)(3)(i) of this section, designate the value or setting for the parameter at which the capture system operates during the process operation. If your operation allows for more than one process to be operating simultaneously, designate the value or setting for the parameter at which the capture system operates during each possible configuration that you may operate.

(iii) Include documentation in your plan to support your selection of the operating limits established for the capture system. This documentation must include a description of the capture system design, a description of the capture system operating during production, a description of each selected operating limit parameter, a rationale for why you chose the parameter, a description of the method used to monitor the parameter according to the requirements of §63.7830(a), and the data used to set the value or setting for the parameter for each of your process configurations.

(4) Corrective action procedures for baghouses equipped with bag leak detection systems or continuous opacity monitoring systems (COMS). In the event a bag leak detection system alarm is triggered or emissions from a baghouse equipped with a COMS exceed an hourly average opacity of 5 percent, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Corrective actions may include, but are not limited to:

(i) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe, or otherwise repair the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions; and .

(5) Corrective action procedures for venturi scrubbers equipped with continuous parameter monitoring systems (CPMS). In the event a venturi scrubber exceeds the operating limit in §63.7790 (b) (2), you must take corrective actions consistent with your site-specific monitoring plan in accordance with §63.7831 (a).

(7) Procedures for determining and recording the daily sinter plant production rate in tons per hour.

General Compliance Requirements

§ 63.7810 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction as defined in §63.2.

(b) During the period between the compliance date specified for your affected source in §63.7783 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3).

68 FR 27663, May 20, 2003, as amended at 71 FR 20468, Apr. 20, 2006]

Initial Compliance Requirements

§ 63.7820 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) You must conduct a performance test to demonstrate initial compliance with each emission and opacity limit in Table 1 to this subpart that applies to you. You must also conduct a performance test to demonstrate initial compliance with the 30-day rolling average operating limit for the oil content of the sinter plant feedstock in §63.7790(d)(1) or alternative limit for volatile organic compound emissions from the sinter plant windbox exhaust stream in §63.7790(d)(2). You must

conduct the performance tests within 180 calendar days after the compliance date that is specified in §63.7783 for your affected source and report the results in your notification of compliance status.

(b) For each operation and maintenance requirement that applies to you where initial compliance is not demonstrated using a performance test or opacity observation, you must demonstrate initial compliance within 30 calendar days after the compliance date that is specified for your affected source in §63.7783.

§ 63.7821 When must I conduct subsequent performance tests?

(a) You must conduct subsequent performance tests to demonstrate compliance with applicable PM and opacity limits in Table 1 to this subpart at frequencies specified in paragraphs (b) through (d) of this section.

(b) For each sinter cooler at an existing sinter plant and each emissions unit equipped with a control device other than a baghouse, you must conduct subsequent performance tests no less frequently than twice (at mid-term and renewal) during each term of your Title V operating permit.

(c) For each emissions unit equipped with a baghouse, you must conduct subsequent performance tests no less frequently than once during each term of your Title V operating permit.

(d) For sources without a Title V operating permit, you must conduct subsequent tests every 2.5 years.

§ 63.7822 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits for particulate matter?

(a) You must conduct each performance test that applies to your affected source according to the requirements in §63.7(e)(1) and the conditions detailed in paragraphs (b) through (i) of this section.

(b) To determine compliance with the applicable emission limit for particulate matter in Table 1 to this subpart, follow the test methods and procedures in paragraphs (b)(1) and (2) of this section.

(1) Determine the concentration of particulate matter according to the following test methods in appendix A to part 60 of this chapter:

(i) Method 1 to select sampling port locations and the number of traverse points. Sampling ports must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5D, or 17, as applicable, to determine the concentration of particulate matter (front half filterable catch only).

(2) Collect a minimum sample volume of 60 dry standard cubic feet (dscf) of gas during each particulate matter test run. Three valid test runs are needed to comprise a performance test.

(c) For each sinter plant windbox exhaust stream, you must complete the requirements of paragraphs (c)(1) and (2) of this section:

(1) Follow the procedures in your operation and maintenance plan for measuring and recording the sinter production rate for each test run in tons per hour; and

(2) Compute the process-weighted mass emissions (E_p) for each test run using Equation 1 of this section as follows:

$$E_p = \frac{C \times Q}{P \times K} \qquad \text{(Eq. 1)}$$

Where:

E_p = Process-weighted mass emissions of particulate matter, lb/ton;

C = Concentration of particulate matter, grains per dry standard cubic foot (gr/dscf);

Q = Volumetric flow rate of stack gas, dry standard cubic foot per hour (dscf/hr);

P = Production rate of sinter during the test run, tons/hr; and

K = Conversion factor, 7,000 grains per pound (gr/lb).

(d) If you apply two or more control devices in parallel to emissions from a sinter plant discharge end or a BOPF, compute the average flow-weighted concentration for each test run using Equation 2 of this section as follows:

$$C_W = \frac{\sum_{i=1}^{n} C_i Q_i}{\sum_{i=1}^{n} Q_i} \qquad \text{(Eq. 2)}$$

Where:
C_w = Flow-weighted concentration, gr/dscf;
C_i = Concentration of particulate matter from exhaust stream "i", gr/dscf; and
Q_i = Volumetric flow rate of effluent gas from exhaust stream "i", dry standard cubic foot per minute (dscfm).

(e) For a control device applied to emissions from a blast furnace casthouse, sample for an integral number of furnace tapping operations sufficient to obtain at least 1 hour of sampling for each test run.

(f) For a primary emission control device applied to emissions from a BOPF with a closed hood system, sample only during the primary oxygen blow and do not sample during any subsequent reblows. Continue sampling for each run for an integral number of primary oxygen blows.

(g) For a primary emission control system applied to emissions from a BOPF with an open hood system and for a control device applied solely to secondary emissions from a BOPF, you must complete the requirements of paragraphs (g)(1) and (2) of this section:
  (1) Sample only during the steel production cycle. Conduct sampling under conditions that are representative of normal operation. Record the start and end time of each steel production cycle and each period of abnormal operation; and
  (2) Sample for an integral number of steel production cycles. The steel production cycle begins when the scrap is charged to the furnace and ends 3 minutes after the slag is emptied from the vessel into the slag pot.

(h) For a control device applied to emissions from BOPF shop ancillary operations (hot metal transfer, skimming, desulfurization, or ladle metallurgy), sample only when the operation(s) is being conducted.

(i) Subject to approval by the permitting authority, you may conduct representative sampling of stacks when there are more than three stacks associated with a process.

§ 63.7823 What test methods and other procedures must I use to demonstrate initial compliance with the opacity limits?

(a) You must conduct each performance test that applies to your affected source according to the requirements in §63.7(h)(5) and the conditions detailed in paragraphs (b) through (d) of this section.

(b) You must conduct each visible emissions performance test such that the opacity observations overlap with the performance test for particulate matter.

(c) To determine compliance with the applicable opacity limit in Table 1 to this subpart for a sinter plant discharge end or a blast furnace casthouse:
  (1) Using a certified observer, determine the opacity of emissions according to Method 9 in appendix A to part 60 of this chapter.
  (2) Obtain a minimum of 30 6-minute block averages. For a blast furnace casthouse, make observations during tapping of the furnace. Tapping begins when the furnace is opened, usually by creating a hole near the bottom of the furnace, and ends when the hole is plugged.

(d) To determine compliance with the applicable opacity limit in Table 1 to this subpart for BOPF shops:
  (1) For an existing BOPF shop:
    (i) Using a certified observer, determine the opacity of emissions according to Method 9 in appendix A to part 60 of this chapter except as specified in paragraphs (d)(1)(ii) and (iii) of this section.
    (ii) Instead of procedures in section 2.4 of Method 9 in appendix A to part 60 of this chapter, record observations to the nearest 5 percent at 15-second intervals for at least three steel production cycles.
    (iii) Instead of procedures in section 2.5 of Method 9 in appendix A to part 60 of this chapter, determine the 3-minute block average opacity from the average of 12 consecutive observations recorded at 15-second intervals.

(4) Opacity observations must cover the entire steel production cycle and must be made for at least three cycles. The steel production cycle begins when the scrap is charged to the furnace and ends 3 minutes after the slag is emptied from the vessel into the slag pot.
(5) Determine and record the starting and stopping times of the steel production cycle.

(e) To determine compliance with the applicable opacity limit in Table 1 to this subpart for sinter cooler at an existing sinter plant:
(1) Using a certified observer, determine the opacity of emissions according to Method 9 in appendix A to part 60 of this chapter.
(2) Obtain a minimum of 30 6-minute block averages.
(3) Make visible emission observations of uncovered portions of sinter plant coolers with the observer's line of site generally in the direction of the center of the cooler.

§ 63.7824 What test methods and other procedures must I use to establish and demonstrate initial compliance with operating limits?

(a) For each capture system subject to an operating limit in §63.7790(b)(1), you must certify that the system operated during the performance test at the site-specific operating limits established in your operation and maintenance plan using the procedures in paragraphs (a)(1) through (4) of this section.
(1) Concurrent with all opacity observations, measure and record values for each of the operating limit parameters in your capture system operation and maintenance plan according to the monitoring requirements specified in §63.7830(a).
(2) For any dampers that are manually set and remain at the same position at all times the capture system is operating, the damper position must be visually checked and recorded at the beginning and end of each opacity observation period segment.
(3) Review and record the monitoring data. Identify and explain any times the capture system operated outside the applicable operating limits.
(4) Certify in your performance test report that during all observation period segments, the capture system was operating at the values or settings established in your capture system operation and maintenance plan.

(b) For a venturi scrubber subject to operating limits for pressure drop and scrubber water flow rate in §63.7790(b)(2), you may establish the parametric monitoring limit during the initial performance test or during any other performance test run that meets the emission limit
(1) Using the CPMS required in §63.7830(c), measure and record the pressure drop and scrubber water flow rate during each run of the particulate matter performance test.
(2) Compute and record the hourly average pressure drop and scrubber water flow rate for each individual test run. Your operating limits are the lowest average pressure drop and scrubber water flow rate value in any of the three runs that meet the applicable emission limit.

(c) You may change the operating limits for a capture system or venturi scrubber if you meet the requirements in paragraphs (c)(1) through (3) of this section.
(1) Submit a written notification to the Administrator of your request to conduct a new performance test to revise the operating limit.
(2) Conduct a performance test to demonstrate compliance with the applicable emission limitation in Table 1 to this subpart.
(3) Establish revised operating limits according to the applicable procedures in paragraphs (a) and (b) of this section for a control device or capture system.

(d) For each sinter plant subject to the operating limit for the oil content of the sinter plant feedstock in §63.7790(d)(1), you must demonstrate initial compliance according to the procedures in paragraphs (d)(1) through (3) of this section.
(1) Sample the feedstock at least three times a day (once every 8 hours), composite the three samples each day, and analyze the composited samples using Method 9071B, "n-Hexane Extractable Material(HEM) for Sludge, Sediment, and Solid Samples," (Revision 2, April 1998). Method 9071B is incorporated by reference (see §63.14) and is published in EPA Publication SW–846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." Record the sampling date and time, oil content values, and sinter produced (tons/day).
(2) Continue the sampling and analysis procedure for 30 consecutive days.
(3) Each day, compute and record the 30-day rolling average using that day's value and the 29 previous daily values.

(e) To demonstrate initial compliance with the alternative operating limit for volatile organic compound emissions from the sinter plant windbox exhaust stream in §63.7790(d)(2), follow the test methods and procedures in paragraphs (e)(1) through (5) of this section.

(1) Determine the volatile organic compound emissions according to the following test methods in appendix A to part 60 of this chapter:

(i) Method 1 to select sampling port locations and the number of traverse points. Sampling ports must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 25 to determine the mass concentration of volatile organic compound emissions (total gaseous nonmethane organics as carbon) from the sinter plant windbox exhaust stream stack.

(2) Determine volatile organic compound (VOC) emissions every 24 hours (from at least three samples taken at 8-hour intervals) using Method 25 in 40 CFR part 60, appendix A. Record the sampling date and time, sampling results, and sinter produced (tons/day).

(3) Compute the process-weighted mass emissions (E_v) each day using Equation 1 of this section as follows:

$$E_v = \frac{M_c \times Q}{35.31 \times 454,000 \times K} \qquad \text{(Eq. 1)}$$

Where:

E_v = Process-weighted mass emissions of volatile organic compounds, lb/ton;

M_c = Average concentration of total gaseous nonmethane organics as carbon by Method 25 (40 CFR part 60, appendix A), milligrams per dry standard cubic meters (mg/dscm) for each day;

Q = Volumetric flow rate of stack gas, dscf/hr;

35.31 = Conversion factor (dscf/dscm);

454,000 = Conversion factor (mg/lb); and

K = Daily production rate of sinter, tons/hr.

(4) Continue the sampling and analysis procedure in paragraphs (f)(1) through (3) of this section for 30 consecutive days.

(5) Compute and record the 30-day rolling average of VOC emissions for each operating day.

(g) You may use an alternative test method to determine the oil content of the sinter plant feedstock or the volatile organic compound emissions from the sinter plant windbox exhaust stack if you have already demonstrated the equivalency of the alternative method for a specific plant and have received previous approval from the applicable permitting authority.

§ 63.7825 How do I demonstrate initial compliance with the emission limitations that apply to me?

(a) For each affected source subject to an emission or opacity limit in Table 1 to this subpart, you have demonstrated initial compliance if:

(1) You meet the conditions in Table 2 to this subpart; and

(2) For each capture system subject to the operating limit in §63.7790(b)(1), you have established appropriate site-specific operating limit(s) and have a record of the operating parameter data measured during the performance test in accordance with §63.7824(a)(1); and

(3) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in §63.7790(b)(2), you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with §63.7824(b).

(b) For each existing or new sinter plant subject to the operating limit in §63.7790(d)(1), you have demonstrated initial compliance if the 30-day rolling average of the oil content of the feedstock, measured during the initial performance test in accordance with §63.7824(d) is no more than 0.02 percent. For each existing or new sinter plant subject to the alternative operating limit in §63.7790 (d) (2), you have demonstrated initial compliance if the 30-day rolling average of the volatile organic compound emissions from the sinter plant windbox exhaust stream, measured during the initial performance test in accordance with §63.7824(e), is no more than 0.2 lb/ton of sinter produced.

(c) For each emission limitation that applies to you, you must submit a notification of compliance status according to §63.7840(e).

§ 63.7826 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

(a) For a capture system applied to emissions from a sinter plant discharge end or blast furnace casthouse or to secondary emissions from a BOPF, you have demonstrated initial compliance if you meet all of the conditions in paragraphs (a)(1) through (4) of this section.
  (1) Prepared the capture system operation and maintenance plan according to the requirements of §63.7800(b), including monthly inspection procedures and detailed descriptions of the operating parameter(s) selected to monitor the capture system;
  (2) Certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan;
  (3) Submitted a notification of compliance status according to the requirements in §63.7840(e), including a copy of the capture system operation and maintenance plan and your certification that you will operate the capture system at the values or settings established for the operating limits in that plan; and
  (4) Prepared a site-specific monitoring plan according to the requirements in §63.7831(a).

(b) For each control device subject to operating limits in §63.7790(b)(2) or (3), you have demonstrated initial compliance if you meet all the conditions in paragraphs (b)(1) through (3) of this section.
  (1) Prepared the control device operation and maintenance plan according to the requirements of §63.7800(b), including a preventative maintenance schedule and, as applicable, detailed descriptions of the corrective action procedures for baghouses and other contol devices;
  (2) Submitted a notification of compliance status according to the requirements in §63.7840(e), including a copy of the operation and maintenance plan; and
  (3) Prepared a site-specific monitoring plan according to the requirements in §63.7831(a).

Continuous Compliance Requirements

§ 63.7830 What are my monitoring requirements?

(a) For each capture system subject to an operating limit in §63.7790(b)(1) established in your capture system operation and maintenance plan, you must install, operate, and maintain a CPMS according to the requirements in §63.7831(e) and the requirements in paragraphs (a)(1) through (3) of this section.
  (1) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate a CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.
  (2) If you use a flow measurement device to monitor the operating limit parameter for a sinter plant discharge end or blast furnace casthouse, you must monitor the hourly average rate (*e.g.,* the hourly average actual volumetric flow rate through each separately ducted hood, the average hourly total volumetric flow rate at the inlet to the control device) according to the requirements in §63.7832.
  (3) If you use a flow measurement device to monitor the operating limit parameter for a capture system applied to secondary emissions from a BOPF, you must monitor the average rate for each steel production cycle (*e.g.,* the average actual volumetric flow rate through each separately ducted hood for each steel production cycle, the average total volumetric flow rate at the inlet to the control device for each steel production cycle) according to the requirements in §63.7832.

(b) Except as provided in paragraph (b) (3) of this subsection, you must meet the requirements in paragraph (b) (1) or (2) of this section for each baghouse applied to meet any particulate emission limit in Table 1 to this subpart. You must conduct inspections of each baghouse according to the requirements in paragraph (b) (4) of this section.
  (1) Install, operate, and maintain a bag leak detection system according to §63.7831(f), and monitor the relative change in particulate matter loadings according to the requirements in §63.7832; or

(2) If you do not install and operate a bag leak detection system, you must install, operate, and maintain a COMS according to the requirements in §63.7831 (h) and monitor the hourly average opacity of emissions exiting each control device stack according to the requirement in §63.7832.

(3) A bag leak detection system and COMS are not required for a baghouse that meets the requirements in paragraphs (b) (3) (i) and (ii) of this section.

(i) The baghouse is a positive pressure baghouse and is not equipped with exhaust gas stacks; and

(ii) The baghouse was installed before August 30, 2005.

(4) You must conduct inspections of each baghouse at the specified frequencies according to the requirements in paragraphs (b)(i) through (viii) of this section.

(i) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(ii) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(iii) Check the compressed air supply for pulse-jet baghouses each day.

(iv) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(v) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.

(vi) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or laying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(vii) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(viii) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(c) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in §63.7790(b)(2), you must install, operate, and maintain CPMS according to the requirements in §63.7831(g) and monitor the hourly average pressure drop and water flow rate according to the requirements in §63.7832.

(e) For each sinter plant subject to the operating limit in §63.7790(d), you must either:

(1) Compute and record the 30-day rolling average of the oil content of the feedstock for each operating day using the procedures in §63.7824(d); or

(2) Compute and record the 30-day rolling average of volatile organic compound emissions (lbs/ton of sinter) for each operating day using the procedures in §63.7824(e).

§ 63.7831 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each CPMS required in §63.7830, you must develop and make available for inspection upon request by the permitting authority a site-specific monitoring plan that addresses the requirements in paragraphs (a)(1) through (8) of this section.

(1) Installation of the CPMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(2) Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system;

(3) Performance evaluation procedures and acceptance criteria (e.g., calibrations);

(4) Ongoing operation and maintenance procedures in accordance with the general requirements of §§63.8(c)(1), (c)(3), (c)(4)(ii), (c)(7), and (c)(8);

(5) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d);

(6) Ongoing recordkeeping and reporting procedures in accordance the general requirements of §§63.10(c), (e)(1), and (e)(2)(i);

(7) Corrective action procedures you will follow in the event a venturi scrubber exceeds the operating limit in §63.7790 (b) (2); and

(8) Corrective action procedures you will follow in the event an electrostatic precipitator exceeds the operating limit in §63.7790 (b) (3).

(b) Unless otherwise specified, each CPMS must:

(1) Complete a minimum of one cycle of operation for each successive 15-minute period and collect a minimum of three of the required four data points to constitute a valid hour of data;
(2) Provide valid hourly data for at least 95 percent of every averaging period; and
(3) Determine and record the hourly average of all recorded readings.

(c) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.
(d) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.
(e) For each capture system subject to an operating limit in §63.7790(b)(1), you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a) through (d) of this section.
(f) For each baghouse equipped with a bag leak detection system according to §63.7790 (b) (1), you must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (f)(1) through (7) of this section.
(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
(2) The system must provide output of relative changes in particulate matter loadings.
(3) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over a preset level. The alarm must be located such that it can be heard by the appropriate plant personnel.
(4) Each system that works based on the triboelectric effect must be installed, operated, and maintained in a manner consistent with the guidance document, “Fabric Filter Bag Leak Detection Guidance,” EPA–454/R–98–015, September 1997. You may install, operate, and maintain other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations.
(5) To make the initial adjustment of the system, establish the baseline output by adjusting the sensitivity (range) and the averaging period of the device. Then, establish the alarm set points and the alarm delay time.
(6) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in your operation and maintenance plan. Do not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless a responsible official certifies, in writing, that the baghouse has been inspected and found to be in good operating condition.
(7) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
(g) For each venturi scrubber subject to operating limits in §63.7790(b)(2) for pressure drop and scrubber water flow rate, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a) through (d) of this section.

§ 63.7832 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitoring malfunctions, out-of-control periods as specified in §63.8(c)(7), associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times an affected source is operating.
(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.
(c) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

§ 63.7833 How do I demonstrate continuous compliance with the emission limitations that apply to me?

(a) You must demonstrate continuous compliance for each affected source subject to an emission or opacity limit in §63.7790(a) by meeting the requirements in Table 3 to this subpart.

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in §63.7790(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.
  (1) Operate the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and
  (2) Monitor the capture system according to the requirements in §63.7830(a) and collect, reduce, and record the monitoring data for each of the operating limit parameters according to the applicable requirements of this subpart;

(c) For each baghouse applied to meet any particulate emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by meeting the requirements in paragraphs (c)(1) or (2) as applicable, and paragraphs (c) (3) and (4) of this section:
  (1) For a baghouse equipped with a bag leak detection system, operating and maintaining each bag leak detection system according to §63.7831 (f) and recording all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in §63.7831(f)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

  (2) For a baghouse equipped with a COMS, operating and maintaining each COMS and reducing the COMS data according to §63.7831 (h).
  (3) Inspecting each baghouse according to the requirements in §63.7830(b) (4) and maintaining all records to document conformance with these requirements
  (4) Maintaining records of the time you initiated corrective actions in the event of a bag leak detection system alarm or when the hourly average opacity exceeded 5 percent, the corrective action(s) taken, and the date on which corrective action was completed.

(d) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in §63.7790(b)(2), you must demonstrate continuous compliance by meeting the requirements of paragraphs (d)(1) through (4) of this section:
  (1) Maintaining the hourly average pressure drop and scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;
  (2) Operating and maintaining each venturi scrubber CPMS according to §63.7831(g) and recording all information needed to document conformance with these requirements; and
  (3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to §63.7831(b) and recording all information needed to document conformance with these requirements.
  (4) If the hourly average pressure drop or scrubber water flow rate is below the operating limits, you must follow the corrective action procedures in paragraph (g) of this section.

(f) For each new or existing sinter plant subject to the operating limit in §63.7790(d), you must demonstrate continuous compliance by either:
  (1) For the sinter plant feedstock oil content operating limit in §63.7790(d)(1),
    (i) Computing and recording the 30-day rolling average of the percent oil content for each operating day according to the performance test procedures in §63.7824(d);
    (ii) Recording the sampling date and time, oil content values, and sinter produced (tons/day) and
    (iii) Maintaining the 30-day rolling average oil content of the feedstock no higher than 0.02 percent.
  (2) For the volatile organic compound operating limit in §63.7790(d)(2),
    (i) Computing and recording the 30-day rolling average of volatile organic compound emissions for each operating day according to the performance test procedures in §63.7824(e);
    (ii) Recording the sampling date and time, sampling values, and sinter produced (tons/day); and
    (iii) Maintaining the 30-day rolling average of volatile organic compound emissions no higher than 0.2 lb/ton of sinter produced.

(g) If the hourly average pressure drop or water flow rate for a venturi scrubber or hourly average opacity for an electrostatic precipator exceeds the operating limit, you must follow the procedures in paragraphs (g) (1) through (4) of this section.
  (1) You must initiate corrective action to determine the cause of the exceedance within 1 hour. During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. Within 24 hours of the exceedance, you must measure and record the hourly average operating parameter

value for the emission unit on which corrective action was taken. If the hourly average parameter value meets the applicable operating limit, then the corrective action was successful and the emission unit is in compliance with the applicable operating limit.

(2) If the initial corrective action required in paragraph (g)(1) of this section was not successful, you must complete additional corrective action within the next 24 hours (48 hours from the time of the exceedance). During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. After this second 24 hour period, you must again measure and record the hourly average operating parameter value for the emission unit on which corrective action was taken. If the hourly average parameter value meets the applicable operating limit, then the corrective action was successful and the emission unit is in compliance with the applicable operating limit.

(3) For purposes of paragraphs (g)(1) and (2) of this section, in the case of an exceedance of the hourly average opacity operating limit for an electrostatic precipitator, measurements of the hourly average opacity based on visible emission observations in accordance with Method 9 (40 CFR part 60, appendix A) may be taken to evaluate the effectiveness of corrective action.

(4) If the second attempt at corrective action required in paragraph (g) (2) of this section was not successful, you must report the exceedance as a deviation in your next semiannual compliance report according to §63.7841(b).

§ 63.7834 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system and control device subject to an operating limit in §63.7790(b), you must demonstrate continuous compliance with the operation and maintenance requirements in §63.7800(b) by meeting the requirements of paragraphs (a)(1) through (4) of this section:

(1) Making monthly inspections of capture systems and initiating corrective action according to §63.7800(b)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance according to §63.7800(b)(2) and recording all information needed to document conformance with these requirements;

(3) Initiating and completing corrective action for a baghouse equipped with a bag leak detection system or COMS according to §63.7800(b)(4) and recording all information needed to document conformance with these requirements, including the time you initiated corrective action, the corrective actions taken, and date on which corrective action was completed.

(4) Initiating and completing corrective action for a venturi scrubber equipped with a CPMS or an electrostatic precipitator equipped with a COMS according to §63.7833(g) and recording all information needed to document conformance with these requirements, including the time you initiated corrective action, the corrective action(s) taken within the first 24 hours according to §63.7833(g)(1) and whether they were successful, the corrective action(s) taken within the second 24 hours according to §63.7833(g)(2) and whether they were successful, and the date on which corrective action was completed.,

(b) You must maintain a current copy of the operation and maintenance plan required in §63.7800(b) onsite and available for inspection upon request. You must keep the plans for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

§ 63.7835 What other requirements must I meet to demonstrate continuous compliance?

(a) *Deviations.* Except as provided in §63.7833(g), you must report each instance in which you did not meet each emission limitation in §63.7790 that applies to you. This includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet each operation and maintenance requirement in §63.7800 that applies to you. These instances are deviations from the emission limitations and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements in §63.7841.

(b) *Startups, shutdowns, and malfunctions.*

(1) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1).

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

[68 FR 27663, May 20, 2003, as amended at 71 FR 20468, Apr. 20, 2006]

Notifications, Reports, and Records

§ 63.7840 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in §63.9(b)(2), if you startup your affected source before May 20, 2003, you must submit your initial notification no later than September 17, 2003.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in §63.7(b)(1).

(e) If you are required to conduct a performance test, opacity observation, or other initial compliance demonstration, you must submit a notification of compliance status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration that does not include a performance test, you must 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, you must 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 §63.10(d)(2).

§ 63.7841 What reports must I submit and when?

(a) *Compliance report due dates.* Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements in paragraphs (a)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.7783 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your source in §63.7783.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (a)(1) through (4) of this section.

(b) *Compliance report contents.* Each compliance report must include the information in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there were no deviations from the continuous compliance requirements in §63.7833 and 63.7834 that apply to you, a statement that there were no deviations from the emission limitations or operation and maintenance requirements during the reporting period.

(6) If there were no periods during which a continuous monitoring system (including a CPMS, COMS, or continuous emission monitoring system (CEMS) was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.

(7) For each deviation from an emission limitation in §63.7790 that occurs at an affected source where you are not using a continuous monitoring system (including a CPMS, COMS, or CEMS) to comply with an emission limitation in this subpart, the compliance report must contain the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(7)(i) and (ii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each affected source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable) as applicable and the corrective action taken.

(8) For each deviation from an emission limitation occurring at an affected source where you are using a continuous monitoring system (including a CPMS or COMS) to comply with the emission limitation in this subpart, you must include the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(8)(i) through (xi) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time that each continuous monitoring was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system was out-of-control as specified in §63.8(c)(7), including the information in §63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period including those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) A brief description of the process units.

(ix) A brief description of the continuous monitoring system.

(x) The date of the latest continuous monitoring system certification or audit.

(xi) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(c) *Immediate startup, shutdown, and malfunction report.* If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in §63.10(d)(5)(ii).

(d) *Part 70 monitoring report.* If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an affected source to your permitting authority.

§ 63.7842 What records must I keep?

(a) You must keep the following records:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements in §63.10(b)(2)(xiv).
(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
(3) Records of performance tests, performance evaluations, and opacity observations as required in §63.10(b)(2)(viii).

(b) For each COMS, you must keep the records specified in paragraphs (b)(1) through (4) of this section.
(1) Records described in §63.10(b)(2)(vi) through (xi).
(2) Monitoring data for a performance evaluation as required in §63.6(h)(7)(i) and (ii).
(3) Previous (that is, superceded) versions of the performance evaluation plan as required in §63.8(d)(3).
(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records required in §63.6(h)(6) for visual observations.
(d) You must keep the records required in §§63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to you.

§ 63.7843 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).
(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

Other Requirements and Information

§ 63.7850 What parts of the General Provisions apply to me?

Table 4 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.7851 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the United States Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.
(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.
(c) The authorities that will not be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (4) of this section.
(1) Approval of alternative opacity emission limits in Table 1 to this subpart under §63.6(h)(9).
(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90, except for approval of an alternative method for the oil content of the sinter plant feedstock or volatile organic compound measurements for the sinter plant windbox exhaust stream stack as provided in §63.7824(g).
(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.
(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§ 63.7852 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section as follows.
Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on tribroelectric, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Basic oxygen process furnace means any refractory-lined vessel in which high-purity oxygen is blown under pressure through a bath of molten iron, scrap metal, and fluxes to produce steel. This definition includes both top and bottom blown furnaces, but does not include argon oxygen decarburization furnaces.
Basic oxygen process furnace shop means the place where steelmaking operations that begin with the transfer of molten iron (hot metal) from the torpedo car and end prior to casting the molten steel, including hot metal transfer, desulfurization, slag skimming, refining in a basic oxygen process furnace, and ladle metallurgy occur.
Basic oxygen process furnace shop ancillary operations means the processes where hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy occur.
Blast furnace means a furnace used for the production of molten iron from iron ore and other iron bearing materials.
Bottom-blown furnace means any basic oxygen process furnace in which oxygen and other combustion gases are introduced into the bath of molten iron through tuyeres in the bottom of the vessel or through tuyeres in the bottom and sides of the vessel.
Casthouse means the building or structure that encloses the bottom portion of a blast furnace where the hot metal and slag are tapped from the furnace.
Certified observer means a visible emission observer certified to perform EPA Method 9 opacity observations.
Desulfurization means the process in which reagents such as magnesium, soda ash, and lime are injected into the hot metal, usually with dry air or nitrogen, to remove sulfur.
Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation (including operating limits) or operation and maintenance requirement;
(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
(3) Fails to meet any emission limitation in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Discharge end means the place where those operations conducted within the sinter plant starting at the discharge of the sintering machine's traveling grate including (but not limited to) hot sinter crushing, screening, and transfer operations occur.
Emission limitation means any emission limit, opacity limit, or operating limit.
Hot metal transfer station means the location in a basic oxygen process furnace shop where molten iron (hot metal) is transferred from a torpedo car or hot metal car used to transport hot metal from the blast furnace casthouse to a holding vessel or ladle in the basic oxygen process furnace shop. This location also is known as the reladling station or ladle transfer station.
Integrated iron and steel manufacturing facility means an establishment engaged in the production of steel from iron ore.
Ladle metallurgy means a secondary steelmaking process that is performed typically in a ladle after initial refining in a basic oxygen process furnace to adjust or amend the chemical and/or mechanical properties of steel. This definition does not include vacuum degassing.
Primary emissions means particulate matter emissions from the basic oxygen process furnace generated during the steel production cycle which are captured and treated in the furnace's primary emission control system.
Primary emission control system means the combination of equipment used for the capture and collection of primary emissions (*e.g.,* an open hood capture system used in conjunction with an electrostatic precipitator or a closed hood system used in conjunction with a scrubber).
Primary oxygen blow means the period in the steel production cycle of a basic oxygen process furnace during which oxygen is blown through the molten iron bath by means of a lance inserted from the top of the vessel (top-blown) or through tuyeres in the bottom and/or sides of the vessel (bottom-blown).
Responsible official means responsible official as defined in §63.2.
Secondary emissions means particulate matter emissions that are not controlled by a primary emission control system, including emissions that escape from open and closed hoods, lance hole openings, and gaps or tears in ductwork to the primary emission control system.
Secondary emission control system means the combination of equipment used for the capture and collection of secondary emissions from a basic oxygen process furnace.
Sinter cooler means the apparatus used to cool the hot sinter product that is transferred from the discharge end through contact with large volumes of induced or forced draft air.

Sinter plant means the machine used to produce a fused clinker-like aggregate or sinter of fine iron-bearing materials suited for use in a blast furnace. The machine is composed of a continuous traveling grate that conveys a bed of ore fines and other finely divided iron-bearing material and fuel (typically coke breeze), a burner at the feed end of the grate for ignition, and a series of downdraft windboxes along the length of the strand to support downdraft combustion and heat sufficient to produce a fused sinter product.
Skimming station means the locations inside a basic oxygen process furnace shop where slag is removed from the top of the molten metal bath.
Steel production cycle means the operations conducted within the basic oxygen process furnace shop that are required to produce each batch of steel. The following operations are included: scrap charging, preheating (when done), hot metal charging, primary oxygen blowing, sampling, (vessel turndown and turnup), additional oxygen blowing (when done), tapping, and deslagging. The steel production cycle begins when the scrap is charged to the furnace and ends after the slag is emptied from the vessel into the slag pot.
Top-blown furnace means any basic oxygen process furnace in which oxygen is introduced into the bath of molten iron by means of an oxygen lance inserted from the top of the vessel.
Windboxes means the compartments that provide for a controlled distribution of downdraft combustion air as it is drawn through the sinter bed of a sinter plant to make the fused sinter product.

Table 1 to Subpart FFFFF of Part 63—Emission and Opacity Limits

As required in §63.7790(a), you must comply with each applicable emission and opacity limit in the following table:

For . . .	You must comply with each of the following . .
1. Each windbox exhaust stream at an existing sinter plant.....	You must not cause to be discharged to the atmosphere any gases that contain particulate matter in excess of 0.4 lb/ton of product sinter.
3. Each discharge end at an existing sinter plant.....	a. You must not cause to be discharged to the atmosphere any gases that exit from one or more control devices that contain, on a flow-weighted basis, particulate matter in excess of 0.02 gr/dscf \1\; and b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the building or structure housing the discharge end that exhibit opacity greater than 20 percent (6-minute average).
5. Each sinter cooler at an existing sinter plant.....	You must not cause to be discharged to the atmosphere any emissions that exhibit opacity greater than 10 percent (6-minute average).
7. Each casthouse at an existing blast furnace.....	a. You must not cause to be discharged to the atmosphere any gases that exit from a control device that contain particulate matter in excess of 0.01 gr/dscf; \2\ and b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the casthouse or structure housing the blast furnace that exhibit opacity greater than 20 percent (6-minute average).
9. Each BOPF at a new or existing shop.....	a. You must not cause to be discharged to the atmosphere any gases that exit from

	a primary emission control system for a BOPF with a closed hood system at a new or existing BOPF shop that contain, on a flow-weighted basis, particulate matter in excess of 0.03 gr/dscf during the primary oxygen blow \2, 3\;
0.01	b. You must not cause to be discharged to the atmosphere any gases that exit from a primary emission control system for a BOPF with an open hood system that contain, on a flow-weighted basis, particulate matter in excess of 0.02 gr/dscf during the steel production cycle for an existing BOPF shop \2, 3\; or gr/dscf during during the steel production cycle for a new BOPF shop \3\; and
	c. You must not cause to be discharged to the atmosphere any gases that exit from a control device used solely for the collection of secondary emissions from the BOPF that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop\2\ or 0.0052 gr/dscf for a new BOPF shop.
10. Each hot metal transfer, skimming, and desulfurization operation control	You must not cause to be discharged at a new or existing BOPF shop to the atmosphere any gases that exit from a device that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop \2\. Or 0.003 gr/dscf for new BOPF shop.
11. Each ladle metallurgy operation at a new or existing BOPF shop..... control	You must not cause to be discharged to the atmosphere any gases that exit from a device that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop \2\ or 0.004 gr/dscf for an new BOPF shop.
12. Each roof monitoring at an existing BOPF shop..... exit	You must not cause to be discharged to the atmosphere any secondary emissions that any opening in the BOPF shop or any other building housing the BOPF or BOPF shop operation that exhibit opacity greater than 20 percent (3- minute average).

\1\ This limit applies if the cooler is vented to the same control device as the discharge end.
\2\ This concentration limit (gr/dscf) for a device does not apply to discharges inside a building or structure housing the discharge end at an existing sinter plant, inside the casthouse at an existing blast furnace , or inside an existing BOPF shop if the control device was installed before August 30, 2005.
\3\ This limit applies to control devices operated in parallel for a single BOPF during the oxygen blow.

Table 2 to Subpart FFFFF of Part 63—Initial Compliance with Emission and Opacity Limits

As required in §63.7825(a)(1), you must demonstrate initial compliance with the emission and opacity limits according to the following table:

For . . .	You have demonstrated initial compliance if . . .
1. Each windbox exhaust stream at an existing sinter plant.....	The process-weighted mass rate of particulate matter from a windbox exhaust stream, measured according to the performance test procedures in § 63.7822(c), did not exceed 0.4 lb/ton of product sinter.
3. Each discharge end at an existing sinter plant.....	a. The flow-weighted average concentration of particulate matter from one or more control devices applied to emissions from a discharge end, measured according to the performance test procedures in § 63.7822(d), did not exceed 0.02 gr/dscf; and b. The opacity of secondary emissions from each discharge end, determined according to the performance test procedures in § 63.7823(c), did not exceed 20 percent (6-minute average).
5. Each sinter cooler stack at an existing sinter plant.....	The opacity of emissions, determined according to the performance test procedures in § 63.7823(e) did not exceed 10 percent (6-minute average)..
7. Each casthouse at an existing blast furnace.....	a. The average concentration of particulate matter from a control device applied to emissions from a casthouse, measured according to the performance test procedures in § 63.7822(e), did not exceed 0.01 gr/dscf; and b. The opacity of secondary emissions from each casthouse, determined according to the performance test procedures in § 63.7823(c), did not exceed 20 percent (6-minute average).
9. Each BOPF at a new or existing BOPF shop.....	a. The average concentration of particulate matter from a primary emission control system applied to emissions from a BOPF with a closed hood system, measured according to the performance test procedures in § 63.7822(f), did not exceed 0.03 gr/dscf for a new or existing BOPF shop; b. The average concentration of particulate matter from a primary emission control system applied to emissions from a BOPF with an open hood system, measured according to the performance test

	procedures in § 63.7822(g), did not exceed 0.02 gr/dscf for an existing BOPF shop; and c. The average concentration of particulate matter from a control device applied solely to secondary emissions from a BOPF, measured according to the performance test procedures in § 63.7822(g), did not exceed 0.01 gr/dscf for an existing BOPF shop.
10. Each hot metal transfer skimming, and desulfurization at a new or existing BOPF shop…	The average concentration of particulate matter from a control device applied to emissions from hot metal transfer, skimming, or desulfurization, measured according to the performance test procedures in § 63.7822(h), did not exceed 0.01 gr/dscf for an existing BOPF shop.
11. Each ladle metallurgy operation at a new or existing BOPF shop.....	The average concentration of particulate matter from a control device applied to emissions from a ladle metallurgy operation, measured according to the performance test procedures in § 63.7822(h), did not exceed 0.01 gr/dscf for an existing BOPF shop.
12. Each roof monitor at an existing BOPF shop...	The opacity of secondary emissions from each BOPF shop, determined according to the performance test procedures in § 63.7823(d), did not exceed 20 percent (3-minute average).

Table 3 to Subpart FFFFF of Part 63—Continuous Compliance with Emission and Opacity Limits

As required in §63.7833(a), you must demonstrate continuous compliance with the emission and opacity limits according to the following table:

For . . .	You must demonstrate continuous compliance by . . .
1. Each windbox exhaust stream at an existing sinter plant...	a. Maintaining emissions of particulate matter at or below 0.4 lb/ton of product sinter; and b. Conducting subsequent performance tests frequencies specified in § 63.7821.
3. Each discharge end at an existing sinter plant.....	a. Maintaining emissions of particulate matter from one or more control devices at or below 0.02 gr/dscf; and b. Maintaining the opacity of secondary emissions that exit any opening in the building or structure housing the discharge end at or below 20 percent (6-minute average); and c. Conducting subsequent performance tests frequencies specified in § 63.7821.

5. Each sinter cooler stack at an existing sinter plant....	a. Maintaining the opacity of emissions that exit any sinter cooler at or below 10 percent (6-minute average); and b. Conducting subsequent performance tests frequencies specified in § 63.7821.
7. Each casthouse at an existing blast furnace...	a. Maintaining emissions of particulate matter from a control device at or below 0.01 gr/dscf; b. Maintaining the opacity of secondary emissions that exit any opening in the casthouse or structure housing the blast furnace at or below 20 percent (6-minute average); and b. Conducting subsequent performance tests frequencies specified in § 63.7821.
9. Each BOPF at a new or existing BOPF shop....	a. Maintaining emissions of particulate matter from the primary emission control system for a BOPF with a closed hood system at or below 0.03 gr/dscf; b. Maintaining emissions of particulate matter from the primary emission control system for a BOPF with an open hood system at or below 0.02 gr/dscf for an existing BOPF shop or 0.01 gr/dscf for an new BOPF shop; and c. Maintaining emissions of particulate matter from a control device applied solely to secondary emissions from a BOPF at or below 0.01 gr/dscf for an existing BOPFshop or 0.0052 gr/dscf for a new BOPF shop; and; d. Conducting subsequent performance tests frequencies specified in § 63.7821.
10. Each hot metal transfer, skimming, and desulfurization operation at a new or existing BOPF shop…	a. Maintaining emissions of particulate matter from a control device at or below gr/dscf at an existing BOPF or 0.003 gr/dscf for a new BOPF; and b. Conducting subsequent performance tests frequencies specified in § 63.7821.
11. Each ladle metallurgy operation at a new or existing BOPF shop...	a. Maintaining emissions of particulate matter from a control device at or below 0.01r/dscf at an existing BOPF shop or 0.004 gr/dscf for a new BOPF shop; and b. Conducting subsequent performance tests frequencies specified in § 63.7821.
12. Each roof monitor at an existing BOPF shop...	a. Maintaining the opacity of secondary emissions that exit any opening in the BOPF shop or other building housing the BOPF or shop operation at or below 20 percent (3-minute average); and

b. Conducting subsequent performance tests frequencies specified in § 63.7821.

Table 4 to Subpart FFFFF of Part 63—Applicability of General Provisions to Subpart FFFFF

As required in §63.7850, you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) shown in the following table:

Citation	Subject	Applies to Subpart FFFFF?	Explanation
§ 63.1	Applicability	Yes	
§ 63.2	Definitions	Yes	
§ 63.3	Units and Abbreviations	Yes	
§ 63.4	Prohibited Activities	Yes	
§ 63.5	Construction/Reconstruction	Yes	
§ 63.6(a), (b), (c), (d), (e), (f), (g), (h)(2)(ii)-(h)(9).	Compliance with Standards and Maintenance Requirements.	Yes	
§ 63.6(h)(2)(i)	Determining Compliance with Opacity and VE Standards	No	Subpart FFFFFspecifies methods and procedures for determining compliance with opacity emission and operating limits.
§ 63.7(a)(1)-(2).	Applicability and Performance Test Dates	No	Subpart FFFFF specifies performance test applicability and dates.
§ 63.7(a)(3), (b), (c)-(h).	Performance Testing Requirements.	Yes..	
§ 63.8(a)(1)-(3), (b), (c)(1)- (3), (c)(4)(i)-(e), (c)(7)-(8), (d), (e), (f)(1)-(5), (g)(1)-(4).	Monitoring Requirements	Yes	CMS requirements in §63.8(c)(4)(i)-(ii), (c)(5), and (c)(6), (d) and (e) apply only to COMS
§ 63.8(a)(4)	Additional Monitoring Requirements for Control Devices in § 63.11.	No	Subpart FFFFF does not require flares.
§ 63.8(c)(4)	Continuous Monitoring System (CMS) Requirements.	No	Subpart FFFFF specifies requirements for operation of CMS.
§ 63.8(f)(6).	RATA Alternative	NO	
§ 63.9	Notification Requirements.	Yes.	Additional notifications for CMS in § 63.9(g) apply to COMS for electrostatic precipitators
§ 63.9(g)(5)	DATA Reduction	NO	Subpart FFFFF specifies data reduction requirements.
§ 63.10(a), (b)(1)-(b)(2)(xii), (b)(2)(xiv), (b)(3), (c)(1)-(6), (c)(9)-(15), (d), (e)(1)-(2), (e)(4), (f).	Recordkeeping and Reporting Requirements	Yes.	Additional records for CMS in §63.10(c)(1)-(6), (9)-(15), and reports in §63.10(d)(1)-(2) apply only to COMS.
§ 63.10(b)(2) (xi)-(xii)	CMS Records for RATA Alternative	No	
§ 63.10(c)(7)-(8)	Records of Excess Emissions and Parameter Monitoring Exceedances for CMS.	No.	Subpart FFFFF specifies record requirements.
§ 63.11	Control Device Requirements.	No	Subpart FFFFF does not require flares.
§ 63.12	State Authority and Delegations	Yes	
§§ 63.13-63.15	Addresses, Incorporation by Reference, Availability of Information.	Yes	

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street MC 8-130, East Chicago, Indiana 46312
Part 70 Permit No.: T089-6577-00316

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit. Please check what document is being certified: ☐ Annual Compliance Certification Letter ☐ Test Result (specify) ☐ Report (specify) ☐ Notification (specify) ☐ Affidavit (specify) ☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street MC 8-130, East Chicago, Indiana 46312
Part 70 Permit No.: T089-6577-00316

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 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street MC 8-130, East Chicago, Indiana 46312
Part 70 Permit No.: T089-6577-00316

☐ Natural Gas Only
☐ 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 QUARTERLY REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street MC 8-130, East Chicago, Indiana 46312
Permit No.: 089-16966-00316
Facility: Slag pits at No.7 Blast Furnace
Parameter: Throughput of slag
Limit: 662,550 tons of slag processed at these facilities per 12 consecutive month period.

QUARTER:_____ YEAR:

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

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

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 USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street MC 8-130, East Chicago, Indiana 46312
Permit No.: T089-6577-00316
Facility: No. 1 Electric Arc Furnace Shop
Parameter: Production of leaded steel
Limit: 640,900 tons of leaded steel produced per 12 consecutive month period

QUARTER:_____ YEAR:_____

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

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

Attach a signed certification to complete this report.

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

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Mailing Address: 3210 Watling Street MC 8-130, East Chicago, Indiana 46312
Part 70 Permit No.: T089-6577-00316

Months: ____ to Year: _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

Attach a signed certification to complete this report.

APPENDIX A – EMISSION FACTORS

No.7 Blast Furnace and No.5 Boiler House emission points:

PM

Stack ID, associated equipment	Type of fuel combusted at the equipment	PM emissions factors (pound/MMSCF of fuel)
170, No.7 Blast Furnace Stoves	Blast furnace gas	0.68
	Natural gas	1.9
	Combination gas (a mix of natural gas and blast furnace gas)	0.68 X Usage of BFG (MMSCF)+ 1.9 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)
134, No.5 Boiler House	Blast Furnace Gas	0.68
	Natural Gas	1.9
	Combination gas (a mix of natural gas and blast furnace gas)	0.68 X Usage of BFG (MMSCF)+ 1.9 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)

Stack ID, associated equipment	PM emissions factors	Units
167, Casthouse No.7 Blast Furnace east baghouse	22.0	pound/hour
166, Casthouse No.7 Blast Furnace west baghouse	11.22	pound/hour
169, Coke screening and transfer station baghouse	0.0002	pound/ton of coke
172, Stockhouse coke handling baghouse	0.0009	pound/ton of coke
168, Stockhouse pellet handling baghouse	0.0005	pound/ton of pellet
Slag pit operation at No.7 Blast Furnace	0.045	pound/ton of slag processed
Slag Granulator/Pelletizer	0.087	pound/ton of slag processed
171, Casthouse fugitive emissions	0.03	pound/ton of hot metal

PM_{10} (Filterable and Condensable)

Stack ID, associated equipment	Type of fuel combusted at the equipment	PM_{10} (Filterable and Condensable)emissions factors (pound/MMSCF of fuel)
170, No.7 Blast Furnace Stoves	Blast furnace gas	4.51
	Natural gas	7.6
	Combination gas (a mix of natural gas and blast furnace gas)	4.51 X Usage of BFG (MMSCF)+ 7.6 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)
134, No.5 Boiler House	Blast Furnace Gas	4.51
	Natural Gas	7.6
	Combination gas (a mix of natural gas and blast furnace gas)	4.51 X Usage of BFG (MMSCF)+ 7.6 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)

Stack ID, associated equipment	PM_{10} emissions factors	Units
167, Casthouse No.7 Blast Furnace east baghouse	30.1	pound/hour
166, Casthouse No.7 Blast Furnace west baghouse	19.3	pound/hour
169, Coke screening and transfer station baghouse	0.0001	pound/ton of coke
172, Stockhouse coke handling baghouse	0.0008	pound/ton of coke
168, Stockhouse pellet handling baghouse	0.0005	pound/ton of pellet
Slag pit operation at No.7 Blast Furnace	0.031	pound/ton of slag processed
Slag Granulator/Pelletizer	0.087	pound/ton of slag processed
171, Casthouse fugitive emissions	0.021	pound/ton of hot metal

SO_2

Stack ID, associated equipment	Type of fuel combusted at the equipment	SO_2 emissions factors (pound/MMSCF of fuel)
170, No.7 Blast Furnace Stoves	Blast furnace gas	14.7
	Natural gas	0.6
	Combination gas (a mix of natural gas and blast furnace gas)	14.7 X Usage of BFG (MMSCF)+ 0.6 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)
134, No.5 Boiler House	Blast Furnace Gas	14.7
	Natural Gas	0.6
	Combination gas (a mix of natural gas and blast furnace gas)	14.7 X Usage of BFG (MMSCF)+ 0.6 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)

Stack ID, associated equipment	SO_2 emissions factors	Units
167, Casthouse No.7 Blast Furnace east baghouse	0.1774	pound/ton of hot metal
166, Casthouse No.7 Blast Furnace west baghouse	0.1774	pound/ton of hot metal
Slag pit operation at No.7 Blast Furnace	0.578	pound/ton of slag processed
Slag Granulator/Pelletizer	0.1	pound/ton of slag processed
171, Casthouse fugitive emissions	0.01	pound/ton of hot metal

CO

Stack ID, associated equipment	CO emissions factors	Units
167 Casthouse No. 7 Blast Furnace east baghouse	0.56	pounds/tons of hot metal
166 Casthouse No. 7 Blast Furnace west baghouse	2.22	pounds/tons of hot metal
Slag pit operation at No.7 Blast Furnace	0.066	pound/ton of slag processed
Slag Granulator/Pelletizer	0.066	pound/ton of slag processed
Gas Cleaning System	0.131	pound/ton of hot metal
171, Casthouse fugitive emissions	0.012	pound/ton of hot metal

NO_x

Stack ID, associated equipment	Type of fuel combusted at the equipment	NO_x emissions factors (pound/MMSCF of fuel)
170, No.7 Blast Furnace Stoves	Blast furnace gas	23
	Natural gas	104
	Combination gas (a mix of natural gas and blast furnace gas)	23 X Usage of BFG (MMSCF)+ 104 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)
134, No.5 Boiler House	Blast Furnace Gas	23
	Natural Gas	104
	Combination gas (a mix of natural gas and blast furnace gas)	23 X Usage of BFG (MMSCF)+ 104 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)

Stack ID, associated equipment	NO_x emissions factors	Units
167, Casthouse No.7 Blast Furnace east baghouse	0.0248	pound/ton of hot metal
166, Casthouse No.7 Blast Furnace west baghouse	0.0248	pound/ton of hot metal
Slag pit operation at No.7 Blast Furnace	0.0248	pound/ton of slag processed
Slag Granulator/Pelletizer	0.01	pound/ton of slag processed
171, Casthouse fugitive emissions	0.0012	pound/ton of hot metal

VOC

Stack ID, associated equipment	Type of fuel combusted at the equipment	VOC emissions factors (pound/MMSCF of fuel)
170, No.7 Blast Furnace Stoves	Blast furnace gas	0
	Natural gas	5.5
	Combination gas (a mix of natural gas and blast furnace gas)	0 X Usage of BFG (MMSCF)+ 5.5 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)
134, No.5 Boiler House	Blast Furnace Gas	0
	Natural Gas	5.5
	Combination gas (a mix of natural gas and blast furnace gas)	0 X Usage of BFG (MMSCF)+ 5.5 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)

Stack ID, associated equipment	VOC emissions factors	Units
167, Casthouse No.7 Blast Furnace east baghouse	0.00922	pound/ton of hot metal
166, Casthouse No.7 Blast Furnace west baghouse	0.00922	pound/ton of hot metal
Slag pit operation at No.7 Blast Furnace	0.00234	pound/ton of slag processed
Slag Granulator/Pelletizer	0.001	pound/ton of slag processed
171, Casthouse fugitive emissions	0.0009	pound/ton of hot metal

Pb

Stack ID, associated equipment	Type of fuel combusted at the equipment	Pb emissions factors (pound/MMSCF of fuel)
170, No.7 Blast Furnace Stoves	Blast furnace gas	0.0000667
	Natural gas	0.00046
	Combination gas (a mix of natural gas and blast furnace gas)	0.0000667 X Usage of BFG (MMSCF)+ 0.00046 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)
134, No.5 Boiler House	Blast Furnace Gas	0.0000667
	Natural Gas	0.00046
	Combination gas (a mix of natural gas and blast furnace gas)	0.0000667 X Usage of BFG (MMSCF)+ 0.00046 X Usage of NG (MMSCF) / Total usage of BFG and NG (MMSCF)

Stack ID, associated equipment	Pb emissions factors	Units
167, Casthouse No.7 Blast Furnace east baghouse	0.0000024	pound/ton of hot metal
166, Casthouse No.7 Blast Furnace west baghouse	0.00000126	pound/ton of hot metal
Slag pit operation at No.7 Blast Furnace	0.0000036	pound/ton of slag processed
Slag Granulator/Pelletizer	0.000001	pound/ton of slag processed
171, Casthouse fugitive emissions	0.00000108	pound/ton of hot metal

Pulverized Coal Injection Plant emission points:

PM

Stack ID, associated equipment	PM emissions factors	Units
185, Coal transfer baghouse A	0.00056	pound/ton of coal
186, Coal storage baghouse C	0.00078	pound/ton of coal
187, Coal pulverizer baghouse D	0.99	pound/hour
188, Coal pulverizer baghouse E	0.99	pound/hour
189, Coal storage baghouse F	0.000818	pound/ton of coal
190, Coal storage baghouse G	0.000818	pound/ton of coal
192, Coal unloading system	0.003	pound/ton of coal

PM_{10} (Filterable and Condensable)

Stack ID, associated equipment	PM_{10} emissions factors	Units
185, Coal transfer baghouse A	0.00056	pound/ton of coal
186, Coal storage baghouse C	0.00078	pound/ton of coal
187, Coal pulverizer baghouse D	0.99	pound/hour
188, Coal pulverizer baghouse E	0.99	pound/hour
189, Coal storage baghouse F	0.000818	pound/ton of coal
190, Coal storage baghouse G	0.000818	pound/ton of coal
192, Coal unloading system	0.0015	pound/ton of coal

No.1 Lime Plant emission points:

PM

Stack ID, associated equipment	Type of fuel combusted at the equipment	PM emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	Natural gas	0.0019

Stack ID, associated equipment	PM emissions factors	Units
47, Lime plant storage silo baghouse	5.53	pound/hour
45 and 49, No.1 and No.2 Lime Kiln baghouses (combined)	7.149	pound/hour
46, Lime plant fugitive control micro-pulse baghouse	0.007	pound/ton of lime
48, Lime plant truck loadout baghouse	0.01	pound/ton of lime

PM_{10} (Filterable and Condensable)

Stack ID, associated equipment	Type of fuel combusted at the equipment	PM_{10} emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	Natural gas	0.0608

Stack ID, associated equipment	PM_{10} emissions factors	Units
47, Lime plant storage silo baghouse	5.53	pound/hour
45 and 49, No.1 and No.2 Lime Kiln baghouses (combined)	8.0	pound/hour
46, Lime plant fugitive control micro-pulse baghouse	0.007	pound/ton of lime
48, Lime plant truck loadout baghouse	0.0048	pound/ton of lime

SO_2

Stack ID, associated equipment	Type of fuel combusted at the equipment	SO_2 emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	Natural gas	0.6

CO

Stack ID, associated equipment	Type of fuel combusted at the equipment	CO emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	Natural gas	84

Stack ID, associated equipment	CO emissions factors	Units
45 and 49, No.1 and No.2 Lime Kiln baghouses	2.0	pound/ton of lime

NO_X

Stack ID, associated equipment	Type of fuel combusted at the equipment	NO_X emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	Natural gas	104

VOC

Stack ID, associated equipment	Type of fuel combusted at the equipment	VOC emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	Natural gas	5.5

Pb

Stack ID, associated equipment	Type of fuel combusted at the equipment	Pb emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	Natural gas	0.00000368

Stack ID, associated equipment	Pb emissions factors	Units
47, Lime plant storage silo baghouse	0.00000595	pound/ton of lime
45 and 49, No.1 and No.2 Lime Kiln baghouses	0.000060568	pound/ton of lime from each kiln
48, Lime plant truck loadout baghouse	0.00000085	pound/ton of lime

No.2 BOF shop emission points:

PM

Stack ID, associated equipment	Type of fuel combusted at the equipment	PM emissions factors (pound/MMSCF of fuel)
147, No.10 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	1.9
148, No.20 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	1.9

Stack ID, associated equipment	PM emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	0.057	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	0.057	pound/ton of steel
154, Ladle metallurgy facility station baghouse	0.0046	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	0.027	pound/ton of steel
152, Charge Aisle and reloading desulfurization (hot metal station) baghouse	0.026	pound/ton of molten iron handled
150, Truck and ladle hopper baghouse	0.01	pound/ton of flux
151, Flux storage batch baghouse	0.007	pound/ton of flux
153, No.2 BOF Roof Monitor	0.03	pound/ton of steel
158, No.2 BOF Caster Roof Monitor	0.0035	pound/ton of slabs

PM_{10} (Filterable and Condensable)

Stack ID, associated equipment	Type of fuel combusted at the equipment	PM_{10} emissions factors (pound/MMSCF of fuel)
147, No.10 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	7.6
148, No.20 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	7.6

Stack ID, associated equipment	PM_{10} emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	0.057	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	0.057	pound/ton of steel
154, Ladle metallurgy facility station baghouse	0.0064	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	0.028	pound/ton of steel
152, Charge Aisle and Reladling desulfurization (hot metal station) baghouse	0.0213	pound/ton of molten iron handled
150, Truck and ladle hopper baghouse	0.011	pound/ton of flux
151, Flux storage batch baghouse	0.0071	pound/ton of flux
153, No.2 BOF Roof Monitor	0.01866	pound/ton of steel
158, No.2 BOF Caster Roof Monitor	0.0015	pound/ton of slabs

SO_2

Stack ID, associated equipment	Type of fuel combusted at the equipment	SO_2 emissions factors (pound/MMSCF of fuel)
147, No.10 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	0.6
148, No.20 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	0.6

Stack ID, associated equipment	SO_2 emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	0.07	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	0.07	pound/ton of steel
154, Ladle metallurgy facility station baghouse	0.025	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	0.014	pound/ton of steel
152, Charge Aisle and Reladling desulfurization (hot metal station) baghouse	0.0094	pound/ton of molten iron handled
153, No.2 BOF Roof Monitor	0.0004	pound/ton of steel

CO

Stack ID, associated equipment	Type of fuel combusted at the equipment	CO emissions factors (pound/MMSCF of fuel)
147, No.10 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	84
148, No.20 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	84

Stack ID, associated equipment	CO emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	13.55	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	13.55	pound/ton of steel
154, Ladle metallurgy facility station baghouse	0.042	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	0.139	pound/ton of steel
Gas Cleaning System	0.022	pound/ton of steel
153, No.2 BOF Roof Monitor	0.0042	pound/ton of steel

NO_x

Stack ID, associated equipment	Type of fuel combusted at the equipment	NO_x emissions factors (pound/MMSCF of fuel)
147, No.10 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	100
148, No.20 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	100

Stack ID, associated equipment	NO_x emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	0.08	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	0.08	pound/ton of steel
154, Ladle metallurgy facility station baghouse	0.003	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	0.02	pound/ton of steel
152, Charge Aisle and Reladling desulfurization (hot metal station) baghouse	0.0024	pound/ton of molten iron handled
153, No.2 BOF Roof Monitor	0.0006	pound/ton of steel

VOC

Stack ID, associated equipment	Type of fuel combusted at the equipment	VOC emissions factors (pound/MMSCF of fuel)
147, No.10 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	5.5
148, No.20 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	5.5

Stack ID, associated equipment	VOC emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	0.001	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	0.001	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	0.005	pound/ton of steel
152, Charge Aisle and Reladling desulfurization (hot metal station) baghouse	0.001	pound/ton of molten iron handled
153, No.2 BOF Roof Monitor	0.00015	pound/ton of steel
158, No.2 BOF Caster Roof Monitor	0.002	pound/ton of slabs

Pb

Stack ID, associated equipment	Type of fuel combusted at the equipment	Pb emissions factors (pound/MMSCF of fuel)
147, No. 10 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	0.00046
148, No. 20 Basic Oxygen Furnace, Flare stack ignitors	Natural gas	0.00046

Stack ID, associated equipment	Pb emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	0.00011	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	0.00011	pound/ton of steel
154, Ladle metallurgy facility station baghouse	4 E –06	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	0.00013	pound/ton of steel
152, Charge Aisle and Reladling desulfurization (hot metal station) baghouse	0.000001881	pound/ton of molten iron handled
153, No.2 BOF Roof Monitor	0.000023	pound/ton of steel

No.4 BOF shop emission points:

PM

Stack ID, associated equipment	PM emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.171	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop baghouse	22.3	pound/hour
26, Reladling and desulfurization (hot metal station) baghouse (North)	0.00512	pound/ton of hot metal
27, Reladling and desulfurization (hot metal station) baghouse (South)	0.00512	pound/ton of hot metal
32, RHOB condensers stack	0.0004	pound/ton of steel
33, RHOB material handling stack	0.002	pound/ton of steel
28, Furnace additive bin loading	0.001	pound/ton of alloys
31, Torch cut	0.0035	pound/ton of steel
35, Furnace additive hopper house	0.001	pound/ton of alloys
29, No.4 BOF Roof Monitor	0.03	pound/ton of steel

PM_{10} (Filterable and Condensable)

Stack ID, associated equipment	PM_{10} emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.177	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop baghouse	23.74	pound/hour
26, Reladling and desulfurization (hot metal station) baghouse (North)	0.017	pound/ton of hot metal
27, Reladling and desulfurization (hot metal station) baghouse (South)	0.017	pound/ton of hot metal
32, RHOB condensers stack	0.0002	pound/ton of steel
33, RHOB material handling stack	0.002	pound/ton of steel
28, Furnace additive bin loading	0.001	pound/ton of alloys
31, Torch cut	0.002025	pound/ton of steel
35, Furnace additive hopper house	0.001	pound/ton of alloys
29, No.4 BOF Roof Monitor	0.0183	pound/ton of steel

SO_2

Stack ID, associated equipment	SO_2 emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.001	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop baghouse	0.001	pound/ton of steel
26, Reladling and desulfurization (hot metal station) baghouse (North)	0.0094	pound/ton of hot metal
27, Reladling and desulfurization (hot metal station) baghouse (South)	0.0094	pound/ton of hot metal
29, No.4 BOF Roof Monitor	0.00003	pound/ton of steel

CO

Stack ID, associated equipment	CO emissions factors	Units
38, No.4 BOF shop off gas scrubber	8.031	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop baghouse	0.139	pound/ton of steel
32, RHOB condensers stack	0.0214	pound/ton of steel
Gas Cleaning System 4 BOF	0.047	pound/ton of steel
Gas Cleaning System 4BOF RHOB	0.0925	pound/ton of steel
29, No.4 BOF Roof Monitor	0.0042	pound/ton of steel

NO_x

Stack ID, associated equipment	NO_x emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.08	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop baghouse	0.02	pound/ton of steel
26, Reladling and desulfurization (hot metal station) baghouse (North)	0.0024	pound/ton of hot metal
27, Reladling and desulfurization (hot metal station) baghouse (South)	0.0024	pound/ton of hot metal
29, No.4 BOF Roof Monitor	0.0006	pound/ton of steel

VOC

Stack ID, associated equipment	VOC emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.001	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop baghouse	0.005	pound/ton of steel
26, Reladling and desulfurization (hot metal station) baghouse (North)	0.001	pound/ton of hot metal
27, Reladling and desulfurization (hot metal station) baghouse (South)	0.001	pound/ton of hot metal
31, Torch cut	0.002	pound/ton of steel
29, No.4 BOF Roof Monitor	0.00015	pound/ton of steel

Pb

Stack ID, associated equipment	Pb emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.001989	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop baghouse	0.000054	pound/ton of steel
26, Reladling and desulfurization (hot metal station) baghouse (North)	9.4 E -07	pound/ton of hot metal
27, Reladling and desulfurization (hot metal station) baghouse (South)	9.4 E -07	pound/ton of hot metal
32, RHOB condensers stack	0.000032	pound/ton of steel
33, RHOB material handling stack	6.0 E -07	pound/ton of steel
29, No.4 BOF Roof Monitor	0.000038	pound/ton of steel

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document for a Prevention of Significant Deterioration (PSD) Permit, a Part 70 Significant Source Modification, and a Part 70 Significant Permit Modification

Source Background and Description

Source Name:	ArcelorMittal USA, Inc.
Source Location:	3210 Watling Street, East Chicago, Indiana 46312
County:	Lake
SIC Code:	3312
Operation Permit No.:	T089-6577-00316
Operation Permit Issuance Date:	September 12, 2006
Significant Source Modification No.:	089-21207-00316
Significant Permit Modification No.:	089-22044-00316
Permit Reviewer:	ERG/YC

On September 8, 2008, the Office of Air Quality (OAQ) had a notice published in The Post Tribune in Merrillville, and The Times in Munster, Indiana, stating that ArcelorMittal USA, Inc. had applied for a Prevention of Significant Deterioration (PSD) Permit, a Part 70 Significant Source Modification, and a Part 70 Significant Permit Modification to revise the existing PSD BACT limits for several units associated with the No. 7 Blast Furnace and to revise existing emission factors with measured stack test data listed in Appendix A of the permit. In addition, the Permittee requested revisions to the slag throughput limit for the existing slag pits operation and revisions to the total emission limits for the units involved in the No. 7 Blast Furnace stove modification project in 2003.The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On October 9, 2008, the Permittee submitted comments on the proposed PSD Permit, Part 70 Significant Source Modification, and Part 70 Significant Permit Modification. The summary of the comments is as follows (bolded language has been added, the language with a line through it has been deleted).

Comment 1:

Condition A.3(h)(3) contains a spelling error and should read as follows - " One (1) electric arc furnace with ~~excentric~~ **eccentric** bottom tapping (EBT)...". The same error is repeated in Section D.8.

Response to Comment 1:

The unit description in Condition A.3(h)(3) and in the unit description box of Section D.8 has been revised as requested.

Comment 2:

In Condition D.2.22(c)(ii), the condition referenced for calculation of daily average CO emissions should be D.2.22(c)(i) rather than D.2.22(e)(i)

Response to Comment 2:

Condition D.2.22(c)(ii) has been revised as follows:

D.2.22 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-2-3]

. . .

(c) The 30-day rolling average calculation shall be conducted as follows:

. . .

(ii) Daily average CO emissions will be calculated by taking the summation of the quality assured hourly average, obtained by Condition D.2.22~~(e)~~**(c)**(i), and dividing by the number of hours in which there was a quality assured hourly average, to determine the average CO emissions for a particular day.

. . .

Comment 3:

In Condition D.2.24(b), the condition referenced for SO_2 compliance should be D.2.21 rather than D.2.20.

Response to Comment 3:

The SO_2 compliance condition number referred in Condition D.2.24(b) is correctly listed as D.2.21 in the draft permit. Therefore, no change has been made as a result of this comment.

Comment 4:

The Permittee states that the technical support document (TSD) contains numbering error under the "Proposed Changes" section. The numbering under this section skips number 6.

Response to Comment 4:

IDEM acknowledges this error in the TSD. However, no change has been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comment 5:

Condition D.5.17 should correctly read - "Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a ~~violation~~ of **deviation** of this permit."

Response to Comment 5:

Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances is considered a deviation, instead of a violation. Therefore, Condition D.5.17 has been revised as follows as the result of this comment:

D.5.17 No.2 BOF Flare Monitoring [326 IAC 9-1-2][326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall install and maintain a monitor to detect the presence of a flame at the flare at the No. 2 BOF shop, 10 BOF (147), and 20 BOF (148). The presence of a flame at the flare tip shall be monitored at all times when the vapors are being vented to the flare. The monitor shall be equipped with an automatic alarm, which activates when the presence of a flame is not detected during periods when vapors are being vented to the flare. Whenever the alarm is activated, the Permittee shall take reasonable response steps in accordance with Section C-Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a ~~violation of~~ **deviation from** this permit.

Comment 6:

Condition D.12.8(b) contains a spelling error and should read as follows - " Pursuant to CP 45-1854, issued on July 11, 1990, No. 4 Aluminizing Line radiant tube furnace NOx emissions ~~shall~~ **shall** be limited to 0.375 lb/MMBtu, 7.2 lb/hr and 31.43 tpy."

Response to Comment 6:

Condition D.12.8(b) has been revised as requested.

Comment 7:

Condition D.14.7 contains a spelling error and should read as follows - "... PM10 includes filterable and ~~condensible~~ **condensable** PM10."

Response to Comment 7:

Condition D.14.7 has been revised as requested.

Comment 8:

The correct spelling of "casthouse" (as one word) is not carried throughout the entire permit.

Response to Comment 8:

IDEM has corrected the spelling of "casthouse" through the entire permit.

Comment 9:

The Permittee stated that their Part 70 operating permit is currently under appeal before the Indiana Office of Environmental Adjudication, Cause No. 06-AJ-3808. In connection with the appeal, ArcelorMittal submitted substantive Part 70 operating permit red-lined revisions to IDEM on July 26, 2007. The issues in the appeal and in ArcelorMittal's July 26, 2007 letter are incorporated into their comments on this permit by reference.

Response to Comment 9:

IDEM is currently working with ArcelorMittal on the issues raised in the appeal (Cause No.

06-AJ-3808) and the letter submitted by the Permittee on July 26, 2007. The results of the appeal will be documented in the appeal resolution documents.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Prevention of Significant Deterioration (PSD) Permit, a Part 70 Significant Source Modification, and a Part 70 Significant Permit Modification

Source Background and Description

Source Name:	ArcelorMittal USA, Inc.
Source Location:	3210 Watling Street, East Chicago, Indiana 46312
County:	Lake
SIC Code:	3312
Operation Permit No.:	089-6577-00316
Operation Permit Issuance Date:	September 12, 2006
Significant Source Modification No.:	089-21207-00316
Significant Permit Modification No.:	089-22044-00316
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from ArcelorMittal USA, Inc. relating to the operation of a stationary iron and steel mill.

Existing Approvals

The source was issued Part 70 Permit No. 089-6577-00316 on September 12, 2006. The source has since received the following approvals:

(a) First Administrative Amendment No.: 089-23628-00316 on November 1, 2006.

(b) First Significant Source Modification No.: 089-23651-00316 on January 3, 2007.

(c) First Significant Permit Modification No.: 089-23470-00316 on January 22, 2007.

(d) Second Significant Source Modification No.: 089-25598-00316 on April 21, 2008.

(e) Second Significant Permit Modification No.: 089-25725-00316 on July 9, 2008.

(f) Second Administrative Amendment No.: 089-26796-00316 on August 20, 2008.

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Nonattainment.
$PM_{2.5}$	Nonattainment.
PM_{10}	Nonattainment.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

(a) Ozone Standards

(1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.

(3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.

(4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.

(i) 1-hour ozone standard

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

On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NOx 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.

(ii) 8-hour ozone standard

VOC and NOx 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 NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) U.S.EPA in 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 law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment 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 PM2.5 promulgated on May 8th, 2008, and effective on July 15th 2008. Therefore, direct PM2.5 and SO_2 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) Lake County has been classified as attainment or unclassifiable 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) Fugitive Emissions
This type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2. Therefore, fugitive emissions are counted toward the determination of PSD 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 (tons/year)
PM	Greater than 100
PM10	Greater than 100
PM2.5	Greater than 100
SO_2	Greater than 100
VOC	Greater than 100
CO	Greater than 100
NO_x	Greater than 100

(a) This existing source is a major Emission Offset stationary source because the potential to emit VOC and NOx is each greater 100 tons/yr. This existing source is a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM2.5 and/or SO_2 is emitted at a rate of 100 tons per year or more.

(b) This existing source is a major PSD stationary source because the potential to emit PM, PM10, SO_2, and CO is greater than 100 tons per year or more, and it is in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(c) These emissions are based upon the Technical Support Document (TSD) for T089-6577-00316, issued on September 12, 2006. It is assumed that PM2.5 emissions are equal to PM10 emissions.

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

HAPs	Potential To Emit (tons/year)
Single HAP	Greater than 10
Total HAPs	Greater than 25

This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for any 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 2003 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	1,972
PM10	1,972
SO_2	2,610
VOC	1,430
CO	42,943
NO_x	4,172
HAP	Not Reported

Description of Proposed Modifications

ArcelorMittal USA, Inc. (formerly Mittal Steel USA Inc. - Indiana Harbor East) is an existing integrated iron and steel mill and is permitted to operate under T089-6577-00316, issued on September 12, 2006. On May 2, 2005, the Permittee submitted an application requesting to revise PSD BACT limitations established in Significant Source Modification (SSM) #089-16966-00316, issued on November 26, 2003. The requirements in SSM #089-16966-00316 have been incorporated into their Part 70 permit. Additional information was submitted on February 21, 2006, April 25, 2007, July 26, 2007, February 14, 2008, April 28, 2008, and June 27, 2008. The requested modifications to the permit are as follows:

1. Revising the lead emission factor specified in Appendix A or the Part 70 permit:

   Based on the stack test results in 2004 and February 2005, the Permittee proposed to revise the Pb emission factors for the emission units listed in the table below as follows. These Pb emission factors were originally established in SSM #089-16966-00316, issued on November 26, 2003 and are now included in Appendix A of the Part 70 permit.

Stack ID	Emission Units	Emission Factor in Part 70 Permit (lbs/ton of steel)	Proposed Emission Factor (lbs/ton of Steel)	Stack Testing Date
147	No. 2 BOF No.10 Basic Oxygen Furnace Scrubber	0.00006	**0.00011**	NA
148	No. 2 BOF No.20 Basic Oxygen Furnace Scrubber	0.00006	**0.00011**	Feb 2005
149	No. 2 BOF Secondary Ventilation System for No. 2 BOF Shop Scrubber	0.000165	**0.00013**	Feb 2005
38	No. 4 BOF Shop Off Gas Scrubber	0.00017	**0.001989**	2004
37	No. 4 BOF Secondary Ventilation System Baghouse*	0.00017	**0.000054**	2004

* The Permittee stated that this unit is controlled by a baghouse, instead of a scrubber.

   With the proposed Pb emission factors, the Pb emission increase from the modification project in 2003 (permitted in SSM #089-16966-00316, issued on November 26, 2003) is still less than the PSD significant thresholds of 0.6 tons/yr after revised netting analysis (see the emission calculations in Appendix A-1 and A-2, and netting analysis table in the section of Permit Level Determination in this TSD). Therefore, the modification project in 2003 remains a PSD minor modification for Pb emissions and the Pb emission factors specified in Appendix A to the Part 70 permit have been revised. In addition, the control device description for stack 37 has been revised throughout Appendix A.

2. Revising the BACT requirements for CO emissions from the existing No. 7 Blast Furnace:

On November 26, 2003, IDEM, OAQ issued a PSD and Significant Source Modification (SSM) #089-16966-00316 to permit the following modifications:

(A) Relining the existing Blast Furnace No. 7;

(B) Adding a fourth stove to Blast Furnace No. 7;

(C) Replacing the existing three (3) stoves at Blast Furnace No.7; and

(D) Increasing the production rate of the existing No. 2 Basic Oxygen Furnace (No. 2 BOF) and No. 4 Basic Oxygen Furnace (No. 4 BOF).

The CO emissions from the modification in 2003 exceeded the PSD significant modification threshold of 100 tons per year after the netting analysis. Therefore, the CO emissions from this modification project are subject to the PSD BACT requirements, pursuant to 326 IAC 2-2-3. Pursuant to SSM 089-16966-00316, issued on November 26, 2003, the BACT requirements for the existing No. 7 Blast Furnace are listed below:

(A) CO emissions from the various stacks associated with the No.7 Blast Furnace shall not exceed the following limitations:

Stack ID, associated equipment	Type of Fuel Combusted	CO Emissions Limitations (lbs/MMSCF of Fuel)
170, No.7 Blast Furnace Stoves	Blast Furnace Gas (BFG)	**13.7**
	Natural gas (NG)	**84**
	Mix of NG and BFG	**13.7 x Usage of BFG (MMSCF)+ 84 x Usage of NG (MMSCF) / Total Usage of BFG and NG (MMSCF)**

Stack ID, associated equipment	CO Emissions Limitations (lbs/ton of metal produced)
167, Cast House No.7 Blast Furnace East Baghouse	**0.56**
166, Cast House No.7 Blast Furnace West Baghouse	**0.56**

(B) If the stack tests show that the CO emission limitations in the tables above are not achievable in practice, the Permittee can request the Department to re-evaluate the CO emissions limitations above. The department may, at its discretion, use the authority under IC 13-15-7-2 to re-open and revise the limit to more closely reflect the actual stack test results. The Department will provide an opportunity for public notice and comment prior to finalizing any permit decision. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to this permit modification.

The Permittee conducted stack tests on November 16 through 18, 2004 for the No. 7 Blast Furnace that showed the actual emissions from Stacks 166 and 170 exceed the emission limits established for these stacks in SSM 089-16966-00316. These limits have been included in their current Part 70 permit T089-6577-00316. Based on the stack test results in 2004, the Permittee requested to revise the CO emission limitations for Stacks 166 and 170 as follows:

Stack ID	Emission Units	Emission Limits in the Part 70 Permit	Stack Testing Results and Date	Proposed New Limits
166	Cast House West Baghouse	0.56 lbs/ton	**1.73 lbs/ton (11/16/04)**	2.22 lbs/ton**
170	Stoves	16.3 lbs/MMCF*	**579.5 lbs/MMCF (11/18/04)**	3,968 lbs/hr***

* This is calculated using the equation contained in Condition D.2.6(a) of T089-6577-00316 for No. 7 furnace stoves (stack 170) based on firing 96.3% BFG and 3.7% NG.
** This is equivalent to the 95% confidence interval of the stack test results on November 16, 2004.
*** This is based on the 30-day rolling averaged CO monitoring results in 2006.

Revising the existing PSD BACT limits requires a re-evaluation of PSD BACT requirements and requires a PSD permit. The PSD BACT analysis is included in Appendix B, and a discussion of the requirements under 326 IAC 2-2 (PSD) is included in the "State Rule Applicability" section.

3. In a letter received on February 21, 2006, the Permittee requested to revise Condition D.7.6(a) as follows in order to be consistent with the requirements in Condition D.3.7(a) and the actual operating practices.

D.7.6 Particulate Control [326 IAC 2-7-6(6)]

(a) The No.1 and No. 2 Kiln baghouses (45), (49), Storage Silo baghouse (47), micro-pulse baghouse (46) and Truck loadout baghouse (48) for PM control shall be in operation and control emissions from the No. 1 Lime Plant operations at all times that the No. 1 Lime Plant is in operation and associated equipment is also in operation. **Lime kiln operation begins when stone in charged to the kiln.**

. . .

This proposed change defines the lime kiln operation and will be made to Condition D.7.6(a) in the revised permit.

4. In a letter received on February 21, 2006, the Permittee requested to make the following corrections to Appendix A of their Part 70 Permit:

(A) The secondary ventilation system for No. 4 BOF is controlled by a baghouse, not a scrubber. The baghouse vents through stack 37.

(B) The Pb emission factor for No. 4 BOF secondary ventilation system baghouse (stack 37) should be lbs/ton, not lbs/hr.

(C) The Pb emission factors for the following emission units of No. 7 Blast Furnace should be revised to be based on the controlled emission factors listed in SSM #089-16966-00316, issued on November 26, 2003, instead of the uncontrolled emission factors because these units are controlled by baghouses.

Stack ID	Emission Units	Pb Emission Factor in the Part 70 Permit (lbs/ton)	Controlled Pb Emission Factor (lbs/ton)
167	No. 7 BF Cast House East Baghouse	0.000126	**0.0000024**
166	No. 7 BF Cast House West Baghouse	0.000126	**0.00000126**
171	No. 7 BF Cast House Fugitive Emissions	0.0000216	**0.00000108**

IDEM, OAQ has verified the information above and has revised the permit as requested.

5. In a letter received on February 21, 2006, the Permittee requested to include the following emission factors for NG combustion at the No. 1 Lime Plant kilns (stacks 45 and 49) in Appendix A of the Part 70 permit.

Pollutant	**Emission Factor (lbs/MMSCF)**	**Source of Emission Factor**
PM	**0.0019**	**AP-42 with Control Efficiency of 99.9%**
PM10	**0.0608**	**AP-42 with Control Efficiency of 99.2%**
SO_2	**0.6**	**AP-42**
CO	**84**	**AP-42**
NOx	**104**	**AP-42**
VOC	**5.5**	**AP-42**
Pb	**0.00000368**	**AP-42 with Control Efficiency of 99.2%**

IDEM, OAQ has verified that the emission factors for stacks 45 and 49 listed in Appendix A to T089-6577-00316, issued on September 12, 2006, do not include combustion emissions. Since the emission factors listed in the table above were applied in the netting analysis for SSM #089-16966-00316, issued on November 26, 2003, they have been added to Appendix A of the permit.

6. In a letter received on February 21, 2006, the Permittee requested to include the following Pb emission factors for all the combustion sources in Appendix A of the Part 70 permit:

Stack ID	Emission Unit	Pb Emission Factor (lbs/MMSCF)	Source of Emission Factor
170	No. 7 Blast Furnace Stoves	0.0000667 (BFG)	AP-42
		0.00046 (NG)	HAPs Inventory
134	No. 5 Boiler House	0.0000667 (BFG)	AP-42
		0.00046 (NG)	HAPs Inventory
45	No. 1 Lime Kiln Baghouse	0.00000368 (NG)	AP-42 with Control Efficiency of 99.2%
49	No. 2 Lime Kiln Baghouse	0.00000368 (NG)	AP-42 with Control Efficiency of 99.2%
147	No. 10 BOF, Flare Stack Ignitors	0.00046 (NG)	AP-42
148	No. 20 BOF, Flare Stack Ignitors	0.00046 (NG)	AP-42

IDEM, OAQ has verified that the Pb emission factors listed in Appendix A to T089-6577-00316, issued on September 12, 2006 for stacks 170, 134, 45, 49, 147 and 148 do not include combustion emissions. Since the Pb emission factors listed in the table above were applied in the netting analysis for SSM #089-16966-00316, issued on November 26, 2003, they have been added to Appendix A of the permit.

7. In a letter submitted on February 14, 2008, the Permittee requested an increase in the annual slag throughput limit in Condition D.2.8 for the slag pits operation at No. 7 Blast Furnace from 227,472 tons per year to 662,550 tons per year. The slag throughput limit for the slag pits was established in SSM #089-16966-00316, issued on November 26, 2003 as a PSD minor limit.

In addition, in a letter received on April 18, 2008, the Permittee requested a revision to the PM/PM10 emission factors listed in Appendix A to their Title V permit for the slag pits operation. The revised emission factors are listed in the table below. The Permittee states that this source is currently required to use lake water, rather than blast furnace process water, as make-up for the slag quenching process. This change reduces the PM/PM10 emissions from the slag pits operation. The revised emission factors were calculated based on the solid content in the treated process water.

	PM	PM10
Slag Pits Emission Factors (lb/ton)	~~0.47~~ 0.045	~~0.32~~ 0.031

In an e-mail received on April 30, 2008, the Permittee indicated that the corrected CO emission factor for slag pits operation is 0.066 lbs/ton according to the emission calculation spreadsheets associated with SSM #089-16966-00316, issued on November 26, 2003. The CO emission factor for the slag pits operation was incorrectly listed as 0.086 lbs/ton in Appendix A of T089-6577-00316, issued on September 12, 2006. This error has been corrected in the revised Part 70 permit.

The Permittee has provided the revised netting analysis to show that the above changes to the slag pits operations will not affect the PSD significant modification analysis results for SSM #089-16966-00316, issued on November 26, 2003 (only CO is subject to PSD review). Therefore, the slag throughput limit and the emission factors for the slag pits have been revised in the Part 70 permit. The revised netting table can be found in the

section of "Permit Level Determination – PSD, Emission Offset, and Nonattainment NSR" in this TSD.

8. The Permittee requested adjustments on the total emission limits in Conditions D.0.1 through D.0.4 of their Part 70 Permit. These limits were established in SSM #089-16966-00316 for the units involved in the modification project in 2003. The proposed new limits are listed in the table below:

Pollutant	PM	PM10	SO_2	CO	NOx	VOC	Pb
Emission Limits for the Emission Units listed in Condition D.0.5 of T6577	~~1156.62~~ **1,250**	~~1460.42~~ **1,566**	~~2,336.2~~ **2,375**	~~33,968.54~~ **39,566**	~~2986.6~~ **3,082**	~~54.44~~ **58.3**	~~0.94~~ **5.17**

The above changes reflected the changes in baseline emissions based on various stack test results, the actual operating data, and the changes made as the results of this modification. The detailed calculations for the proposed emission limits are attached as Appendix A-3 to this TSD.

In addition, the increases in the coal usage, coke consumption rate, lime production rate, natural gas usage in lime plant, and the steel production rate due to the No. 7 Blast furnace modification project permitted in SSM #089-16966-00316 have been revised to the table below based on the actual operating data obtained after this modification:

Amount of Material Increased	Existing numbers listed in Section D.0 of the current TV permit.	Proposed Number
Pulverized Coal Usage	274,178 tons/yr	373,155 tons/yr
Coke Consumption	112,132 tons/yr	296,686 tons/yr
Lime Production	29,485 tons/yr	50,355 tons/yr
NG Usage in Lime Plant	146 MMSCF/yr	247 MMSCF/y
Steel production	772,620 tons/yr	908,965 tons/yr

The amounts of coal usage, coke consumption rate, lime production rate, natural gas usage in lime plant, and the steel production rate increases due to the No. 7 Blast furnace modification project were no limited in the current Part 70 permit, however, were referred in the unit description box in Section D.0. Therefore, the unit description box in Section D.0 will be based the throughput number proposed.

The proposed changes will be incorporated into the revised emission calculations and these changes do affect the PSD significant modification analysis results for SSM #089-16966-00316, issued on November 26, 2003 (only CO is subject to PSD review). The revised netting table can be found in the section of "Permit Level Determination – PSD, Emission Offset, and Nonattainment NSR" in this TSD. Therefore, the information in the description box of Section D.0 will be revised as requested.

9. In the e-mail received on June 27, 2008, the source requested the following administrative changes:

(a) The general source phone number has been changed to (219) 391-2133.

(b) In Conditions D.2.4 and D.2.5, the stack identification numbers (ID) are incorrect. The stack ID for the coke transfer tower is 164 and the stack ID for the coke transfer point is 169.

The requested administrative changes have been incorporated into the revised permit.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

Appendix A-1 shows the revised PTE increase due to the modification project permitted in SSM #089-16966-00316, issued on November 26, 2003 and it is assumed that all the increased hot metal would be processed in No. 2 BOF. Appendix A-2 shows the revised PTE increase due to the modification project permitted in SSM #089-16966-00316, issued on November 26, 2003 and it is assumed that all the increased hot metal would be processed in No. 4 BOF. Appendix A-3 includes the detailed calculations for the proposed emission limits in Conditions D.0.1 through D.0.4. These emission calculations were provided by the source on April 28, 2008 and have been verified by IDEM.

Permit Level Determination – Part 70

The proposed modifications do not involve physical changes to the emission units. However, changes in the existing PSD BACT limits require a re-evaluation of PSD BACT requirements. Therefore, this modification is being performed through a Part 70 Significant Source Modification because this modification is subject to 326 IAC 2-2 (PSD), pursuant to 326 IAC 2-7-10.5(f)(1). The permit modification is being performed through a Part 70 Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because this modification changes a case-by-case determination of an emission limitation.

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

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this permit.

(a) Revised Potential to Emit of the Modification in 2003 with all the modifications proposed in this permit:

Increases Attendant to Project	**Criteria Air Pollutants Emission Rates (tons/yr)**						
Emissions unit	**PM**	**PM10**	**SO_2**	**CO**	**NOx**	**VOC**	**Pb**
PTE of the Modification 2003, assuming all increased hot metal used at No. 2 BOF*	129	187	448	**11,319**	474	(24.2)	0.07
PTE of the Modification 2003, assuming all increased hot metal used at No. 4 BOF**	161	223	398	8,832	471	(24.3)	0.91
PTE of the Modification in 2003 (Worst Case Situation)	161	223	448	**11,319**	474	**(24.2)**	0.91

*See Table 4-2A in Appendix A-1 of the TSD.
**See Table 4-2B in Appendix A-2 of the TSD.

(b) Revised Netting Analysis for the Modification in 2003:

	Criteria Air Pollutants Emission Rates (tons/yr)						
	PM	**PM10**	**SO_2**	**CO**	**NOx**	**VOC**	**Pb**
No. 4 AC Station Shutdown in April 1999*	(605.80)	(605.80)	(1,355.50)	(202.50)	(3,284.00)	(20.20)	(0.36)
80-Inch No. 4 WBF Project in 2001*	(0.14)	(0.14)	(0.01)	1.08	(51.74)	(0.10)	-
The Startup of EAF Vacuum Degasser in 2001*	1.40	1.40	0.10	25.10	18.20	1.00	-
The Startup of No. 6 Continuous Coating Line in 2001*	6.10	6.10	0.50	5.43	-	-	-
Modification of Slag Pit (Curtailment) in 2002*	(402.98)	(197.00)	(287.04)	(42.71)	(12.32)	(1.16)	-
The Installation of Slag Granulation/Pelletization in 2002*	307.53	144.96	50.66	32.96	5.07	0.51	-
Slag Pits (continued operation) in 2002**	14.9	10.3	191	21.9	8.22	0.78	-
The Installation of the EAF DRI in 2002*	8.68	5.84	-	-	-	-	-
PTE of the Furnace Stoves Modification in 2003	161	223	448	**11,319**	474	(24.2)	0.91
Contemporaneous Changes from 1999 -2003	(494)	(401)	(952)	11,160	(2,843)	(43.4)	0.55
PSD Significant Thresholds	25	15	40	100	40	40	0.60

* These are from the addendum for the technical support document for SSM #089-16966-00316, issued on November 26, 2003.
** The PTE of the slag pits operation has been revised based on the proposed slag throughput limit of 662,550 tons/yr.

The revised netting analysis shows that only the net CO emissions increase from the modification in 2003 is greater than the PSD significant modification threshold (100 tons/yr). Therefore, the CO emissions from the modification in 2003 is still subject to the requirements of 326 IAC 2-2 (PSD).

The net emission increases for PM, PM10, SO_2, NOx, VOC, and Pb remains less than the PSD and Emission Offset significant thresholds. Therefore, the requirements of 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Nonattainment NSR) remain not applicable to the stove modification project for these criteria air pollutants in 2003.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this modification.

(b) The No.7 Blast Furnace at this integrated iron and steel manufacturing facility is considered an existing affected source in 40 CFR §63.7782 and is subject to the requirements of National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities (40 CFR 63, Subpart FFFFF). There are no physical changes or changes in method of operation in this modification. The requirements of this NESHAP have been included in Section G of T089-6577-00316, issued on September 12, 2006. Pursuant to 40 CFR 63.7783, the existing affected sources must comply with each limitation and maintenance requirement of 40 CFR Subpart FFFFF, no later than May 22, 2006.

(c) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) applicable to this modification.

(d) 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 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.

Becasue the No. 7 Blast Furnace Stoves at this source do not utilize a control device as defined in 40 CFR 64.1, the requirements of 40 CFR 64 (CAM) are not applicable to this modification.

State Rule Applicability

This modification is subject to the following state rules:

326 IAC 2-2 (PSD)

The Permittee proposed to modify No. 7 Blast Furnace in 2003. This modification was permitted in SSM #089-16966-00316, issued on November 26, 2003, and the CO emissions from this modification were subject to the requirements of 326 IAC 2-2 (PSD). Several CO emission limitations for the affected units were established in SSM #089-16966-00316.

The Permittee has requested to increase the CO emission limit for West Casthouse Baghouse (Stack 166) and No. 7 Blast Furnace Stoves (Stack 170) based upon the stack tests performed on November 16 through 18, 2004 and the newly established emission factors. Since the requested changes are considered changes to the existing PSD BACT limits, this modification is subject to the requirements of 326 IAC 2-2 (PSD) and the Permittee shall comply with the following for this modification:

(a) The CO emissions from West Casthouse Baghouse (Stack 166) and No. 7 Blast Furnace Stoves (Stack 170) shall be controlled with the Best Available Control Technology (BACT), pursuant to 326 IAC 2-2-3;

(b) An air quality analysis shall be performed, pursuant to 326 IAC 2-2-4;

(c) An air quality impact analysis shall be performed, pursuant to 326 IAC 2-2-5; and

(d) Additional analysis, such as energy, economy, soil, and vegetation impact analysis shall be performed, pursuant to 326 IAC 2-2-7.

According to the BACT analysis in Appendix B, the Permittee shall comply with the following revised BACT requirements:

(a) For the West Casthouse Baghouse (Stack 166), CO emissions shall not exceed 2.22 lbs/ton of hot metal produced.

(b) For No. 7 Blast Furnace Stoves (Stack 170), the Permittee shall comply with the following:

(1) The CO emissions from the No. 7 blast furnace stoves (stack 170) shall not exceed 3,968 lbs/hr based on a rolling 30-day average.

(2) No later than January 31, 2009, the Permittee shall install a continuous emissions monitoring system (CEMS) with stack 170 to monitor the CO emissions from No. 7 blast furnace stoves.

(3) The Permittee shall utilize a computerized monitoring system for the No. 7 blast furnace stoves to assist operational control and energy conservation.

(4) The Permittee shall complete the stove rebuild project (rebuilding the existing stoves No. 1 through 3) no later than March 30, 2011.

(5) After the stove rebuild project is complete, the Permittee shall submit a permit application with PSD BACT analysis to re-evaluate the PSD BACT requirements

for the No. 7 blast furnace stoves based on monitoring data from the CO CEMS associated with Stack 170.

The air quality analysis and the air quality impact analysis for this modification are attached as Appendix C. A copy of the additional analysis can be found in Appendix D.

Testing Requirements

The CO emission limits for Cast House West Baghouse (Stack 166) and the No. 7 Blast Furnace Stoves (Stack 170) have been revised in this permit. Within thirty (30) months from the last valid compliance test, the Permittee shall perform CO stack testing for Stack 166. This test shall be repeated at least once every two and half (2.5) years from the date of this valid compliance demonstration. The same CO stack testing requirements shall apply to the Cast House East Baghouse (Stack 167).

Since the Permittee is required to install a CO CEMS with Stack 170, no stack testing is required for the No. 7 Blast Furnace Stoves.

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:

1. No later than January 31, 2009, the Permittee shall install a CO CEMS on Stack 170 for the No. 7 Blast Furnace Stoves. The proposed CEMS shall comply with the following:

    (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 326 IAC 2-2-3 (PSD BACT), the Permittee is required to calibrate, certify, operate and maintain a continuous emission monitoring system (CEMS) for measuring CO emissions rate from the No. 7 Blast Furnace stack (stack 170) in accordance with 326 IAC 3-5 to demonstrate compliance with CO emissions limit for Stack 170.

    (b) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

    (c) The 30-day rolling average calculation shall be conducted as follows:

        (i) The average CO emissions, for each hour, shall be recorded by completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period anytime the monitor is in service and is not malfunctioning or being calibrated. For any hour in which required maintenance or quality assurance activities

occur a valid hour of data shall consist of valid CEM data from no less than two (2) 15-minute periods within the hour.

(ii) Daily average CO emissions will be calculated by taking the summation of the quality assured hourly average, obtained by Condition D.2.22(e)(i), and dividing by the number of hours in which there was a quality assured hourly average, to determine the average CO emissions for a particular day.

(iii) The 30-day rolling average will be calculated each day by summing the daily average CO emission rates for the previous 30 days and dividing by 30.

(d) Pursuant to 326 IAC 3-5-4(a), if revisions are made to the continuous monitoring standard operating procedures (SOP), the Permittee shall submit updates to the department biennially.

(e) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(f) Within 180 days of date of installation of CO CEM system, the Permittee shall develop and implement a CO CEM operation and maintenance plan (O&M Plan) that includes an alternate procedure for quantifying CO emissions any time the CEMs is down for four (4) or more hours. The backup system will include a calibrated online process control CO analyzer on a representative portion of the stack gas flow. The primary CEMS shall be returned to operation as soon as practicable.

(g) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5.

These monitoring conditions are necessary because the proposed CO CEMS must operate properly to ensure compliance with 326 IAC 2-2-3 (PSD BACT) and 326 IAC 3-5 (Continuous Monitoring of Emissions).

Proposed Changes

The following changes have been made to the Part 70 Permit No.: T089-6577-00316, issued on September 12, 2006. New language is in **bold** and language shown in ~~strikeout~~ has been deleted.

1. The following mail codes were added throughout the permit as appropriate.

Permits Branch: **MC 61-53 IGCN 1003**
Compliance Branch: **MC 61-53 IGCN 1003**
Air Compliance Section: **MC 61-53 IGCN 1003**
Compliance Data Section: **MC 61-52 IGCN 1003**
Asbestos Section: **MC 61-52 IGCN 1003**
Technical Support and Modeling: **MC 61-50 IGCN 1003**

2. IDEM, OAQ has decided to remove the information regarding the Responsible Official and source contact person from Section A.1 of the permit. IDEM, OAQ will continue to gather and retain this information up-to-date in their permit tracking system. In addition, Lake County is considered nonattainment for PM2.5, which is regulated under 326 IAC 2-1.1-5 (Nonattainment NSR). Since the potential to emit PM10 from this source is greater than 100 tons per year, this source is also considered a major source for Nonattainment NSR. The general source phone number is also revised as requested by the source. Therefore, Condition A.1 has been revised as follows:

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 Iron and Steel Mill.

~~Responsible Official: Leonard Churderewicz~~

. . .

General Source Phone Number: (219) 39~~9-4325~~**1-2133** ~~Thomas Barnett~~

. . .

Source Status: Part 70 Permit Program
Major Source, under PSD**,** ~~and~~ Emission Offset**,**
and Nonattainment NSR Rules
Major Source, Section 112 of the Clean Air Act
1 of 28 Source Categories ~~under PSD and Emission Offset Rules~~

3. 326 IAC 4-1-3 has been incorporated into SIP. Therefore, the requirements in Condition C.2 - Open Burning are now federally enforceable. Therefore, Condition C.2 has been revised as follows:

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.~~

4. 326 IAC 6-4-2(4) is not part of the SIP. Therefore, a statement has been added to Condition C.4 - Fugitive Dust Emissions as follows to specify that 326 IAC 6-4-2(4) is not federally enforceable:

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

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

5. For clarification purposes, Condition C.18 - General Record Keeping Requirements has been revised as follows:

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

. . .

(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 Clean Unit (or 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)**)** 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:

. . .

7. The following changes have been made as a result of the proposed modifications. The word "relading" in the Appendix A to the permit has been corrected to "reladling" throughput the whole Appendix A.

SECTION D.0 FACILITY OPERATION CONDITIONS-
No.7 Blast Furnace operation modification project

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

Increase in production of hot metal by detailed reline project and addition of 4th stove:

. . .

(b) Additional ~~274,178~~ **373,155** tons per year of pulverized coal for injection into the No.7 Blast Furnace will be supplied by the existing pulverized coal injection system without any changes to the existing equipment.

. . .

(d) Increased consumption of coke at No.7 Blast Furnace by ~~112,132~~ **296,686** tons per year, either from the on-site coke plant operated by Indiana Harbor Coke Company or purchased from an offsite producer.

. . .

(g) Increased lime production at No.1 lime plant and consumption at No.2 and/or No.4 BOF shop by ~~29,785~~ **50,355** tons per year. This will result in an increase of natural gas usage by ~~146~~ **247** MMSCF per year.

(h) The increased hot metal production at No.7 Blast Furnace will be processed at the existing No.2 and/or No.4 Basic Oxygen Furnaces (BOF) shops to produce additional steel. The steel production will increase by approximately ~~772,620~~ **908,965** tons per year.

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

D.0.1 Non-applicability of Major Modification [326 IAC 2-2-1 (x)]

Pursuant to ~~Significant Source Modification 089-16966-00316, issued on November 26, 2003~~ **SSM #089-21207-00316 and**~~,~~ in order to make requirements of 326 IAC 2-2-1 (x) (Major Modification)~~,~~ not applicable to this modification, the cumulative emissions from emissions units listed in D.0.5 of particulate matter (PM), oxides of nitrogen (NO_x) and Lead (Pb) associated with (when handling material to or from) the No.7 Blast Furnace operations shall be less than the following limitations:

Pollutant	Emissions (in tons per 12 consecutive month period with compliance demonstrated at the end of each month)
PM	~~1156.62~~ **1,250**
NOx	~~2986.6~~ **3,082**
Pb	~~0.94~~ **5.17**

D.0.2 Non-applicability of Major Modification [326 IAC 2-3-1 (s)]

Pursuant to ~~Significant Source Modification 089-16966-00316, issued on November 26, 2003~~ **SSM #089-21207-00316 and**~~,~~ in order to make the requirements of 326 IAC 2-3-1 (s) (Major Modification)~~,~~ not applicable to this modification, the cumulative emissions from emissions units listed in D.0.5 of particulate matter less than 10 microns diameter (including filterable and condensable components) (PM_{10}) and sulfur dioxide (SO_2) associated with (when handling material to or from) the No.7 Blast Furnace operation shall be less than the following limitations:

Pollutant	Emissions (in tons per 12 consecutive month period with compliance demonstrated at the end of each month)
PM_{10}	~~1460.42~~ **1,566**
SO_2	~~2,336.2~~ **2,375**

D.0.3 Volatile Organic Compounds (VOC)– non-applicability of De-minimis [326 IAC 2-3-1 (l)]

Pursuant to ~~Significant Source Modification 089-16966-00316, issued on November 26, 2003~~ **SSM #089-21207-00316 and**~~,~~ in order to make the requirements of 326 IAC 2-3-1 (l) (De-

minimis)~~,~~ not applicable to this modification, the cumulative emissions from emissions units listed in D.0.5 of VOC associated with (when handling material to or from) the No.7 Blast Furnace operation shall be less than ~~54.44~~ **58.3** tons per 12 consecutive month period with compliance demonstrated at the end of each month.

D.0.4 Carbon Monoxide (CO)– Air quality impacts and increment consumption [326 IAC 2-2-4, 5 and 6]

Pursuant to ~~Significant Source Modification 089-16966-00316, issued on November 26, 2003~~ **SSM #089-21207-00316**, 326 IAC 2-2-4, 2-2-5, **and** 2-2-6 (PSD Requirements: Air quality analysis, Air quality impacts and increment consumption)**,** the cumulative emissions from emissions units listed in D.0.5 of CO associated with (when handling material to or from) No.7 Blast Furnace operation shall not exceed ~~33968.54~~ **39,566** tons per 12 consecutive month period with compliance demonstrated at the end of each month.

D.2.1 Lake County PM10 emission requirements [326 IAC 6.8-2-17]

Pursuant to 326 IAC 6.8-2-17 ~~(formerly 326 IAC 6-1-10.1(d)(19))~~, PM10 and total suspended particulate (TSP) emissions from the No. 7 Blast Furnace process including the increased capacity shall not exceed the following:

. . .

D.2.2 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant 326 IAC 6.8-1-2 ~~(formerly 326 IAC 6-1-2)~~, the No. 7 Blast Furnace Casthouse Roof Monitor (171) and No. 7 Blast Furnace flare (195) 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.2.3 Opacity [326 IAC 6.8-3]

Pursuant to 326 IAC 6.8-3 ~~(formerly 326 IAC 6-1-10.1(e))~~, 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 for the No. 7 Blast Furnace operations (Casthouse Roof Monitor (171)) shall not exceed fifteen percent (15%), six (6) minute average.

D.2.4 Opacity

Pursuant to construction permit 089-9033-00316, issued on February 26, 1998, visible emissions from the coke transfer towers controlled by baghouses (Stack IDS ~~268~~**164** and ~~2~~**1**69) shall not exceed an opacity of five percent (5%), six minute average.

D.2.5 Particulate Matter (PM) [326 IAC 2-3]

Pursuant to construction permit 089-9033-00316, issued on February 26, 1998, PM emissions from the coal and coke handling equipment shall be limited as follows:

(a) the coke transfer tower (Stack ID ~~268~~**164**) shall not exceed 0.075 pounds per hour, and

(b) the coke transfer point (Stack ID ~~2~~**1**69) shall not exceed 0.092 pounds per hour.

D.2.6 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2-3]

(a) Pursuant to Significant Source Modification **(SSM)** #089-16966-00316, issued on November 26, 2003 and 326 IAC 2-2-3 (Control Technology Review: Requirements)**,** the carbon monoxide emissions from ~~the various~~ stack~~s~~ **167** associated with the **east baghouse for** No.7 Blast Furnace **casthouse** shall not exceed the following limitation~~s~~:

~~Stack ID, associated equipment~~	~~Type of fuel combusted at the equipment~~	~~CO emissions limitations (pound/MMSCF of fuel)~~
~~170, No.7 Blast Furnace Stoves~~	~~Blast furnace gas~~	~~13.7~~
	~~Natural gas~~	~~84~~
	~~Combination gas (a mix of natural gas and blast furnace gas)~~	~~13.7 X Usage of BFG (MMSCF)+ 84 X Usage of NG (MMSCF)~~ ~~Total usage of BFG and NG (MMSCF)~~

Stack ID, associated equipment	CO emissions limitations	Units
167, Cast house No.7 Blast Furnace east baghouse	0.56	pound/ton of hot metal produced
~~166, Cast house No.7 Blast Furnace west baghouse~~	~~0.56~~	~~pound/ton of hot metal produced~~

~~(b) Pursuant to Significant Source Modification 089-16966-00316, issued on November 26, 2003, if the stack tests required under condition D.2.14 show that the CO emission limitations in condition D.2.6 (a) are not achievable in practice, the Permittee can request the Department to re-evaluate the CO emissions limitations in D.2.6 (a). The department may, at its discretion, use the authority under IC 13-15-7-2 to re-open and revise the limit to more closely reflect the actual stack test results. The Department will provide an opportunity for public notice and comment prior to finalizing any permit decision. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to this permit modification.~~

(b) Pursuant to SSM #089-21207-00316 and 326 IAC 2-2-3 (PSD BACT), the CO emissions from Stack 166 for Cast House No. 7 Blast Furnace West Baghouse shall not exceed 2.22 pounds per ton of hot metal produced.

(c) Pursuant to SSM #089-21207-00316 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following for No. 7 Blast Furnace Stoves (Stack 170):

(1) The CO emissions from the No. 7 blast furnace stoves (stack 170) shall not exceed 3,968 lbs/hr based on a rolling 30-day average.

(2) No later than January 31, 2009, the Permittee shall install a continuous emissions monitoring system (CEMS) with stack 170 to monitor the CO emissions from No. 7 blast furnace stoves.

(3) The Permittee shall utilize a computerized monitoring system for the No. 7 blast furnace stoves to assist operational control and energy conservation.

(4) The Permittee shall complete the stove rebuild project (rebuilding the existing stoves No. 1 through 3) no later than March 30, 2011.

(5) After the stove rebuild project is complete, the Permittee shall submit a permit application with PSD BACT analysis to re-evaluate the PSD BACT requirements for the No. 7 blast furnace stoves based on monitoring data from the CO CEMS associated with Stack 170.

D.2.8 Operation Restriction – Curtailment of slag pits operation [326 IAC 2-2][326 IAC 2-3]

In order to make requirements of 326 IAC 2-2 (PSD) not applicable~~, on and after the date of issuance of Significant Source Modification 089-16966-00316, issued on November 26, 2003~~ **and pursuant to SSM #089-21207-00316**, the operation of the slag pits at No.7 Blast Furnace shall be curtailed to ~~227,472~~ **662,550** tons of slag processed at these facilities per 12 consecutive month period with compliance demonstrated at the end of each month.

D.2.10 No.7 Blast Furnace Specific Control Requirements [326 IAC 6.8-7-5]

Pursuant to 326 IAC 6.8-7-5 ~~(formerly 326 IAC 6-1-10.1(k)(5)(F))~~, tapping emissions from the No. 7 blast furnace casthouse shall be controlled by a hood vented to a baghouse. Canopy hoods shall be installed above each of the four (4) furnace tap holes. The hoods shall be ducted to a new three hundred seventy thousand (370,000) actual cubic feet per minute minimum design flow rate baghouse. Each hood shall be located just above the casthouse crane and extend via vertical sheeting to the casthouse roof. The system shall provide a minimum of one hundred eighty-five thousand (185,000) actual cubic feet per minute of air flow (fume capture) to each hood, when the corresponding tap hole is being drilled or plugged.

D.2.14 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]

(a) Within thirty (30) months of issuance of this permit, or from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform PM10 testing on the No. 7 blast furnace (West baghouse) (166) utilizing a testing method approved by the Commissioner to show compliance with conditions D.2.1, in accordance with Section C - Performance Testing. Testing shall be performed using a test method that is listed in 326 IAC 6.8-4-1 ~~(formerly 326 IAC 6-1-10.1(f)(2))~~ and is approved by the Commissioner. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

(b) Within thirty (30) months of issuance of this permit, or from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance Data Section, the Permittee shall perform TSP testing on the No. 7 blast furnace (East baghouse) (167) utilizing a testing method approved by the Commissioner to show compliance with condition D.2.1, in accordance with Section C - Performance Testing. Testing shall be performed using a test method that is listed in 326 IAC 6.8-4-1 ~~(formerly 326 IAC 6-1-10.1(f)(2))~~ and is approved by the Commissioner. This test shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

(c) In order to demonstrate compliance with Conditions D.2.6(a) and D.2.6(b), within thirty (30) months from the date of the last valid compliance test, the Permittee shall perform CO testing on Stacks 166 and 167 for Cast House Baghouses for No. 7 Blast Furnace utilizing a testing method approved by the Commissioner, in accordance with Section C - Performance Testing. These tests shall be repeated at least once every two and one half (2.5) years from the date of this valid compliance demonstration.

D.2.22 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-2-3]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 326 IAC 2-2-3 (PSD BACT), the Permittee is required to calibrate, certify, operate and maintain a continuous emission monitoring system (CEMS) for measuring CO emissions rate from the No. 7 Blast Furnace stack (stack 170) in accordance with 326 IAC 3-5 and Condition D.2.23 to demonstrate compliance with Condition D.2.6(c)(1).

(b) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) The 30-day rolling average calculation shall be conducted as follows:

(i) The average CO emissions, for each hour, shall be recorded by completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period anytime the monitor is in service and is not malfunctioning or being calibrated. For any hour in which required maintenance or quality assurance activities occur a valid hour of data shall consist of valid CEM data from no less than two (2) 15-minute periods within the hour.

(ii) Daily average CO emissions will be calculated by taking the summation of the quality assured hourly average, obtained by Condition D.2.22(e)(i), and dividing by the number of hours in which there was a quality assured hourly average, to determine the average CO emissions for a particular day.

(iii) The 30-day rolling average will be calculated each day by summing the daily average CO emission rates for the previous 30 days and dividing by 30.

(d) Pursuant to 326 IAC 3-5-4(a), if revisions are made to the continuous monitoring standard operating procedures (SOP), the Permittee shall submit updates to the department biennially.

D.2.23 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(b) Within 180 days of date of installation of CO CEM system, the Permittee shall develop and implement a CO CEM operation and maintenance plan (O&M Plan) that includes an alternate procedure for quantifying CO emissions any time the CEMs is down for four (4) or more hours. The backup system will include a calibrated online process control CO analyzer on a representative portion of the stack gas flow. The primary CEMS shall be returned to operation as soon as practicable.

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5.

~~D.2.22~~ **D.2.24** Record Keeping Requirements

(a) To document compliance with Condition D.2.6(c)(1), the Permittee shall maintain the CO CEMS data for the emissions from stack 170 for No. 7 Blast Furnace Stoves in accordance with D.2.22(c).

~~(a)~~**(b)** To document compliance with Conditions D.2.12 and D.2.21, 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. 7 Blast Furnace.

(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)~~**(c)** To document compliance with D.2.7, the Permittee shall keep records of molten metal produced at the No.7 Blast Furnace in terms of tons of metal per three hundred and sixty five (365) days. These records shall be kept for at least a period of 60 months.

~~(c)~~**(d)** To document compliance with D.2.8, the Permittee shall keep records of slag produced at the No.7 Blast Furnace and processed at the slag pits in terms of tons of slag per month. These records shall be kept for at least a period of 60 months.

~~(d)~~**(e)** In order to document compliance with Condition D.2.17, the Permittee shall maintain records of once per day visible emission notations of the No. 7 blast furnace casthouse west baghouse (166) and No. 7 blast furnace casthouse east baghouse (167) stack

exhaust(s). **The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).**

~~(e)~~**(f)** In order to document compliance with condition D.2.18, the Permittee shall maintain once per day records of pressure drop across the baghouse during normal operation when venting to the atmosphere. **The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).**

~~(f)~~**(g)** In order to document compliance with condition D.2.20, the Permittee shall maintain records of the occurrence of alarm events at the flare and response steps taken to correct the same.

(h) To document compliance with Conditions D.2.22 and D.2.23, the Permittee shall maintain records, including raw data of all monitoring data and supporting information, for a minimum of five (5) years from the date described in 326 IAC 3-5-7(a). The records shall include the information described in 326 IAC 3-5-7(b).

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

~~D.2.23~~ **D.2.25** Reporting Requirements

. . .

D.7.6 Particulate Control [326 IAC 2-7-6(6)]

(a) The No.1 and No. 2 Kiln baghouses (45), (49), Storage Silo baghouse (47), micro-pulse baghouse (46) and Truck loadout baghouse (48) for PM control shall be in operation and control emissions from the No. 1 Lime Plant operations at all times that the No. 1 Lime Plant is in operation and associated equipment is also in operation. **Lime kiln operation begins when stone in charged to the kiln.**

. . .

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

PART 70 QUARTERLY REPORT

Source Name:	ArcelorMittal USA, Inc.
Source Address:	3210 Watling Street, East Chicago, Indiana 46312
Mailing Address:	3210 Watling Street MC 8-130, East Chicago, Indiana 46312
Permit No.:	089-16966-00316
Facility:	Slag pits at No.7 Blast Furnace
Parameter:	Throughput of slag
Limit:	~~227,472~~ **662,550** tons of slag processed at these facilities per 12 consecutive month period.

. . .

APPENDIX A – EMISSION FACTORS

No.7 Blast Furnace and No.5 Boiler House emission points:

PM

. . .

Stack ID, associated equipment	PM emissions factors	Units

167, Cast house No.7 Blast Furnace east baghouse	22.0	pound/hour
166, Cast house No.7 Blast Furnace west baghouse	11.22	pound/hour
169, Coke screening and transfer station baghouse	0.0002	pound/ton of coke
172, Stockhouse coke handling baghouse	0.0009	pound/ton of coke
168, Stockhouse pellet handling baghouse	0.0005	pound/ton of pellet
Slag pit operation at No.7 Blast Furnace	~~0.47~~ **0.045**	pound/ton of slag processed
Slag Granulator/Pelletizer	0.087	pound/ton of slag processed
171, Casthouse fugitive emissions	0.03	pound/ton of hot metal

PM_{10} (Filterable and Condensable)

. . .

Stack ID, associated equipment	PM_{10} emissions factors	Units
167, Cast house No.7 Blast Furnace east baghouse	30.1	pound/hour
166, Cast house No.7 Blast Furnace west baghouse	19.3	pound/hour
169, Coke screening and transfer station baghouse	0.0001	pound/ton of coke
172, Stockhouse coke handling baghouse	0.0008	pound/ton of coke
168, Stockhouse pellet handling baghouse	0.0005	pound/ton of pellet
Slag pit operation at No.7 Blast Furnace	~~0.32~~ **0.031**	pound/ton of slag processed
Slag Granulator/Pelletizer	0.087	pound/ton of slag processed
171, Casthouse fugitive emissions	0.021	pound/ton of hot metal

. . .

CO

Stack ID, associated equipment	CO emissions factors	Units
167 Cast house No. 7 Blast Furnace east baghouse	**0.56**	**pounds/tons of hot metal**
166 Cast house No. 7 Blast Furnace west baghouse	**2.22**	**pounds/tons of hot metal**
Slag pit operation at No.7 Blast Furnace	~~0.086~~ **0.066**	pound/ton of slag processed
Slag Granulator/Pelletizer	0.066	pound/ton of slag processed
Gas Cleaning System	0.131	pound/ton of hot metal
171, Casthouse fugitive emissions	0.012	pound/ton of hot metal

Pb

Stack ID, associated equipment	**Type of fuel combusted at the equipment**	**Pb emissions factors (pound/MMSCF of fuel)**
170, No.7 Blast Furnace Stoves	**Blast furnace gas**	**0.0000667**
	Natural gas	**0.00046**
	Combination gas (a mix of natural gas and blast furnace gas)	**0.0000667 X Usage of BFG (MMSCF)+ 0.00046 X Usage of NG (MMSCF)** **Total usage of BFG and NG (MMSCF)**
134, No.5 Boiler House	**Blast Furnace Gas**	**0.0000667**
	Natural Gas	**0.00046**
	Combination gas (a mix of natural gas and blast furnace gas)	**0.0000667 X Usage of BFG (MMSCF)+ 0.00046 X Usage of NG (MMSCF)** **Total usage of BFG and NG (MMSCF)**

Stack ID, associated equipment	Pb emissions factors	Units
167, Cast house No.7 Blast Furnace east baghouse	~~0.000126~~ **0.0000024**	pound/ton of hot metal
166, Cast house No.7 Blast Furnace west baghouse	~~0.000126~~ **0.00000126**	pound/ton of hot metal
Slag pit operation at No.7 Blast Furnace	0.0000036	pound/ton of slag processed
Slag Granulator/Pelletizer	0.000001	pound/ton of slag processed
171, Casthouse fugitive emissions	~~0.0000216~~ **0.00000108**	pound/ton of hot metal

. . .

No.1 Lime Plant emission points:

PM

Stack ID, associated equipment	**Type of fuel combusted at the equipment**	**PM emissions factors (pound/MMSCF of fuel)**
45 and 49, No.1 and No.2 Lime Kiln baghouses	**Natural gas**	**0.0019**

. . .

PM_{10} (Filterable and Condensable)

Stack ID, associated equipment	Type of fuel combusted at the equipment	PM_{10} emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	**Natural gas**	**0.0608**

. . .

SO_2

Stack ID, associated equipment	Type of fuel combusted at the equipment	SO_2 emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	**Natural gas**	**0.6**

CO

Stack ID, associated equipment	Type of fuel combusted at the equipment	CO emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	**Natural gas**	**84**

. . .

NO_X

Stack ID, associated equipment	Type of fuel combusted at the equipment	NO_X emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	**Natural gas**	**104**

VOC

Stack ID, associated equipment	Type of fuel combusted at the equipment	VOC emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	**Natural gas**	**5.5**

Pb

Stack ID, associated equipment	Type of fuel combusted at the equipment	Pb emissions factors (pound/MMSCF of fuel)
45 and 49, No.1 and No.2 Lime Kiln baghouses	**Natural gas**	**0.00000368**

. . .

No.2 BOF shop emission points:

. . .

Pb

Stack ID, associated equipment	Type of fuel combusted at the equipment	Pb emissions factors (pound/MMSCF of fuel)
147, No. 10 Basic Oxygen Furnace, Flare stack ignitors	**Natural gas**	**0.00046**
148, No. 20 Basic Oxygen Furnace, Flare stack ignitors	**Natural gas**	**0.00046**

Stack ID, associated equipment	Pb emissions factors	Units
147, No.10 Basic Oxygen Furnace scrubber	~~0.00006~~ **0.00011**	pound/ton of steel
148, No.20 Basic Oxygen Furnace scrubber	~~0.00006~~ **0.00011**	pound/ton of steel
154, Ladle metallurgy facility station baghouse	4 E –06	pound/ton of steel
149, Secondary ventilation system for No.2 BOF shop scrubber	~~0.000165~~ **0.00013**	pound/ton of steel
152, Charge Aisle and relading desulfurization (hot metal station) baghouse	0.000001881	pound/ton of molten iron handled
153, No.2 BOF Roof Monitor	0.000023	pound/ton of steel

. . .

No.4 BOF shop emission points:

PM

Stack ID, associated equipment	PM emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.171	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop ~~scrubber~~ **baghouse**	22.3	pound/hour
26, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (North)	0.00512	pound/ton of hot metal
27, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (South)	0.00512	pound/ton of hot metal
32, RHOB condensers stack	0.0004	pound/ton of steel
33, RHOB material handling stack	0.002	pound/ton of steel
28, Furnace additive bin loading	0.001	pound/ton of alloys
31, Torch cut	0.0035	pound/ton of steel
35, Furnace additive hopper house	0.001	pound/ton of alloys
29, No.4 BOF Roof Monitor	0.03	pound/ton of steel

PM_{10} (Filterable and Condensable)

Stack ID, associated equipment	PM_{10} emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.177	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop ~~scrubber~~ **baghouse**	23.74	pound/hour
26, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (North)	0.017	pound/ton of hot metal
27, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (South)	0.017	pound/ton of hot metal
32, RHOB condensers stack	0.0002	pound/ton of steel
33, RHOB material handling stack	0.002	pound/ton of steel
28, Furnace additive bin loading	0.001	pound/ton of alloys
31, Torch cut	0.002025	pound/ton of steel
35, Furnace additive hopper house	0.001	pound/ton of alloys
29, No.4 BOF Roof Monitor	0.0183	pound/ton of steel

SO_2

Stack ID, associated equipment	SO_2 emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.001	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop ~~scrubber~~ **baghouse**	0.001	pound/ton of steel
26, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (North)	0.0094	pound/ton of hot metal
27, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (South)	0.0094	pound/ton of hot metal
29, No.4 BOF Roof Monitor	0.00003	pound/ton of steel

CO

Stack ID, associated equipment	CO emissions factors	Units
38, No.4 BOF shop off gas scrubber	8.031	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop ~~scrubber~~ **baghouse**	0.139	pound/ton of steel
32, RHOB condensers stack	0.0214	pound/ton of steel
Gas Cleaning System 4 BOF	0.047	pound/ton of steel
Gas Cleaning System 4BOF RHOB	0.0925	pound/ton of steel
29, No.4 BOF Roof Monitor	0.0042	pound/ton of steel

NO_x

Stack ID, associated equipment	NO_x emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.08	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop ~~scrubber~~ **baghouse**	0.02	pound/ton of steel
26, Relading and desulfurization (hot metal station) baghouse (North)	0.0024	pound/ton of hot metal
27, Relading and desulfurization (hot metal station) baghouse (South)	0.0024	pound/ton of hot metal
29, No.4 BOF Roof Monitor	0.0006	pound/ton of steel

VOC

Stack ID, associated equipment	VOC emissions factors	Units
38, No.4 BOF shop off gas scrubber	0.001	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop ~~scrubber~~ **baghouse**	0.005	pound/ton of steel
26, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (North)	0.001	pound/ton of hot metal
27, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (South)	0.001	pound/ton of hot metal
31, Torch cut	0.002	pound/ton of steel
29, No.4 BOF Roof Monitor	0.00015	pound/ton of steel

Pb

Stack ID, associated equipment	Pb emissions factors	Units
38, No.4 BOF shop off gas scrubber	~~0.00017~~ **0.001989**	pound/ton of steel
37, Secondary ventilation system for No.4 BOF shop ~~scrubber~~ **baghouse**	~~0.00017~~ **0.000054**	pound/~~hour~~ **ton of steel**
26, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (North)	9.4 E -07	pound/ton of hot metal
27, ~~Relading~~ **Reladling** and desulfurization (hot metal station) baghouse (South)	9.4 E -07	pound/ton of hot metal
32, RHOB condensers stack	0.000032	pound/ton of steel
33, RHOB material handling stack	~~6 E -07~~ **6.0 E -07**	pound/ton of steel
29, No.4 BOF Roof Monitor	0.000038	pound/ton of steel

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No.089-21207-00316 and the operation of this proposed modification shall be subject to the conditions of the attached Significant Permit Modification No. 089-22044-00316. The staff recommends to the Commissioner that this Part 70 Significant Source Modification and Significant Permit Modification be approved.

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
PM_{10}
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor Filterable	Emission Factor Condensible	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
										(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	289	hours	30.10		30.100	lb/hr	N/A	30.100	4.35	0.9930	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	289	hours	19.30		19.300	lb/hr	N/A	19.300	2.79	0.6367	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.42		0.420	lb/ton	95.00%	0.021	8.11	1.8522	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.10		0.10	lb/ton	99.90%	0.0001	0.01	0.0034	T-089-6577-00316, Appendix A
	Stockhouse Coke Baghouse	296,686	coke	0.04		0.04	lb/ton	98.00%	0.0008	0.12	0.0271	T-089-6577-00316, Appendix A
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.05		0.05	lb/ton	99.00%	0.0005	0.32	0.0739	T-089-6577-00316, Appendix A
	Slag Pit Operations	81,527	slag	0.031		0.031	lb/ton	N/A	0.0310	1.26	0.2885	Clean water quench @ 250 mg/l TDS
	Slag Granulator Operations	146,341	slag	0.087		0.0870	lb/ton	N/A	0.0870	6.37	1.4534	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.28		0.28	lb/ton	99.80%	0.00056	0.10	0.0239	T-089-6577-00316, Appendix A
	Coal Storage Baghouse C	373,155	coal	0.39		0.39	lb/ton	99.80%	0.00078	0.15	0.0332	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse D	289	hours	0.99		0.99	lb/hr	N/A	0.990	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse E	289	hours	0.99		0.99	lb/hr	N/A	0.990	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Storage Baghouse F	373,155	coal	0.409		0.41	lb/ton	99.80%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Storage Baghouse G	373,155	coal	0.409		0.41	lb/ton	99.80%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Unloading	373,155	coal	0.010		0.01	lb/ton	85.00%	0.0015	0.28	0.0639	T-089-6577-00316, Appendix A
Lime Plant	Silo Baghouses	200.0	hours	5.53		5.53	lb/hr	N/A	5.53	0.55	0.1263	T-089-6577-00316, Appendix A
	No. 1 Kiln Baghouse	200.0	hours	3.575		3.57	lb/hr	N/A	3.575	0.36	0.0816	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	200.0	hours	3.575		3.57	lb/hr	N/A	3.575	0.36	0.0816	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.35		0.35	lb/ton	98.00%	0.007	0.18	0.0402	T-089-6577-00316, Appendix A
	Truck Loadout Baghouse	50,335	lime	2.40		2.40	lb/ton	99.80%	0.0048	0.12	0.0276	T-089-6577-00316, Appendix A
No. 2 BOF	10 Furnace Stack	454,482	molten steel	13.10	0.0226	13.1226	lb/ton	99.57%	0.0564	12.82	2.9275	T-089-6577-00316, Appendix A
	20 Furnace Stack	454,482	molten steel	13.10	0.0226	13.1226	lb/ton	99.57%	0.0564	12.82	2.9275	T-089-6577-00316, Appendix A
	Caster Roof Monitor	908,965	slabs	0.0015		0.0015	lb/ton		0.0015	0.68	0.1556	T-089-6577-00316, Appendix A
	Ladle Metallurgy Station	908,965	molten steel	0.4600		0.46	lb/ton	98.60%	0.0064	2.93	0.6682	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	908,965	molten steel	1.85		1.8500	lb/ton	98.50%	0.028	12.61	2.8794	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	0.71		0.710	lb/ton	97.00%	0.0213	9.68	2.2102	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	58,829	flux	1.06		1.06	lb/ton	99.00%	0.011	0.31	0.0712	T-089-6577-00316, Appendix A
	Flux Storage and Batch Baghouse	58,829	flux	0.71		0.71	lb/ton	99.00%	0.0071	0.21	0.0477	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.051	0.0112	0.0622	lb/ton	70.00%	0.01866	8.48	1.9362	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	0	molten steel	13.60	1.500	15.100	lb/ton	98.83%	0.177	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	0	hours	23.74		23.74	lb/hr	N/A	23.74	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	0	hot metal	1.15		1.150	lb/ton	98.50%	0.017	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	0	hot metal	1.15		1.150	lb/ton	98.50%	0.017	0.00	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.050	0.0110	0.0610	lb/ton	70.00%	0.0183	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	0	lime alloys	0.0010		0.0010	lb/ton		0.001	0.00	0.0000	T-089-6577-00316, Appendix A
	Torch Cut	0	molten steel	0.002025		0.002025	lb/ton		0.002025	0.00	0.0000	T-089-6577-00316, Appendix A
	RHOB Condensers	0	molten steel	0.10		0.10	lb/ton	99.80%	0.0002	0.00	0.0000	T-089-6577-00316, Appendix A
	RHOB Material Handling	0	molten steel	0.10		0.10	lb/ton	98.00%	0.002	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	0	lime alloys	0.001		0.100	lb/ton		0.100	0.00	0.0000	T-089-6577-00316, Appendix A

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
PARTICULATE MATTER
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	289	hours	22.00	lb/hr	N/A	22.00	3.18	0.7258	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	289	hours	11.22	lb/hr	N/A	11.22	1.62	0.3702	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.60	lb/ton	95.00%	0.03	11.59	2.6460	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.20	lb/ton	99.90%	0.0002	0.03	0.0068	T-089-6577-00316, Appendix A
	Stockhouse Coke Baghouse	296,686	coke	0.09	lb/ton	99.00%	0.0009	0.13	0.0305	T-089-6577-00316, Appendix A
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.10	lb/ton	99.50%	0.0005	0.32	0.0739	T-089-6577-00316, Appendix A
	Slag Pit Operations	81,527	slag	0.045	lb/ton	N/A	0.0450	1.83	0.4188	Clean water quench @ 250 mg/l TDS
	Slag Granulator Operations	146,341	slag	0.087	lb/ton	N/A	0.087	6.37	1.4534	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.56	lb/ton	99.90%	0.00056	0.10	0.0239	T-089-6577-00316, Appendix A
	Coal Storage Baghouse C	373,155	coal	0.78	lb/ton	99.90%	0.00078	0.15	0.0332	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse D	289	hours	0.99	lb/hr	N/A	0.99	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse E	289	hours	0.99	lb/hr	N/A	0.99	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Storage Baghouse F	373,155	coal	0.818	lb/ton	99.90%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Storage Baghouse G	373,155	coal	0.818	lb/ton	99.90%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Unloading	373,155	coal	0.010	lb/ton	85.00%	0.0015	0.28	0.0639	T-089-6577-00316, Appendix A
Lime Plant	Silo Baghouses	200.0	hours	5.53	lb/hr	N/A	5.5300	0.55	0.1263	T-089-6577-00316, Appendix A
	No. 1 Kiln Baghouse	200.0	hours	3.575	lb/hr	N/A	3.5745	0.36	0.0816	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	200.0	hours	3.575	lb/hr	N/A	3.5745	0.36	0.0816	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.70	lb/ton	99.00%	0.007	0.18	0.0402	T-089-6577-00316, Appendix A
	Truck Loadout Baghouse	50,335	lime	5.00	lb/ton	99.80%	0.01	0.25	0.0575	T-089-6577-00316, Appendix A
No. 2 BOF	10 Furnace Stack	454,482	molten steel	28.50	lb/ton	99.80%	0.057	12.95	2.9572	T-089-6577-00316, Appendix A
	20 Furnace Stack	454,482	molten steel	28.50	lb/ton	99.80%	0.057	12.95	2.9572	T-089-6577-00316, Appendix A
	Caster Roof Monitor	908,965	slabs	0.0035	lb/ton	N/A	0.0035	1.59	0.3632	T-089-6577-00316, Appendix A
	Ladle Metallurgy Station	908,965	molten steel	0.6636	lb/ton	99.30%	0.0046	2.11	0.4820	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	908,965	molten steel	3.32	lb/ton	99.20%	0.027	12.07	2.7559	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	1.28	lb/ton	98.00%	0.026	11.63	2.6563	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	58,829	flux	2.13	lb/ton	99.50%	0.01	0.31	0.0715	T-089-6577-00316, Appendix A
	Flux Storage and Batch Baghouse	58,829	flux	1.42	lb/ton	99.50%	0.007	0.21	0.0477	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.10	lb/ton	70.00%	0.03	13.63	3.1129	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	0	molten steel	28.50	lb/ton	99.40%	0.171	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	0	hours	22.30	lb/hr	N/A	22.3000	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	0	hot metal	1.28	lb/ton	99.60%	0.00512	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	0	hot metal	1.28	lb/ton	99.60%	0.00512	0.00	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.100	lb/ton	70.00%	0.030	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	0	lime alloys	0.001	lb/ton		0.001	0.00	0.0000	T-089-6577-00316, Appendix A
	Torch Cut	0	molten steel	0.0035	lb/ton		0.0035	0.00	0.0000	T-089-6577-00316, Appendix A
	RHOB Condensers	0	molten steel	0.20	lb/ton	99.80%	0.0004	0.00	0.0000	T-089-6577-00316, Appendix A
	RHOB Material Handling	0	molten steel	0.20	lb/ton	99.00%	0.002	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	0	lime alloys	0.001	lb/ton		0.001	0.00	0.0000	T-089-6577-00316, Appendix A

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
SULFUR DIOXIDE
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Annual Change in Emissions		Source of Emission Factor
						(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.1774	lb/ton	34.27	7.8232	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.1774	lb/ton	34.27	7.8232	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.01	lb/ton	3.86	0.8820	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Slag Pit Operations	81,527	slag	0.578	lb/ton	23.56	5.3793	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.100	lb/ton	7.32	1.6706	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 2 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	454,482	molten steel	0.070	lb/ton	15.91	3.6317	T-089-6577-00316, Appendix A
	20 Furnace Stack	454,482	molten steel	0.070	lb/ton	15.91	3.6317	T-089-6577-00316, Appendix A
	Caster Roof Monitor	908,965	slabs	0.000	lb/ton	0.00	0.0000	Not Applicable
	Ladle Metallurgy Station	908,965	molten steel	0.025	lb/ton	11.36	2.5941	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	908,965	molten steel	0.014	lb/ton	6.36	1.4527	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	0.0094	lb/ton	4.27	0.9754	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	58,829	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	58,829	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Roof Monitor	908,965	molten steel	0.0004	lb/ton	0.18	0.0415	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	0	molten steel	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	0	molten steel	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	0	hot metal	0.0094	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	0	hot metal	0.0094	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.00003	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	0	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable
	Torch Cut	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Condensers	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Material Handling	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	Furnace Additive Hopper House	0	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
CARBON MONOXIDE
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.5600	lb/ton		0.5600	108.17	24.6956	July 25, 2007 Modification Request
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	2.2200	lb/ton		2.2200	428.80	97.9005	July 25, 2007 Modification Request
	Casthouse Fugitives	772,620	hot metal	0.012	lb/ton		0.012	4.64	1.0584	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.066	lb/ton		0.066	2.69	0.6142	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.066	lb/ton		0.066	4.83	1.1026	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr		0.000	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	2.000	lb/ton		2.000	50.34	11.4921	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	50,335	lime	2.000	lb/ton		2.000	50.34	11.4921	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	454,482	molten steel	139.00	lb/ton	90.25%	13.55	3,079.69	703.1247	T-089-6577-00316, Appendix A
	20 Furnace Stack	454,482	molten steel	139.00	lb/ton	90.25%	13.55	3,079.69	703.1247	T-089-6577-00316, Appendix A
	Caster Roof Monitor	908,965	slabs	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Ladle Metallurgy Station	908,965	molten steel	0.042	lb/ton		0.042	19.09	4.3580	T-089-6577-00316, Appendix A
	Gas Cleaning System	908,965	molten steel	0.022	lb/ton		0.022	10.00	2.2828	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	908,965	molten steel	0.139	lb/ton		0.139	63.17	14.4231	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Truck and Ladle Hopper Baghouse	58,829	flux	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	58,829	flux	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Roof Monitor	908,965	molten steel	0.0042	lb/ton		0.0042	1.91	0.4358	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	0	molten steel	139	lb/ton	94.22%	8.031	0.00	0.0000	T-089-6577-00316, Appendix A
	Gas Cleaning System	0	molten steel	0.0470	lb/ton		0.0470	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	0	molten steel	0.139	lb/ton		0.139	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	0	hot metal	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Reladling and Desulfurization Baghouse South	0	hot metal	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Roof Monitor	0	molten steel	0.0042	lb/ton		0.0042	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	0	lime alloys	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Torch Cut	0	molten steel	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	RHOB Condensers	0	molten steel	1.07	lb/ton	98.00%	0.0214	0.00	0.0000	T-089-6577-00316, Appendix A
	RHOB Material Handling	0	molten steel	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	RHOB Gas Cleaning System	0	molten steel	0.0925	lb/ton		0.0925	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	0	lime alloys	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable

ARCELOR MITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
NITROGEN OXIDES
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Annual Change in Emissions		Source of Emission Factor
						(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.0248	lb/ton	4.79	1.0937	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.0248	lb/ton	4.79	1.0937	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.0012	lb/ton	0.46	0.1058	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton	0.00	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.0248	lb/ton	1.01	0.2308	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.0100	lb/ton	0.73	0.1671	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 2 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	454,482	molten steel	0.08	lb/ton	18.18	4.1505	T-089-6577-00316, Appendix A
	20 Furnace Stack	454,482	molten steel	0.08	lb/ton	18.18	4.1505	T-089-6577-00316, Appendix A
	Caster Roof Monitor	908,965	slabs	0.0000	lb/ton	0.00	0.0000	Not Applicable
	Ladle Metallurgy Station	908,965	molten steel	0.003	lb/ton	1.36	0.3113	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	908,965	molten steel	0.020	lb/ton	9.09	2.0753	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	0.0024	lb/ton	1.09	0.2490	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	58,829	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	58,829	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Roof Monitor	908,965	molten steel	0.0006	lb/ton	0.27	0.0623	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	0	molten steel	0.080	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	0	molten steel	0.020	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	0	hot metal	0.0024	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	0	hot metal	0.0024	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.0006	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	0	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable
	Torch Cut	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Condensers	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Material Handling	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	Furnace Additive Hopper House	0	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
VOC
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Annual Change in Emissions		Source of Emission Factor
						(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.00922	lb/ton	1.78	0.4064	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.00922	lb/ton	1.78	0.4064	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.0009	lb/ton	0.35	0.0794	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton	0.00	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.00234	lb/ton	0.10	0.0218	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.00100	lb/ton	0.07	0.0167	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 2 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	454,482	molten steel	0.001	lb/ton	0.23	0.0519	T-089-6577-00316, Appendix A
	20 Furnace Stack	454,482	molten steel	0.001	lb/ton	0.23	0.0519	T-089-6577-00316, Appendix A
	Caster Roof Monitor	908,965	slabs	0.002	lb/ton	0.91	0.2075	T-089-6577-00316, Appendix A
	Ladle Metallurgy Station	908,965	molten steel	0.000	lb/ton	0.00	0.0000	Not Applicable
	Secondary, Ventilation System Scrubber	908,965	molten steel	0.005	lb/ton	2.27	0.5188	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	0.001	lb/ton	0.45	0.1038	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	58,829	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	58,829	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Roof Monitor	908,965	molten steel	0.00015	lb/ton	0.07	0.0156	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	0	molten steel	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	0	molten steel	0.005	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	0	hot metal	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	0	hot metal	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.00015	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	0	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable
	Torch Cut	0	molten steel	0.002	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	RHOB Condensers	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Material Handling	0	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	Furnace Additive Hopper House	0	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
LEAD
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.000126	lb/ton	98.10%	0.000002	0.0005	0.0001	July 25, 2007 Modification Request
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.000126	lb/ton	99.00%	0.00000126	0.0002	0.0001	July 25, 2007 Modification Request
	Casthouse Fugitives	772,620	hot metal	0.0000216	lb/ton	95.00%	0.00000108	0.0004	0.0001	July 25, 2007 Modification Request
	Coke Transfer Station	296,686	coke	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.0000036	lb/ton		0.0000036	0.0001	0.0000	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.000001	lb/ton		0.000001	0.0001	0.0000	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000425	lb/ton	98.60%	0.00000595	0.0001	0.0000	T-089-6577-00316, Appendix A
	No. 1 Kiln Baghouse	50,335	lime	0.007571	lb/ton	99.20%	0.000060568	0.0015	0.0003	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	50,335	lime	0.007571	lb/ton	99.20%	0.000060568	0.0015	0.0003	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.00	lb/ton	98.00%	0.000000	0.0000	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000425	lb/ton	99.80%	0.000001	0.0000	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	454,482	molten steel	0.0275	lb/ton	99.60%	0.000110	0.0250	0.0057	July 25, 2007 Modification Request
	20 Furnace Stack	454,482	molten steel	0.0275	lb/ton	99.60%	0.000110	0.0250	0.0057	July 25, 2007 Modification Request
	Caster Roof Monitor	908,965	slabs	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Ladle Metallurgy Station	908,965	molten steel	0.0006636	lb/ton	99.40%	0.000004	0.0018	0.0004	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	908,965	molten steel	0.00065	lb/ton	80.00%	0.00013	0.0591	0.0135	July 25, 2007 Modification Request
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	0.0000627	lb/ton	97.00%	0.00000188	0.0009	0.0002	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	58,829	flux	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	58,829	flux	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Roof Monitor	908,965	molten steel	0.0000772	lb/ton	70.00%	0.000023	0.0105	0.0024	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	0	molten steel	0.1530	lb/ton	98.70%	0.001989	0.0000	0.0000	July 25, 2007 Modification Request
	Secondary Vent System Baghouse	0	molten steel	0.002450	lb/ton	97.80%	0.000054	0.0000	0.0000	July 25, 2007 Modification Request
	Reladling and Desulfurization Baghouse North	0	hot metal	0.0000627	lb/ton	98.50%	0.00000094	0.0000	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	0	hot metal	0.0000627	lb/ton	98.50%	0.00000094	0.0000	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.000127	lb/ton	70.00%	0.000038	0.0000	0.0000	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	0	lime alloys	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Torch Cut	0	molten steel	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	RHOB Condensers	0	molten steel	0.0000322	lb/ton		0.000032	0.0000	0.0000	Not Applicable
	RHOB Material Handling	0	molten steel	0.00003	lb/ton	98.00%	0.0000006	0.0000	0.0000	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	0	lime alloys	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
PM_{10}
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	7.60	lb/mmcf			1.836	0.4191	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	4.51	lb/mmcf			33.048	7.5452	T-089-6577-00316, Appendix A
						Total Stoves		34.883	7.9643	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	6.9	mmcf	1.90	lb/mmcf			0.007	0.0015	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	6.9	mmcf	1.90	lb/mmcf			0.007	0.0015	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	7.60	lb/mmcf			0.060	0.0136	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	4.71	lb/mmcf			66.133	15.0989	T-089-6577-00316, Appendix A
						Total Boiler House		66.193	15.1125	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	0.0608	lb/mmcf		0.0608	0.004	0.0009	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	0.0608	lb/mmcf		0.0608	0.004	0.0009	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
PARTICULATE MATTER
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	1.90	lb/mmcf		1.90	0.459	0.1048	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	0.68	lb/mmcf		0.68	4.983	1.1376	T-089-6577-00316, Appendix A
						Total Stoves		5.442	1.242	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	6.9	mmcf	1.90	lb/mmcf		1.90	0.007	0.0015	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	6.9	mmcf	1.90	lb/mmcf		1.90	0.007	0.0015	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	1.90	lb/mmcf		1.90	0.015	0.0034	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	0.68	lb/mmcf		0.68	9.548	2.1799	T-089-6577-00316, Appendix A
						Total Boiler House		9.563	2.183	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	1.90	lb/mmcf	99.90%	0.0019	0.000	0.0000	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	1.90	lb/mmcf	99.90%	0.0019	0.000	0.0000	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
SULFUR DIOXIDE
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	0.60	lb/mmcf		0.145	0.0331	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	14.70	lb/mmcf		107.717	24.5929	T-089-6577-00316, Appendix A
						Total Stoves	107.862	24.626	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	6.9	mmcf	0.60	lb/mmcf		0.002	0.0005	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	6.9	mmcf	0.60	lb/mmcf		0.002	0.0005	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	0.60	lb/mmcf		0.005	0.0011	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	14.70	lb/mmcf		206.403	47.1239	T-089-6577-00316, Appendix A
						Total Boiler House	206.407	47.125	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	0.60	lb/mmcf		0.037	0.0085	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	0.60	lb/mmcf		0.037	0.0085	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
CARBON MONOXIDE
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	84.00	lb/mmcf		20.288	4.6319	AP-42
	Stoves (BFG)	14,655.4	mmcf	579.50	lb/mmcf		4,246	969.5	2005 Stack Test
						Total Stoves	4,267	974.1	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	6.9	mmcf	84.00	lb/mmcf		0.292	0.0666	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	6.9	mmcf	84.00	lb/mmcf		0.292	0.0666	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	84.00	lb/mmcf		0.658	0.1502	AP-42
	Boiler House (BFG)	28,082.0	mmcf	13.70	lb/mmcf		192.362	43.9182	AIRS
						Total Boiler House	193.020	44.068	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	84.00	lb/mmcf		5.187	1.1842	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	84.00	lb/mmcf		5.187	1.1842	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
NITROGEN OXIDES
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	104.00	lb/mmcf		25.118	5.7347	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	23.00	lb/mmcf		168.537	38.4787	T-089-6577-00316, Appendix A
						Total Stoves	193.655	44.213	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	6.9	mmcf	100.00	lb/mmcf		0.347	0.0793	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	6.9	mmcf	100.00	lb/mmcf		0.347	0.0793	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	104.00	lb/mmcf		0.815	0.1860	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	23.00	lb/mmcf		322.943	73.7313	T-089-6577-00316, Appendix A
						Total Boiler House	323.758	73.917	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	104.00	lb/mmcf		6.422	1.4662	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	104.00	lb/mmcf		6.422	1.4662	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
VOC
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	5.50	lb/mmcf		1.328	0.3033	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	0.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
						Total Stoves	1.328	0.303	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	6.9	mmcf	5.50	lb/mmcf		0.019	0.0044	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	6.9	mmcf	5.50	lb/mmcf		0.019	0.0044	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	5.50	lb/mmcf		0.043	0.0098	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	0.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
						Total Boiler House	0.043	0.010	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	5.50	lb/mmcf		0.340	0.0775	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	5.50	lb/mmcf		0.340	0.0775	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
LEAD
(All Additional Hot Metal Through No. 2 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	0.00046	lb/mmcf		0.00011	0.00003	July 25, 2007 Modification Request
	Stoves (BFG)	14,655.4	mmcf	0.0000667	lb/mmcf		0.00049	0.00011	July 25, 2007 Modification Request
						Total Stoves	0.00060	0.00014	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	6.9	mmcf	0.00046	lb/mmcf		1.597E-06	3.646E-07	AP-42
	20 Furnace Stack Ignitor (NG)	6.9	mmcf	0.00046	lb/mmcf		1.597E-06	3.646E-07	AIRS
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	0.00046	lb/mmcf		3.603E-06	8.225E-07	July 25, 2007 Modification Request
	Boiler House (BFG)	28,082.0	mmcf	0.0000667	lb/mmcf		0.00094	0.00021	July 25, 2007 Modification Request
						Total Boiler House	0.00094	0.00021	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	0.00046	lb/mmcf		0.00003	0.00001	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	0.00046	lb/mmcf		0.00003	0.00001	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
CALCULATION OF ROAD PARTICULATE MATTER (TSP) EMISSIONS BY ROAD SEGMENT
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 2 BOF SHOP

PAVED ROADS

Road Segment ID	Material	Paved Road Segment Description	Silt (%)	Road Surface Silt Loading (g/m2)	Average Vehicle Weight (tons)	AP-42 TSP Emission Factor* (lb/VMT)	Additional Annual Traffic (VMT/yr)	Additional TSP Emissions (tons/yr)	Additional TSP Emissions (lbs/hr)
46P	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	1.3380	859	0.5749	0.1312
46P	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	1.3380	431	0.2884	0.0658
39P	No. 7 BF Slag	Rt. 76 Between Rt 56/71 and Rt. 74	7.4	0.24	22.5	0.4292	4,484	0.9623	0.2197
38P	No. 7 BF Slag	Rt. 56 bBetween Rt. 54 and Rt. 76	12.6	1.59	22.5	1.4490	2,405	1.7422	0.3978
7P	No. 7 BF Slag	Rt.71 S from Slag Quench Pits to Rt.71, Under Conveyor	3.4	25.76	20.0	7.4314	718	2.6692	0.6094
44P	No. 7 BF Slag	Rt. 71 Between New Coke Dump and West End of Rt. 75	15.4	1.98	20.0	1.4039	3,100	2.1763	0.4969
41P	No. 7 BF Slag	Rt.71 Between Rt.70 and New Coke Dump	14.3	0.12	20.0	0.2292	3,488	0.3998	0.0913
26P	No. 7 BF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.7931	3,034	1.2032	0.2747
24P	No. 7 BF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.4682	2,505	0.5863	0.1339
20P	No. 7 BF Slag	Rt.64 Between Propane Tank Farm Road and Rt.60	9.0	1.04	20.0	0.9213	7,864	3.6226	0.8271
19P	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.2292	6,097	0.6988	0.1595
99P	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Plant Gate	1.3	0.12	20.0	0.2292	2,363	0.2708	0.0618
34P	No. 4 BOF Scrap	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	1.0405	0	0.0000	0.0000
1P	No. 4 BOF Scrap	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	1.4595	0	0.0000	0.0000
10P	No. 4 BOF Scrap	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.4424	0	0.0000	0.0000
11P	No. 4 BOF Scrap	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	1.0733	0	0.0000	0.0000
30P	No. 4 BOF Scrap	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.6736	0	0.0000	0.0000
32P	No. 4 BOF Scrap	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.9734	0	0.0000	0.0000
64P	No. 4 BOF Scrap	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	1.7095	0	0.0000	0.0000
34P	No. 4 BOF Alloys	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	1.0405	0	0.0000	0.0000
1P	No. 4 BOF Alloys	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	1.4595	0	0.0000	0.0000
10P	No. 4 BOF Alloys	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.4424	0	0.0000	0.0000
11P	No. 4 BOF Alloys	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	1.0733	0	0.0000	0.0000
30P	No. 4 BOF Alloys	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.6736	0	0.0000	0.0000
32P	No. 4 BOF Alloys	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.9734	0	0.0000	0.0000
64P	No. 4 BOF Alloys	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	1.7095	0	0.0000	0.0000
26P	No. 4 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.7931	0	0.0000	0.0000
24P	No. 4 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.4682	0	0.0000	0.0000
20P	No. 4 BOF Slag	Rt.64 Between Propane Tank Farm Road and Rt.60	9.0	1.04	20.0	0.9213	0	0.0000	0.0000
19P	No. 4 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.2292	0	0.0000	0.0000
2P	No. 2 BOF Scrap	Rt.30	15.2	2.75	20.0	1.7346	2,000	1.7345	0.3960
8P	No. 2 BOF Scrap	Rt.21	17.1	0.85	20.0	0.8121	3,201	1.2997	0.2967
2P	No. 2 BOF Alloys	Rt.30	15.2	2.75	20.0	1.7346	567	0.4920	0.1123
8P	No. 2 BOF Alloys	Rt.21	17.1	0.85	20.0	0.8121	908	0.3687	0.0842
26P	No. 2 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.7931	2,054	0.8147	0.1860
24P	No. 2 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.4682	1,696	0.3970	0.0906
20P	No. 2 BOF Slag	Rt.64 Between Propane Tank Farm Road and Rt.60	9.0	1.04	20.0	0.9213	5,325	2.4529	0.5600
19P	No. 2 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.2292	4,128	0.4731	0.1080
33P	No. 2 BOF Lime	Rt. 56 Between Lime Plant North Entrance and Rt.41	20.6	4.64	30.0	4.4800	211	0.4732	0.1080
37P	No. 2 BOF Lime	Rt. 41 (Chisom Trail) Between Rt.56 and Rt. 43	12.8	0.12	30.0	0.4211	1,325	0.2789	0.0637
9P	No. 2 BOF Lime	Rt.43 Between Rt.40 and Rt.23 at Railroad Tracks	26.2	2.04	30.0	2.6305	299	0.3934	0.0898
8P	No. 2 BOF Lime	Rt.21	17.1	0.85	30.0	1.4919	748	0.5579	0.1274
							Paved Road Totals	24.9307	5.6919

*AP-42, 5th Edition, Equation (1), page 13.2.1-4 (October 2002)

Table 4-2A

ARCELOR MITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
ADDITION OF A FOURTH STOVE AT NO. 7 BLAST FURNACE
CONTEMPORANEOUS EMISSIONS CHANGES
ALL INCREASED HOT METAL USED AT NO. 2 BOF

Increases Attendant to Project	Criteria Air Pollutants Emission Rates (tons/yr)						
Facility	**PM**	**PM_{10}**	**SO_2**	**CO**	**NOx**	**VOC**	**Pb**
Blast Furnace No. 7	28.6841	56.9574	187.5734	4813.1185	204.4306	5.3091	0.0018
PCI	1.1212	1.1212	0.0000	0.0000	0.0000	0.0000	0.0000
Lime Plant	1.6960	1.5724	0.0741	111.0448	12.8440	0.6793	0.0033
No. 2 BOF	67.4829	60.5606	53.9967	6254.1240	48.8694	4.1967	0.1223
No. 4 BOF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
No. 5 Boiler House	9.5628	66.1926	206.4074	193.0196	323.7575	0.0431	0.0009
Fugitive Emissions	25.3648	5.2986					
Shutdown of No. 2A Blooming Mill/21-Inch Bar Mill	(5.0224)	(4.9861)	(0.3698)	(52.0170)	(116.3382)	(34.4444)	(0.0533)
Project Emissions	**128.89**	**186.72**	**447.68**	**11319.29**	**473.56**	**(24.22)**	**0.07**

Contemporaneous and Creditable Changes			Criteria Air Pollutants Emission Rates (tons/yr)						
Facility	**Shutdown/ Modification Year**	**Startup Year**	**PM**	**PM10**	**SO2**	**CO**	**NOx**	**VOC**	**Pb**
No. 4 AC Station	1999		(605.80)	(605.80)	(1,355.50)	(202.50)	(3,284.00)	(20.20)	(0.36)
80-Inch No. 4 WBF Project	2001		(0.14)	(0.14)	(0.01)	1.08	(51.74)	(0.10)	
EAF Vacuum Degasser		2001	1.40	1.40	0.10	25.10	18.20	1.00	
No. 6 CGL		2001	6.10	6.10	0.50	5.43			
Slag Pits (curtailment)	2002		(402.98)	(197.00)	(287.04)	(42.71)	(12.32)	(1.16)	
Slag Granulation/Pelletization		2002	307.53	144.96	50.66	32.93	5.07	0.51	
Slag Pits (continued operation)*		2002	14.91	10.27	191.48	21.86	8.22	0.78	1.19E-03
EAF DRI		2002	8.68	5.84					
Contemporaneous and Creditable Emissions Changes			**(670.30)**	**(634.37)**	**(1,399.81)**	**(158.81)**	**(3,316.57)**	**(19.17)**	**(0.36)**
Net Emissions Changes			**(541.41)**	**(447.65)**	**(952.13)**	**11,160.48**	**(2,843.01)**	**(43.39)**	**(0.28)**

Project	Description
No. 4 AC Station	Shutdown in April 1999
80-Inch No. 4 WBF Project	Shutdown of two pusher furnaces and installation of No. 4 Walking Beam Furnace.
EAF Vacuum Degasser	Construction permit issued in March 1999.
No. 6 Continuous Coating Line	Construction permit issued in May 1999.
Slag Granulation/Pelletization	Installation reduced emissions by cooling and processing slag currently handled in the slag pits.
EAF Direct Reduced Iron System	Installation of system to handle Direct Reduced Iron at No. 1 EAF.

* The PTE for Slag Pits (continued operation) in 2002 has been adjusted based on the new slag throughput rate limit of 662,550 tons/yr.
at No. 5 Anneal.

Proposed Slag Pits Throughput (tons/yr)	**662,550**		**PM**	**PM10**	**SO2**	**CO**	**NOx**	**VOC**	**Pb**
Emission Factor (lbs/ton)			0.045	0.031	0.578	0.066	0.0248	0.0023	3.60E-06
PTE of Slag Pits (tons/yr)			14.91	10.27	191.48	21.86	8.22	0.78	1.19E-03

ARCELORMITTAL INDIANA HARBOR EAST
SSM#089-21207-00316 & SPM #089-22044-00316
NET EMISSIONS CHANGES COMPARED TO NET SIGNIFICANT EMISSIONS at NO. 2 BOF

	Criteria Air Pollutants Emission Rates (tons/yr)						
	PM	**PM_{10}**	**SO_2**	**CO**	**NOx**	**VOC**	**Pb**
Net Emissions	128.89	186.72	447.68	11,319.29	473.56	(24.22)	0.07
Net Contemporaneous Emissions	(670.30)	(634.37)	(1,399.81)	(158.81)	(3,316.57)	(19.17)	(0.36)
Net Project Emissions Change	(541.41)	(447.65)	(952.13)	11,160.48	(2,843.01)	(43.39)	(0.28)
Net Significant Threshold	25	15	40	100	40	25	0.6

SSM#089-21207-00316 & SPM #089-22044-00316
SUMMARY OF FUGITIVE DUST EMISSIONS
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 2 BOF SHOP

PAVED ROADS

Road Segment ID	Area Source ID	Material	Silt (%)	Road Surface Silt Loading (g/m^2)	Average Vehicle Weight (tons)	AP-42 PM_{10} Emission Factor* (lb/VMT)	Additional Annual Traffic (VMT/yr)	Additional PM_{10} Emissions (tons/yr)	Additional PM_{10} Emissions (lbs/hr)
46P	63	No. 7 BF Slag	16.3	1.40	22.5	0.2611	859	0.1122	0.0256
46P	63	No. 7 BF Slag	16.3	1.40	22.5	0.2611	431	0.0563	0.0128
39P	56	No. 7 BF Slag	7.4	0.24	22.5	0.0838	4,484	0.1878	0.0429
38P	40	No. 7 BF Slag	12.6	1.59	22.5	0.2827	2,405	0.3399	0.0776
7P	68	No. 7 BF Slag	3.4	25.76	20.0	1.4500	718	0.5208	0.1189
44P	69	No. 7 BF Slag	15.4	1.98	20.0	0.2739	3,100	0.4246	0.0969
41P	65	No. 7 BF Slag	14.3	0.12	20.0	0.0447	3,488	0.0780	0.0178
26P	39	No. 7 BF Slag	34.9	0.82	20.0	0.1548	3,034	0.2348	0.0536
24P	39	No. 7 BF Slag	13.8	0.37	20.0	0.0914	2,505	0.1144	0.0261
20P	39	No. 7 BF Slag	9.0	1.04	20.0	0.1798	7,864	0.7069	0.1614
19P	27	No. 7 BF Slag	1.3	0.12	20.0	0.0447	6,097	0.1363	0.0311
99P	8	No. 7 BF Slag	1.3	0.12	20.0	0.0447	2,363	0.0528	0.0121
34P	8	No. 4 BOF Scrap	18.4	1.25	20.0	0.2030	0	0.0000	0.0000
1P	12	No. 4 BOF Scrap	20.4	2.11	20.0	0.2848	0	0.0000	0.0000
10P	12	No. 4 BOF Scrap	13.7	0.34	20.0	0.0863	0	0.0000	0.0000
11P	24	No. 4 BOF Scrap	28.0	1.31	20.0	0.2094	0	0.0000	0.0000
30P	31	No. 4 BOF Scrap	10.7	0.64	20.0	0.1314	0	0.0000	0.0000
32P	31	No. 4 BOF Scrap	12.6	1.13	20.0	0.1899	0	0.0000	0.0000
64P	44	No. 4 BOF Scrap	13.3	2.69	20.0	0.3336	0	0.0000	0.0000
34P	8	No. 4 BOF Alloys	18.4	1.25	20.0	0.2030	0	0.0000	0.0000
1P	12	No. 4 BOF Alloys	20.4	2.11	20.0	0.2848	0	0.0000	0.0000
10P	12	No. 4 BOF Alloys	13.7	0.34	20.0	0.0863	0	0.0000	0.0000
11P	24	No. 4 BOF Alloys	28.0	1.31	20.0	0.2094	0	0.0000	0.0000
30P	31	No. 4 BOF Alloys	10.7	0.64	20.0	0.1314	0	0.0000	0.0000
32P	31	No. 4 BOF Alloys	12.6	1.13	20.0	0.1899	0	0.0000	0.0000
64P	44	No. 4 BOF Alloys	13.3	2.69	20.0	0.3336	0	0.0000	0.0000
26P	39	No. 4 BOF Slag	34.9	0.82	20.0	0.1548	0	0.0000	0.0000
24P	39	No. 4 BOF Slag	13.8	0.37	20.0	0.0914	0	0.0000	0.0000
20P	39	No. 4 BOF Slag	9.0	1.04	20.0	0.1798	0	0.0000	0.0000
19P	27	No. 4 BOF Slag	1.3	0.12	20.0	0.0447	0	0.0000	0.0000
2P	7	No. 2 BOF Scrap	15.2	2.75	20.0	0.3385	2,000	0.3384	0.0773
8P	11	No. 2 BOF Scrap	17.1	0.85	20.0	0.1585	3,201	0.2536	0.0579
2P	7	No. 2 BOF Alloys	15.2	2.75	20.0	0.3385	567	0.0960	0.0219
8P	11	No. 2 BOF Alloys	17.1	0.85	20.0	0.1585	908	0.0719	0.0164
26P	39	No. 2 BOF Slag	34.9	0.82	20.0	0.1548	2,054	0.1590	0.0363
24P	39	No. 2 BOF Slag	13.8	0.37	20.0	0.0914	1,696	0.0775	0.0177
20P	39	No. 2 BOF Slag	9.0	1.04	20.0	0.1798	5,325	0.4786	0.1093
19P	27	No. 2 BOF Slag	1.3	0.12	20.0	0.0447	4,128	0.0923	0.0211
33P	37	No. 2 BOF Lime	20.6	4.64	30.0	0.8742	211	0.0923	0.0211
37P	30,24	No. 2 BOF Lime	12.8	0.12	30.0	0.0822	1,325	0.0544	0.0124
9P	22	No. 2 BOF Lime	26.2	2.04	30.0	0.5133	299	0.0768	0.0175
8P	11	No. 2 BOF Lime	17.1	0.85	30.0	0.2911	748	0.1089	0.0249
							Paved Road Totals	4.8645	1.1106

MATERIAL HANDLING

Material Handling ID	Area Source ID	Material		Additional PM_{10} Emissions (tons/yr)	Additional PM_{10} Emissions (lbs/hr)
1M	30	Self-fluxing Pellets		0.0720	0.0164
2M		Limestone			
3M	37	Limestone		0.0182	0.0042
4M	38	Steelmaking Slag		0.1761	0.0402
5M	64	No. 7 BF Slag		0.1117	0.0255
6M	67	No. 7 BF Slag		0.0561	0.0128
Additional Material Handling Emissions				0.4340	0.0991

	(tons/yr)	(lbs/hr)
Total Paved Roads and Material Handling Emissions	5.2986	1.2097

SSM#089-21207-00316 & SPM #089-22044-00316
CALCULATION OF ADDITIONAL VEHICLE MILES TRAVELED FOR TRUCK TRANSPORTATION OF MATERIALS
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 2 BOF

Road Segment ID	Material	Additional Material Required (tons/yr)	Percent Hauled by Truck	Additional Material Hauled by Truck (tons/yr)	Net Weight (tons/vehicle)	Empty Vehicle Weight [Tare Weight] (tons/vehicle)	Average Vehicle Weight* (tons/vehicle)	No. of Additional Trucks per Year	Road Length (mi)	Increase in VMT** per Year	Remarks
46P	No. 7 BF Slag	189,040	100%	189,040	25	10	22.5	7,562	0.057	859	From Slag Granulator / Slag Pit to Storage
46P	No. 7 BF Slag	94,520	100%	94,520	25	10	22.5	3,781	0.057	431	Trucked to Dock 6 for water transportation
39P	No. 7 BF Slag	94,520	100%	94,520	25	10	22.5	3,781	0.593	4,484	
38P	No. 7 BF Slag	94,520	100%	94,520	25	10	22.5	3,781	0.318	2,405	
7P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.076	718	Sent offsite by truck only
44P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.328	3,100	
41P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.369	3,488	
26P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.321	3,034	
24P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.265	2,505	
20P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.832	7,864	
19P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.645	6,097	
99P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.250	2,363	
34P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.239	0	Remainder of scrap transported by train
1P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.206	0	
10P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.205	0	
11P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.466	0	
30P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.361	0	
32P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.318	0	
64P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.240	0	
34P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.239	0	
1P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.206	0	
10P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.205	0	
11P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.466	0	
30P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.361	0	
32P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.318	0	
64P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.240	0	
26P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.321	0	Shipped offsite by truck from slag processing area adjacent to No. 4 BOF Shop.
24P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.265	0	
20P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.832	0	
19P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.645	0	
2P	No. 2 BOF Scrap	120,000	55%	66,000	20	10	20	3,300	0.303	2,000	Remainder of scrap transported by train
8P	No. 2 BOF Scrap	120,000	55%	66,000	20	10	20	3,300	0.485	3,201	
2P	No. 2 BOF Alloys	18,720	100%	18,720	20	10	20	936	0.303	567	
8P	No. 2 BOF Alloys	18,720	100%	18,720	20	10	20	936	0.485	908	
26P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.321	2,054	Transported by rail from No. 2 BOF to slag processing area. Shipped offsite by truck from slag processing area adjacent to No. 4 BOF Shop.
24P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.265	1,696	
20P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.832	5,325	
19P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.645	4,128	
33P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.137	211	Transported by truck from Lime Plant. BOF No. 4 receives lime directly from Lime Plant by conveyor.
37P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.859	1,325	
9P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.194	299	
8P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.485	748	

Percent of Blast Furnace No. 7 slag sent by truck to Dock No. 6 for offsite water transportation: 50%
Percent of Blast Furnace No. 7 slag sent to offsite sales by truck: 50%

*Average Vehicle Weight = [(Net Weight+Tare Weight)+Tare Weight]/2
**Vehicle Miles Traveled. Assumes each truck makes one pass empty and one pass loaded.

SSM#089-21207-00316 & SPM #089-22044-00316
CALCULATION OF ROAD FUGITIVE DUST EMISSIONS BY ROAD SEGMENT
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 2 BOF SHOP

PAVED ROADS

Road Segment ID	Area Source ID	Material	Paved Road Segment Description	Silt (%)	Road Surface Silt Loading (g/m^2)	Average Vehicle Weight (tons)	AP-42 PM_{10} Emission Factor* (lb/VMT)	Additional Annual Traffic (VMT/yr)	Additional PM_{10} Emissions (tons/yr)
46P	63	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	0.2611	859	0.1122
46P	63	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	0.2611	431	0.0563
39P	56	No. 7 BF Slag	Rt. 76 Between Rt 56/71 and Rt. 74	7.4	0.24	22.5	0.0838	4,484	0.1878
38P	40	No. 7 BF Slag	Rt. 56 Between Rt. 54 and Rt. 76	12.6	1.59	22.5	0.2827	2,405	0.3399
7P	68	No. 7 BF Slag	Rt.71 S from Slag Quench Pits to Rt.71, Under Conveyor	3.4	25.76	20.0	1.4500	718	0.5208
44P	69	No. 7 BF Slag	Rt. 71 Between New Coke Dump and West End of Rt. 75	15.4	1.98	20.0	0.2739	3,100	0.4246
41P	65	No. 7 BF Slag	Rt.71 Between Rt.70 and New Coke Dump	14.3	0.12	20.0	0.0447	3,488	0.0780
26P	39	No. 7 BF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.1548	3,034	0.2348
24P	39	No. 7 BF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.0914	2,505	0.1144
20P	39	No. 7 BF Slag	Rt.64 Between Propane Tank Farm Rd and Rt.60	9.0	1.04	20.0	0.1798	7,864	0.7069
19P	27	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.0447	6,097	0.1363
99P	8	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Plant Gate	1.3	0.12	20.0	0.0447	2,363	0.0528
34P	8	No. 4 BOF Scrap	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	0.2030	0	0.0000
1P	12	No. 4 BOF Scrap	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	0.2848	0	0.0000
10P	12	No. 4 BOF Scrap	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.0863	0	0.0000
11P	24	No. 4 BOF Scrap	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	0.2094	0	0.0000
30P	31	No. 4 BOF Scrap	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.1314	0	0.0000
32P	31	No. 4 BOF Scrap	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.1899	0	0.0000
64P	44	No. 4 BOF Scrap	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	0.3336	0	0.0000
34P	8	No. 4 BOF Alloys	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	0.2030	0	0.0000
1P	12	No. 4 BOF Alloys	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	0.2848	0	0.0000
10P	12	No. 4 BOF Alloys	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.0863	0	0.0000
11P	24	No. 4 BOF Alloys	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	0.2094	0	0.0000
30P	31	No. 4 BOF Alloys	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.1314	0	0.0000
32P	31	No. 4 BOF Alloys	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.1899	0	0.0000
64P	44	No. 4 BOF Alloys	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	0.3336	0	0.0000
26P	39	No. 4 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.1548	0	0.0000
24P	39	No. 4 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.0914	0	0.0000
20P	39	No. 4 BOF Slag	Rt.64 Propane Tank Farm Rd to Rt.60	9.0	1.04	20.0	0.1798	0	0.0000
19P	27	No. 4 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Rd	1.3	0.12	20.0	0.0447	0	0.0000
2P	7	No. 2 BOF Scrap	Rt.30	15.2	2.75	20.0	0.3385	2,000	0.3384
8P	11	No. 2 BOF Scrap	Rt.21	17.1	0.85	20.0	0.1585	3,201	0.2536
2P	7	No. 2 BOF Alloys	Rt.30	15.2	2.75	20.0	0.3385	567	0.0960
8P	11	No. 2 BOF Alloys	Rt.21	17.1	0.85	20.0	0.1585	908	0.0719
26P	39	No. 2 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.1548	2,054	0.1590
24P	39	No. 2 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.0914	1,696	0.0775
20P	39	No. 2 BOF Slag	Rt.64 Between Propane Tank Farm Rd and Rt.60	9.0	1.04	20.0	0.1798	5,325	0.4786
19P	27	No. 2 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Rd	1.3	0.12	20.0	0.0447	4,128	0.0923
33P	37	No. 2 BOF Lime	Rt. 56 Lime Plant North Entrance to Rt.41	20.6	4.64	30.0	0.8742	211	0.0923
37P	30,24	No. 2 BOF Lime	Rt. 41 (Chisom Trail) Between Rt.56 and Rt. 43	12.8	0.12	30.0	0.0822	1,325	0.0544
9P	22	No. 2 BOF Lime	Rt.43 Between Rt.40 and Rt.23 at Railroad Tracks	26.2	2.04	30.0	0.5133	299	0.0768
8P	11	No. 2 BOF Lime	Rt.21	17.1	0.85	30.0	0.2911	748	0.1089
								Paved Road Totals	4.8645

*AP-42, 5th Edition, Equation (1), page 13.2.1-4 (October 2002)

SSM#089-21207-00316 & SPM #089-22044-00316
CALCULATION OF ROAD FUGITIVE DUST EMISSIONS BY AREA SOURCE
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 2 BOF SHOP

Road Segment ID	Area Source ID	Material	PM_{10} Emissions (tons/yr)	PM_{10} Emissions (lbs/hr)	Length of Area Source Side (m)	Length of Area Source Side (ft)	Area of Area Source (ft^2)	Emission Rate ($lb/hr/ft^2$)
2P	7	No. 2 BOF Scrap	0.3384	0.0773	500	1,640.4	2,690,912	3.6858E-08
2P	7	No. 2 BOF Alloys	0.0960	0.0219				
34P	8	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	4.4839E-09
39P	8	No. 4 BOF Alloys	0.0000	0.0000				
99P	8	No. 7 BF Slag	0.0528	0.0121				
8P	11	No. 2 BOF Lime	0.1089	0.0249	500	1,640.4	2,690,912	3.6856E-08
8P	11	No. 2 BOF Scrap	0.2536	0.0579				
8P	11	No. 2 BOF Alloys	0.0719	0.0164				
10P	12	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
1P	12	No. 4 BOF Scrap	0.0000	0.0000				
10P	12	No. 4 BOF Alloys	0.0000	0.0000				
1P	12	No. 4 BOF Alloys	0.0000	0.0000				
9P	22	No. 2 BOF Lime	0.0768	0.0175	250	820.2	672,728	2.6054E-08
11P	24	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
11P	24	No. 4 BOF Alloys	0.0000	0.0000				
19P	27	No. 2 BOF Slag	0.0923	0.0211	500	1,640.4	2,690,912	1.9401E-08
19P	27	No. 4 BOF Slag	0.0000	0.0000				
19P	27	No. 7 BF Slag	0.1363	0.0311				
37P	30	No. 2 BOF Lime	0.0544	0.0124	500	1,640.4	2,690,912	4.6175E-09
30P	31	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
32P	31	No. 4 BOF Scrap	0.0000	0.0000				
30P	31	No. 4 BOF Alloys	0.0000	0.0000				
32P	31	No. 4 BOF Alloys	0.0000	0.0000				
33P	37	No. 2 BOF Lime	0.0923	0.0211	250	820.2	672,728	3.1336E-08
20P	39	No. 2 BOF Slag	0.4786	0.1093	750	2,460.6	6,054,552	6.6786E-08
20P	39	No. 4 BOF Slag	0.0000	0.0000				
20P	39	No. 7 BF Slag	0.7069	0.1614				
24P	39	No. 2 BOF Slag	0.0775	0.0177				
24P	39	No. 4 BOF Slag	0.0000	0.0000				
24P	39	No. 7 BF Slag	0.1144	0.0261				
26P	39	No. 2 BOF Slag	0.1590	0.0363				
26P	39	No. 4 BOF Slag	0.0000	0.0000				
26P	39	No. 7 BF Slag	0.2348	0.0536				
38P	40	No. 7 BF Slag	0.3399	0.0776	500	1,640.4	2,690,912	2.8842E-08
64P	44	No. 4 BOF Scrap	0.0000	0.0000	250	820.2	672,728	0.0000E+00
64P	44	No. 4 BOF Alloys	0.0000	0.0000				
39P	56	No. 7 BF Slag	0.1878	0.0429	500	1,640.4	2,690,912	1.5931E-08
46P	63	No. 7 BF Slag	0.1122	0.0256	250	820.2	672,728	5.7163E-08
46P	63	No. 7 BF Slag	0.0563	0.0128				
41P	65	No. 7 BF Slag	0.0780	0.0178	250	820.2	672,728	2.6473E-08
7P	68	No. 7 BF Slag	0.5208	0.1189	250	820.2	672,728	1.7675E-07
44P	69	No. 7 BF Slag	0.4246	0.0969	250	820.2	672,728	1.4411E-07

SSM#089-21207-00316 & SPM #089-22044-00316
SUMMARY OF MATERIAL HANDLING EMISSIONS BY AREA SOURCE
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 2 BOF SHOP

Material Handling ID	Area Source ID	Material	Additional PM_{10} Emissions (tons/yr)	Additional PM_{10} Emissions (lbs/hr)	Length of Area Source Side (m)	Length of Area Source Side (ft)	Area of Area Source (ft^2)	Emission Rate ($lb/hr/ft^2$)
1M	30	Self-fluxing Pellets	0.0538	0.0123	500	1,640.4	2,690,912	6.1110E-09
2M		Limestone	0.0182	0.0042				
3M	37	Limestone	0.0182	0.0042	250	820.2	672,728	6.1689E-09
4M	38	Steelmaking Slag	0.1761	0.0402	500	1,640.4	2,690,912	1.4939E-08
5M	64	No. 7 BF Slag	0.1117	0.0255	250	820.2	672,728	3.7905E-08
6M	67	No. 7 BF Slag	0.0561	0.0128	250	820.2	672,728	1.9027E-08
Additional Material Handling Emissions			0.4340	0.0991				

SSM#089-21207-00316 & SPM #089-22044-00316
CALCULATION OF FUGITIVE DUST EMISSIONS BY AREA SOURCES
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 2 BOF SHOP

Area Source ID	Road PM_{10} Emissions (lbs/hr)	Material Handling PM_{10} Emissions (lbs/hr)	Total PM_{10} Emissions (lbs/hr)	Length of Area Source Side (m)	Length of Area Source Side (ft)	Area of Area Source (ft^2)	Emission Rate ($lb/hr/ft^2$)
7	0.0992	0.0000	0.0992	500	1,640.4	2,690,912	3.6858E-08
8	0.0121	0.0000	0.0121	500	1,640.4	2,690,912	4.4839E-09
11	0.0992	0.0000	0.0992	500	1,640.4	2,690,912	3.6856E-08
12	0.0000	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
22	0.0175	0.0000	0.0175	250	820.2	672,728	2.6054E-08
24	0.0000	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
27	0.0522	0.0000	0.0522	500	1,640.4	2,690,912	1.9401E-08
30	0.0124	0.0164	0.0289	500	1,640.4	2,690,912	1.0728E-08
31	0.0000	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
37	0.0211	0.0042	0.0252	250	820.2	672,728	3.7505E-08
38	0.0000	0.0402	0.0402	500	1,640.4	2,690,912	1.4939E-08
39	0.4044	0.0000	0.4044	750	2,460.6	6,054,552	6.6786E-08
40	0.0776	0.0000	0.0776	500	1,640.4	2,690,912	2.8842E-08
44	0.0000	0.0000	0.0000	250	820.2	672,728	0.0000E+00
56	0.0429	0.0000	0.0429	500	1,640.4	2,690,912	1.5931E-08
63	0.0385	0.0000	0.0385	250	820.2	672,728	5.7163E-08
64	0.0000	0.0255	0.0255	250	820.2	672,728	3.7905E-08
65	0.0178	0.0000	0.0178	250	820.2	672,728	2.6473E-08
67	0.0000	0.0128	0.0128	250	820.2	672,728	1.9027E-08
68	0.1189	0.0000	0.1189	250	820.2	672,728	1.7675E-07
69	0.0969	0.0000	0.0969	250	820.2	672,728	1.4411E-07

Arcelor Mittal Indiana Harbor East
SSM #089-21207-00316 & SPM #089-22044-00316
Blast Furnace No. 7 Stove Addition
Emission Increase
No. 7 Blast Furnace at 772,620 Tons Hot Metal Per Year

Emission Unit	Emission Location	Changes in Annual Emission Rates of Criteria Air Pollutants (tons/yr)						
		PM	PM10	SO2	CO	NOx	VOC	Pb
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	3.1790	4.3495	34.2657	108.1668	4.7902	1.7799	0.0005
	Casthouse Baghouse No. 2 (west)	1.6213	2.7889	34.2657	428.8041	4.7902	1.7799	0.0002
	Casthouse Fugitives	11.5893	8.1125	3.8631	4.6357	0.4636	0.3477	0.0004
	Coke Transfer Station	0.0297	0.0148	0.0000	0.0000	0.0000	0.0000	0.0000
	Stockhouse Coke Baghouse	0.1335	0.1187	0.0000	0.0000	0.0000	0.0000	0.0000
	Stockhouse Pellet Baghouse	0.3238	0.3238	0.0000	0.0000	0.0000	0.0000	0.0000
	Slag Pit Operations	6.3658	6.3658	7.3170	4.8292	0.7317	0.0732	0.0001
	Stoves (NG)	0.4589	1.8356	0.1449	20.2877	25.1181	1.3284	0.0001
	Stoves (BFG)	4.9828	33.0479	107.7170	4246.3950	168.5368	0.0000	0.0005
	Blast Furnace No. 7 Total	**28.6841**	**56.9574**	**187.5734**	**4813.1185**	**204.4306**	**5.3091**	**0.0018**
PCI	Coal Transfer Baghouse A	0.1045	0.1045	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Storage Baghouse C	0.1455	0.1455	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Pulverizer Baghouse D	0.1431	0.1431	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Pulverizer Baghouse E	0.1431	0.1431	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Storage Baghouse F	0.1526	0.1526	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Storage Baghouse G	0.1526	0.1526	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Unloading	0.2799	0.2799	0.0000	0.0000	0.0000	0.0000	0.0000
	PCI Total	**1.1212**	**1.1212**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
Lime Plant	Silo Baghouses	0.5530	0.5530	0.0000	0.0000	0.0000	0.0000	0.0001
	No. 1 Kiln Baghouse	0.3575	0.3575	0.0000	50.3354	0.0000	0.0000	0.0015
	No. 2 Kiln Baghouse	0.3575	0.3575	0.0000	50.3354	0.0000	0.0000	0.0015
	Micro-Pulse Baghouse (2)	0.1762	0.1762	0.0000	0.0000	0.0000	0.0000	0.0000
	Truck Loadout Baghouse	0.2517	0.1208	0.0000	0.0000	0.0000	0.0000	0.0000
	No. 1 Kiln (NG)	0.0001	0.0038	0.0371	5.1870	6.422	0.3396	0.0000
	No. 2 Kiln (NG)	0.0001	0.0038	0.0371	5.1870	6.422	0.3396	0.0000
	Lime Plant Total	**1.6960**	**1.5724**	**0.0741**	**111.0448**	**12.8440**	**0.6793**	**0.0033**
No. 2 BOF	10 Furnace Stack	12.9527	12.8226	15.9069	3079.6860	18.1793	0.2272	0.0250
	20 Furnace Stack	12.9527	12.8226	15.9069	3079.6860	18.1793	0.2272	0.0250
	10 Furnace Stack (NG)	0.0066	0.0066	0.0021	0.2916	0.3471	0.0191	0.0000
	20 Furnace Stack (NG)	0.0066	0.0066	0.0021	0.2916	0.3471	0.0191	0.0000
	Caster Roof Monitor	1.5907	0.6817	0.0000	0.0000	0.0000	0.9090	0.0000
	Ladle Metallurgy Station	2.1112	2.9269	11.3621	19.0883	1.3634	0.0000	0.0018
	Gas Cleaning System	0.0000	0.0000	0.0000	9.9986	0.0000	0.0000	0.0000
	Secondary, Ventilation System Scrubber	12.0711	12.6119	6.3628	63.1730	9.0896	2.2724	0.0591
	Charging Aisle and Reladling Desulfurization Baghouse	11.6347	9.6805	4.2721	0.0000	1.0908	0.4545	0.0009
	Truck and Ladle Hopper Baghouse	0.3133	0.3118	0.0000	0.0000	0.0000	0.0000	0.0000
	Flux Storage and Batch Baghouse	0.2088	0.2088	0.0000	0.0000	0.0000	0.0000	0.0000
	Roof Monitor	13.6345	8.4806	0.1818	1.9088	0.2727	0.0682	0.0105
	No. 2 BOF Total	**67.4829**	**60.5606**	**53.9967**	**6254.1240**	**48.8694**	**4.1967**	**0.1223**
No. 4 BOF	Scrubber	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Gas Cleaning System	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Secondary Vent System Baghouse	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Reladling and Desulfurization Baghouse North	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Reladling and Desulfurization Baghouse South	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Roof Monitor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Furnace Additives Bin Loading	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Torch Cut	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	RHOB Condensers	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	RHOB Material Handling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	RHOB Gas Cleaning System	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Furnace Additive Hopper House	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	No. 4 BOF Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
No. 5 Boiler House	Boiler House (NG)	0.0149	0.0595	0.0047	0.6579	0.8145	0.0431	0.0000
	Boiler House (BFG)	9.5479	66.1331	206.4027	192.3617	322.9430	0.0000	0.0009
	Boiler House (Mixed Gas)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	No. 5 Boiler House Total	**9.5628**	**66.1926**	**206.4074**	**193.0196**	**323.7575**	**0.0431**	**0.0009**

ArcelorMittal Indiana Harbor East
SSM #089-21207-00316 & SPM #089-22044-00316
Calculation of Change in Hours of Operation
Baghouses with PM10 Limits (lbs/hr)

Emission Location	Hours of Operation		Average Hours of Operation	Hours Per Year	Increase in Hours of Operation	Model Operation Hours
	1999	2000				
Casthouse No. 1	8,466	8,476	8,471.0	8,760	289.0	289.0
Casthouse No. 2	8,466	8,476	8,471.0	8,760	289.0	289.0
Coal Pulverizer Baghouse	8,466	8,476	8,471.0	8,760	289.0	289.0
Lime Plant	8,247	8,072	8,159.5	8,760	600.5	200.0
No. 4 BOF Secondary Vent System	8,497	8,298	8,397.5	8,760	362.5	362.5

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 & SPM #089-22044-00316
Calculation of Annual Change in Production/Throughput Rate

Emission Unit	Emission Location	Annual Production/ Thruput Change	Units	Comments
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Casthouse Baghouse No. 2 (west)	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Casthouse Baghouse No. 1 (east)	386,310	hot metal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on permitted increase in hot metal from No. 7 Blast Furnace.
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on permitted increase in hot metal from No. 7 Blast Furnace.
	Casthouse Fugitives	772,620	hot metal	Based on hot metal increase
	Coke Transfer Station	296,686	coke	Based on hot metal increase
	Stockhouse Coke Baghouse	296,686	coke	Based on hot metal increase
	Stockhouse Pellet Baghouse	1,295,275	pellet	Increase in IDEM public notice SPM
	Slag Granulation	146,341	slag	Based on minimum actual slag granulation ratio x hot metal increase.
	Slag Pit	81,527	slag	Based on minimum actual slag granulation ratio x hot metal increase.
PCI	Coal Transfer Baghouse A	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Storage Baghouse C	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Pulvurizer Baghouse D	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Coal Pulvurizer Baghouse E	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Coal Pulvurizer Baghouse D	373,155	coal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Pulvurizer Baghouse E	373,155	coal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Storage Baghouse F	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Storage Baghouse G	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Unloading	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
Lime Plant	Silo Baghouses	200.0	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	No. 1 Kiln Baghouse	200.0	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	No. 2 Kiln Baghouse	200.0	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Silo Baghouses	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	No. 1 Kiln Baghouse	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	No. 2 Kiln Baghouse	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Micro-Pulse Baghouse (2)	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Truck Loadout Baghouse	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
No. 2 BOF	10 Furnace Stack	454,482	molten steel	Total change in steel production divided between 10 Furnace and 20 Furnace Stacks.
	20 Furnace Stack	454,482	molten steel	Total change in steel production divided between 10 Furnace and 20 Furnace Stacks.
	Caster Fume Collection	908,965	slabs	Total change in steel production
	Ladle Metallurgy Station	908,965	molten steel	Total change in steel production
	Gas Cleaning System	908,965	molten steel	Total change in steel production
	Secondary, Ventilation System Scrubber	908,965	molten steel	Total change in steel production
	Charging Aisle and Reladling Desulfurization Baghouse	908,965	hot metal	Based on change in hot metal production
	Truck and Ladle Hopper Baghouse	58,829	flux	Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Flux Storage and Batch Baghouse	58,829	flux	Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Roof Monitor	908,965	molten steel	Total change in steel production
No. 4 BOF	Scrubber	0	molten steel	Total change in steel production
	Gas Cleaning System	0	molten steel	Total change in steel production
	Secondary Vent System Baghouse	0	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Secondary Vent System Baghouse	0	molten steel	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on change in total change in steel production.
	Reladling and Desulfurization Baghouse North	0	hot metal	Based on change in hot metal production
	Reladling and Desulfurization Baghouse South	0	hot metal	Based on change in hot metal production
	Roof Monitor	0	molten steel	Total change in steel production
	Furnace Additives Bin Loading	0	lime alloys	Total change in steel production
	Torch Cut	0	molten steel	Total change in steel production
	RHOB Condensers	0	molten steel	Total change in steel production
	RHOB Material Handling	0	molten steel	Total change in steel production
	RHOB Gas Cleaning System	0	molten steel	Total change in steel production
	Furnace Additive Hopper House	0	lime alloys	Total change in steel production
Blast Furnace No. 7	Stoves (NG)	483	mmcf	Based on change in hot metal production in tons hot metal per year and maximum BFG combust/tons hot metal Jan 05-Apr 07
	Stoves (BFG)	14,655	mmcf	Based on change in hot metal production in tons hot metal per year and maximum BFG combust/tons hot metal Jan 05-Apr 07
No. 2 BOF	10 Furnace Stack (NG)	6.94	mmcf	Based on actual mmscf of natural gas per ton of steel produced
	20 Furnace Stack (NG)	6.94	mmcf	Based on actual mmscf of natural gas per ton of steel produced multiplied by the change in steel production.
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	Based on change in amount of NG consumed.
	Boiler House (BFG)	28,082	mmcf	Based on change in amount of BFG generated in mmcf/yr less BFG consumed at No. 7 BF.
Lime Plant	No. 1 Kiln (Residual Oil)	0.0000	10^3 gal	Revised on February 21, 2003
	No. 1 Kiln (NG)	123.5000	mmcf	IDEM Public Noticed SSM
	No. 2 Kiln (Residual Oil)	0.0000	10^3 gal	Revised on February 21, 2003
	No. 2 Kiln (NG)	123.5000	mmcf	IDEM Public Noticed SSM

ArcelorMittal Indiana Harbor East
SSM #089-21207-00316 & SPM #089-22044-00316
Summary of Calculations Used to Estimate Change in Annual Production/Throughput Rate
All Hot Metal Increase Through No. 2 BOF Shop

Calculation of Change in Hot Metal Production Rate		Comments
Change in total steel production rate at No. 2 BOF (tons steel/yr)	908,965	Change in hot metal/ratio hot metal to steel
Change in total steel production rate at No. 4 BOF (tons steel/yr)	0	Change in hot metal/ratio hot metal to steel
Ratio of hot metal to steel	0.850	Hot metal to steel ratio of 0.85 from 7/11/07 E-mail
Change in hot metal annual production/throughput change (tons/yr)	772,620	From Section D.0 of Title V Permit

Calculation of Change in Pellet Throughput Rate		Comments
Ratio of pellet throughput rate per ton of hot metal produced		
Change in pellet annual production/throughput change (tons/yr)	1,295,275	Increase in IDEM public notice SPM

Calculation of Change in Coke Consumption Rate		Comments
Ratio of coke consumption rate per ton of hot metal produced	0.384	Based on actual operating data
Change in annual coke consumption rate (tons/yr)	296,686	Increase in IDEM public notice SPM

Calculation of Change in Slag Granulation and Slag Pit Production Rate		Comments
Ratio of slag generation per ton of hot metal produced	0.295	Maximum-Production records 1/05-4/07
Total slag generation rate (tons/yr)	227,868	change in tons hot metal x ratio of tons slag per ton hot metal
Ratio of slag granulation to total slag production	0.64	Minimum-Production records 1/05-4/07
Ratio of slag to total slag production	0.36	Based on total slag generated and granulation ratio
Revised Slag Granulation Potential Production Rate (tons/yr)	146,341	granulated ratio x total slag generation rate
Revised Slag Pit Potential Production Rate (tons/yr)	81,527	pit ratio x total slag generation rate

Calculation of PCI Change in Throughput Rate		Comments
Pounds of PCI consumed per ton of hot metal (before)	320	Based on 160 kg PCI/metric ton HM
Pounds of PCI consumed per ton of hot metal (after)	431	Maximum-Production records 1/05-4/07
Average tons of hot metal thruput (before)	3,737,016	October 1998 through September 2000
Average tons of hot metal thruput (after)	4,509,636	3,737,016 + change in hot metal production rate)
Tons of PCI consumed per year (before)	597,923	320 / 2000 x 3,737,016
Tons of PCI consumed per year (after)	971,077	lb/ton from production records 1/05-4/07 / 2000 x (3,737,016 + change in hot metal production rate)
Change in PCI consumed per year	373,155	Difference between before and after

Calculation of Lime Change in Throughput Rate		Comments
Ratio of pounds of lime per ton of steel at BOF	110.8	Maximum-Production records 1/05-4/07
Change in lime consumed per year (tons/yr)	50,335	Maximum ratio from production records 1/05-4/07 x change in No. 2 BOF steel production

Calculation of Change in Total Steel Production Rate		Comments
Change in total steel production rate at No. 2 BOF (tons steel/yr)	908,965	
Change in total steel production rate at No. 4 BOF (tons steel/yr)	0	

Calculation of Fuel Consumption Rates at No. 7 BF Stoves		Comments
BFG stoves consumption rate in mmcf per ton of hot metal	0.0190	Maximum-Production records 1/05-4/07
Percent blast furnace gas of total heat inpu	61.28%	
NG stoves consumption rate in mmcf per ton of hot metal	0.000625	Maximum-Production records 1/05-4/07
Change in BFG Consumption Rate (mmscf/yr)	14,655	Change in tons of hot metal x BFG consumption rate in mmscf per ton hot metal
Change in NG Consumption Rate (mmscf/yr)	483	Change in tons of hot metal x NG consumption rate in mmscf per ton hot metal

Calculation of Fuel Consumption Rate at No. 5 Boiler House		Comments
No. 7 BF BFG Generation Rate (mmscf/ton hot metal)	48,750	
Change in No. 7 BF BFG generation rate (mmscf/yr)	37,665	Change in tons of hot metal x BFG generatio rate in mmscf per ton hot metal
Change in BFG Consumption Rate at No. 5 Boiler House (mmscf/yr)	28,082	Change in No. 7 BF BFG generation rate - Change in No. 7 BF BFG consumption rate
2001 NG consumption rate (mmscf/yr)	483.38	2001 EIS Report
2001 BFG consumption rate (mmscf/yr)	100,287.83	2001 EIS Report
2001 MG consumption rate (mmscf/yr)	960.22	2001 EIS Report
2001 No. 7 BF production rate (tons/yr)	3,105,587	2001 EIS Report
Mixed Gas heating value as a percent of natural gas heating value	71.90%	71.9 percent of natural gas heating value
Mixed gas heating value	733.38	1020 BTU/scf x 71.90 percent
NG Heat Input (MMBTU/yr)	493,048	2001 NG consumption rate x natural gas heating value
BFG Heat Input (MMTU/yr)	9,025,905	2001 BFG consumption rate x BFG Heating Value
MG Heat Input (MMBTU/yr)	704,206	2001 MG consumption rate x mixed gas heating value
Total heat input (MMBTU/yr)	10,223,158	Sum of NG, BFG and MG heat inputs
2001 total heat input per ton of hot metal	3.29	Total heat input / tons hot metal
Change in total heat input at No. 5 Boiler House (MMBTU/yr)	2,543,357.08	Change in hot metal production x 2001 total heat input per ton of hot metal
Change in BFG heat input at No. 5 Boiler House (MMBTU/yr)	2,527,380.00	Change in BFG consumption rate x BFG heating value
Remaining heat input at No. 5 Boiler House made up by natural gas (MMBTU/yr)	15,977.08	Total heat input - heat input from BFG
Change in NG Consumption Rate at No. 5 Boiler House (mmscf/yr)	15.7	

Calculation of Fuel Consumption Rate at No. 2 BOF Furnace Flare Stacks		Comments
Consumption rate per ton of steel (mmscf/ton)	0.000015	Maximum-Production records 1/05-4/07
Change in No. 10 Furnace Flare Stack consumption rate (mmscf/yr)	6.94	Consumption rate x change in tons of steel produced
Change in No. 20 Furnace Flare Stack consumption rate (mmscf/yr)	6.94	Consumption rate x change in tons of steel produced

Calculation of Furnace Additives Bin Loading/Hopper House Throughput Rate		Comments
Ratio of tons of lime/flux handled per ton of steel produced	0.06472	Maximum-Production records 1/05-4/07
Change in Furnace Additive Bin Loading throughput rate (tons/yr)	58,829.08	Change in steel production x ratio
Change in Furnace Additive Hopper House throughput rate (tons/yr)	58,829.08	Change in steel production x ratio

Calculation of Fuel Consumption Rates at Lime Plant		Comments
Natural Gas Heating Value (BTU/scf)	1,020	Inland Steel
Heat Consumption Rate (MMBTU/ton of lime)	5.00	Inland Steel heat consumption per ton of lime
Change in lime consumed per year (tons/yr)	50,335	Maximum ratio from production records 1/05-4/07 x change in No. 2 BOF steel production
Total Heat Input (MMBTU/yr)	251,677	Heat Consumption Rate x change in steel production
Natural Gas Heat Input (MMBTU/yr)	251,677.1	Total heat input x percent natural gas
Change in Natural Gas Consumption Rate (mmscf/yr)	246.74	Natural gas heat input / natural gas heating value

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
PM_{10}
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor Filterable	Emission Factor Condensible	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
										(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	289	hours	30.10		30.100	lb/hr	N/A	30.100	4.35	0.9930	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	289	hours	19.30		19.300	lb/hr	N/A	19.300	2.79	0.6367	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.42		0.420	lb/ton	95.00%	0.021	8.11	1.8522	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.10		0.10	lb/ton	99.90%	0.0001	0.01	0.0034	T-089-6577-00316, Appendix A
	Stockhouse Coke Baghouse	296,686	coke	0.04		0.04	lb/ton	98.00%	0.0008	0.12	0.0271	T-089-6577-00316, Appendix A
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.05		0.05	lb/ton	99.00%	0.0005	0.32	0.0739	T-089-6577-00316, Appendix A
	Slag Pit Operations	81,527	slag	0.031		0.031	lb/ton	N/A	0.0310	1.26	0.2885	Clean water quench @ 250 mg/l TDS
	Slag Granulator Operations	146,341	slag	0.087		0.0870	lb/ton	N/A	0.0870	6.37	1.4534	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.28		0.28	lb/ton	99.80%	0.00056	0.10	0.0239	T-089-6577-00316, Appendix A
	Coal Storage Baghouse C	373,155	coal	0.39		0.39	lb/ton	99.80%	0.00078	0.15	0.0332	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse D	289	hours	0.99		0.99	lb/hr	N/A	0.990	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse E	289	hours	0.99		0.99	lb/hr	N/A	0.990	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Storage Baghouse F	373,155	coal	0.409		0.41	lb/ton	99.80%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Storage Baghouse G	373,155	coal	0.409		0.41	lb/ton	99.80%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Unloading	373,155	coal	0.010		0.01	lb/ton	85.00%	0.0015	0.28	0.0639	T-089-6577-00316, Appendix A
Lime Plant	Silo Baghouses	200.0	hours	5.53		5.53	lb/hr	N/A	5.53	0.55	0.1263	T-089-6577-00316, Appendix A
	No. 1 Kiln Baghouse	200.0	hours	3.575		3.57	lb/hr	N/A	3.575	0.36	0.0816	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	200.0	hours	3.575		3.57	lb/hr	N/A	3.575	0.36	0.0816	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.35		0.35	lb/ton	98.00%	0.007	0.18	0.0402	T-089-6577-00316, Appendix A
	Truck Loadout Baghouse	50,335	lime	2.40		2.40	lb/ton	99.80%	0.0048	0.12	0.0276	T-089-6577-00316, Appendix A
No. 2 BOF	10 Furnace Stack	0	molten steel	13.10	0.0226	13.1226	lb/ton	99.57%	0.0564	0.00	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack	0	molten steel	13.10	0.0226	13.1226	lb/ton	99.57%	0.0564	0.00	0.0000	T-089-6577-00316, Appendix A
	Caster Roof Monitor	0	slabs	0.0015		0.0015	lb/ton		0.0015	0.00	0.0000	T-089-6577-00316, Appendix A
	Ladle Metallurgy Station	0	molten steel	0.4600		0.46	lb/ton	98.60%	0.0064	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	0	molten steel	1.85		1.8500	lb/ton	98.50%	0.028	0.00	0.0000	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	0.71		0.710	lb/ton	97.00%	0.0213	0.00	0.0000	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	0	flux	1.06		1.06	lb/ton	99.00%	0.011	0.00	0.0000	T-089-6577-00316, Appendix A
	Flux Storage and Batch Baghouse	0	flux	0.71		0.71	lb/ton	99.00%	0.0071	0.00	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.051	0.0112	0.0622	lb/ton	70.00%	0.01866	0.00	0.0000	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	908,965	molten steel	13.60	0.023	13.623	lb/ton	98.83%	0.159	72.44	16.5387	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	363	hours	23.74		23.74	lb/hr	N/A	23.74	4.30	0.9824	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	386,310	hot metal	1.15		1.150	lb/ton	98.50%	0.017	3.33	0.7607	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	386,310	hot metal	1.15		1.150	lb/ton	98.50%	0.017	3.33	0.7607	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.050	0.0110	0.0610	lb/ton	70.00%	0.0183	8.32	1.8989	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	58,829	lime alloys	0.0010		0.0010	lb/ton		0.001	0.03	0.0067	T-089-6577-00316, Appendix A
	Torch Cut	908,965	molten steel	0.002025		0.002025	lb/ton		0.002025	0.92	0.2101	T-089-6577-00316, Appendix A
	RHOB Condensers	908,965	molten steel	0.10		0.10	lb/ton	99.80%	0.0002	0.09	0.0208	T-089-6577-00316, Appendix A
	RHOB Material Handling	908,965	molten steel	0.10		0.10	lb/ton	98.00%	0.002	0.91	0.2075	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	58,829	lime alloys	0.001		0.100	lb/ton		0.100	2.94	0.6716	T-089-6577-00316, Appendix A

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
PARTICULATE MATTER
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	289	hours	22.00	lb/hr	N/A	22.00	3.18	0.7258	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	289	hours	11.22	lb/hr	N/A	11.22	1.62	0.3702	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.60	lb/ton	95.00%	0.03	11.59	2.6460	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.20	lb/ton	99.90%	0.0002	0.03	0.0068	T-089-6577-00316, Appendix A
	Stockhouse Coke Baghouse	296,686	coke	0.09	lb/ton	99.00%	0.0009	0.13	0.0305	T-089-6577-00316, Appendix A
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.10	lb/ton	99.50%	0.0005	0.32	0.0739	T-089-6577-00316, Appendix A
	Slag Pit Operations	81,527	slag	0.045	lb/ton	N/A	0.0450	1.83	0.4188	Clean water quench @ 250 mg/l TDS
	Slag Granulator Operations	146,341	slag	0.087	lb/ton	N/A	0.087	6.37	1.4534	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.56	lb/ton	99.90%	0.00056	0.10	0.0239	T-089-6577-00316, Appendix A
	Coal Storage Baghouse C	373,155	coal	0.78	lb/ton	99.90%	0.00078	0.15	0.0332	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse D	289	hours	0.99	lb/hr	N/A	0.99	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Pulverizer Baghouse E	289	hours	0.99	lb/hr	N/A	0.99	0.14	0.0327	T-089-6577-00316, Appendix A
	Coal Storage Baghouse F	373,155	coal	0.818	lb/ton	99.90%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Storage Baghouse G	373,155	coal	0.818	lb/ton	99.90%	0.000818	0.15	0.0348	T-089-6577-00316, Appendix A
	Coal Unloading	373,155	coal	0.010	lb/ton	85.00%	0.0015	0.28	0.0639	T-089-6577-00316, Appendix A
Lime Plant	Silo Baghouses	200.0	hours	5.53	lb/hr	N/A	5.5300	0.55	0.1263	T-089-6577-00316, Appendix A
	No. 1 Kiln Baghouse	200.0	hours	3.575	lb/hr	N/A	3.5745	0.36	0.0816	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	200.0	hours	3.575	lb/hr	N/A	3.5745	0.36	0.0816	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.70	lb/ton	99.00%	0.007	0.18	0.0402	T-089-6577-00316, Appendix A
	Truck Loadout Baghouse	50,335	lime	5.00	lb/ton	99.80%	0.01	0.25	0.0575	T-089-6577-00316, Appendix A
No. 2 BOF	10 Furnace Stack	0	molten steel	28.50	lb/ton	99.80%	0.057	0.00	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack	0	molten steel	28.50	lb/ton	99.80%	0.057	0.00	0.0000	T-089-6577-00316, Appendix A
	Caster Roof Monitor	0	slabs	0.0035	lb/ton	N/A	0.0035	0.00	0.0000	T-089-6577-00316, Appendix A
	Ladle Metallurgy Station	0	molten steel	0.6636	lb/ton	99.30%	0.0046	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	0	molten steel	3.32	lb/ton	99.20%	0.027	0.00	0.0000	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	1.28	lb/ton	98.00%	0.026	0.00	0.0000	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	0	flux	2.13	lb/ton	99.50%	0.01	0.00	0.0000	T-089-6577-00316, Appendix A
	Flux Storage and Batch Baghouse	0	flux	1.42	lb/ton	99.50%	0.007	0.00	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	0	molten steel	0.10	lb/ton	70.00%	0.03	0.00	0.0000	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	908,965	molten steel	28.50	lb/ton	99.40%	0.171	77.72	17.7435	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	363	hours	22.30	lb/hr	N/A	22.3000	4.04	0.9228	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	386,310	hot metal	1.28	lb/ton	99.60%	0.00512	0.99	0.2258	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	386,310	hot metal	1.28	lb/ton	99.60%	0.00512	0.99	0.2258	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.100	lb/ton	70.00%	0.030	13.63	3.1129	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	58,829	lime alloys	0.001	lb/ton		0.001	0.03	0.0067	T-089-6577-00316, Appendix A
	Torch Cut	908,965	molten steel	0.0035	lb/ton		0.0035	1.59	0.3632	T-089-6577-00316, Appendix A
	RHOB Condensers	908,965	molten steel	0.20	lb/ton	99.80%	0.0004	0.18	0.0415	T-089-6577-00316, Appendix A
	RHOB Material Handling	908,965	molten steel	0.20	lb/ton	99.00%	0.002	0.91	0.2075	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	58,829	lime alloys	0.001	lb/ton		0.001	0.03	0.0067	T-089-6577-00316, Appendix A

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
SULFUR DIOXIDE
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Annual Change in Emissions		Source of Emission Factor
						(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.1774	lb/ton	34.27	7.8232	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.1774	lb/ton	34.27	7.8232	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.01	lb/ton	3.86	0.8820	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Slag Pit Operations	81,527	slag	0.578	lb/ton	23.56	5.3793	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.100	lb/ton	7.32	1.6706	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 2 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	0	molten steel	0.070	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack	0	molten steel	0.070	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Caster Roof Monitor	0	slabs	0.000	lb/ton	0.00	0.0000	Not Applicable
	Ladle Metallurgy Station	0	molten steel	0.025	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	0	molten steel	0.014	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	0.0094	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	0	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	0	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Roof Monitor	0	molten steel	0.0004	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	908,965	molten steel	0.001	lb/ton	0.45	0.1038	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	908,965	molten steel	0.001	lb/ton	0.45	0.1038	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	386,310	hot metal	0.0094	lb/ton	1.82	0.4145	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	386,310	hot metal	0.0094	lb/ton	1.82	0.4145	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.00003	lb/ton	0.01	0.0031	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	58,829	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable
	Torch Cut	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Condensers	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Material Handling	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	Furnace Additive Hopper House	58,829	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
CARBON MONOXIDE
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.5600	lb/ton		0.5600	108.17	24.6956	July 25, 2007 Modification Request
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	2.2200	lb/ton		2.2200	428.80	97.9005	July 25, 2007 Modification Request
	Casthouse Fugitives	772,620	hot metal	0.012	lb/ton		0.012	4.64	1.0584	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.066	lb/ton		0.066	2.69	0.6142	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.066	lb/ton		0.066	4.83	1.1026	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr		0.000	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	2.000	lb/ton		2.000	50.34	11.4921	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	50,335	lime	2.000	lb/ton		2.000	50.34	11.4921	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	0	molten steel	139.00	lb/ton	90.25%	13.55	0.00	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack	0	molten steel	139.00	lb/ton	90.25%	13.55	0.00	0.0000	T-089-6577-00316, Appendix A
	Caster Roof Monitor	0	slabs	0.000	lb/ton		0.000	0.00	0.0000	Not Applicable
	Ladle Metallurgy Station	0	molten steel	0.042	lb/ton		0.042	0.00	0.0000	T-089-6577-00316, Appendix A
	Gas Cleaning System	0	molten steel	0.022	lb/ton		0.022	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	0	molten steel	0.139	lb/ton		0.139	0.00	0.0000	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Truck and Ladle Hopper Baghouse	0	flux	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	0	flux	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Roof Monitor	0	molten steel	0.0042	lb/ton		0.0042	0.00	0.0000	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	908,965	molten steel	139	lb/ton	94.22%	8.031	3,650.14	833.3650	T-089-6577-00316, Appendix A
	Gas Cleaning System	908,965	molten steel	0.0470	lb/ton		0.0470	21.36	4.8769	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	908,965	molten steel	0.139	lb/ton		0.139	63.17	14.4231	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	386,310	hot metal	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Reladling and Desulfurization Baghouse South	386,310	hot metal	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Roof Monitor	908,965	molten steel	0.0042	lb/ton		0.0042	1.90	0.4327	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	58,829	lime alloys	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	Torch Cut	908,965	molten steel	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	RHOB Condensers	908,965	molten steel	1.07	lb/ton	98.00%	0.0214	9.73	2.2205	T-089-6577-00316, Appendix A
	RHOB Material Handling	908,965	molten steel	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable
	RHOB Gas Cleaning System	908,965	molten steel	0.0925	lb/ton		0.0925	42.04	9.5981	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	58,829	lime alloys	0.00	lb/ton		0.00	0.00	0.0000	Not Applicable

ARCELOR MITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
NITROGEN OXIDES
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Annual Change in Emissions		Source of Emission Factor
						(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.0248	lb/ton	4.79	1.0937	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.0248	lb/ton	4.79	1.0937	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.0012	lb/ton	0.46	0.1058	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton	0.00	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.0248	lb/ton	1.01	0.2308	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.0100	lb/ton	0.73	0.1671	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 2 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	0	molten steel	0.08	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack	0	molten steel	0.08	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Caster Roof Monitor	0	slabs	0.0000	lb/ton	0.00	0.0000	Not Applicable
	Ladle Metallurgy Station	0	molten steel	0.003	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	0	molten steel	0.020	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	0.0024	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	0	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	0	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Roof Monitor	0	molten steel	0.0006	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	908,965	molten steel	0.080	lb/ton	36.36	8.3010	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	908,965	molten steel	0.020	lb/ton	9.09	2.0753	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	386,310	hot metal	0.0024	lb/ton	0.46	0.1058	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	386,310	hot metal	0.0024	lb/ton	0.46	0.1058	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.0006	lb/ton	0.27	0.0623	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	58,829	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable
	Torch Cut	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Condensers	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Material Handling	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	Furnace Additive Hopper House	58,829	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
VOC
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Annual Change in Emissions		Source of Emission Factor
						(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.00922	lb/ton	1.78	0.4064	T-089-6577-00316, Appendix A
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.00922	lb/ton	1.78	0.4064	T-089-6577-00316, Appendix A
	Casthouse Fugitives	772,620	hot metal	0.0009	lb/ton	0.35	0.0794	T-089-6577-00316, Appendix A
	Coke Transfer Station	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.000	lb/ton	0.00	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.000	lb/ton	0.00	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.00234	lb/ton	0.10	0.0218	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.00100	lb/ton	0.07	0.0167	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.000	lb/ton	0.00	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 1 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	No. 2 Kiln Baghouse	50,335	lime	0.000	lb/hr	0.00	0.0000	Not Applicable
	Micro-Pulse Baghouse (2)	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000	lb/ton	0.00	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	0	molten steel	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack	0	molten steel	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Caster Roof Monitor	0	slabs	0.002	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Ladle Metallurgy Station	0	molten steel	0.000	lb/ton	0.00	0.0000	Not Applicable
	Secondary, Ventilation System Scrubber	0	molten steel	0.005	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	0.001	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	0	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	0	flux	0.00	lb/ton	0.00	0.0000	Not Applicable
	Roof Monitor	0	molten steel	0.00015	lb/ton	0.00	0.0000	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	908,965	molten steel	0.001	lb/ton	0.45	0.1038	T-089-6577-00316, Appendix A
	Secondary Vent System Baghouse	908,965	molten steel	0.005	lb/ton	2.27	0.5188	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse North	386,310	hot metal	0.001	lb/ton	0.19	0.0441	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	386,310	hot metal	0.001	lb/ton	0.19	0.0441	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.00015	lb/ton	0.07	0.0156	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	58,829	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable
	Torch Cut	908,965	molten steel	0.002	lb/ton	0.91	0.2075	T-089-6577-00316, Appendix A
	RHOB Condensers	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	RHOB Material Handling	908,965	molten steel	0.00	lb/ton	0.00	0.0000	Not Applicable
	Furnace Additive Hopper House	58,829	lime alloys	0.00	lb/ton	0.00	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
LEAD
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	386,310	hot metal	0.000126	lb/ton	98.10%	0.000002	0.0005	0.0001	July 25, 2007 Modification Request
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	0.000126	lb/ton	99.00%	0.00000126	0.0002	0.0001	July 25, 2007 Modification Request
	Casthouse Fugitives	772,620	hot metal	0.0000216	lb/ton	95.00%	0.00000108	0.0004	0.0001	July 25, 2007 Modification Request
	Coke Transfer Station	296,686	coke	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Stockhouse Coke Baghouse	296,686	coke	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Stockhouse Pellet Baghouse	1,295,275	pellet	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Slag Pit Operations	81,527	slag	0.0000036	lb/ton		0.0000036	0.0001	0.0000	T-089-6577-00316, Appendix A
	Slag Granulator Operations	146,341	slag	0.000001	lb/ton		0.000001	0.0001	0.0000	T-089-6577-00316, Appendix A
PCI	Coal Transfer Baghouse A	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Storage Baghouse C	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Pulverizer Baghouse D	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Pulverizer Baghouse E	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Storage Baghouse F	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Storage Baghouse G	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Coal Unloading	373,155	coal	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
Lime Plant	Silo Baghouses	50,335	lime	0.000425	lb/ton	98.60%	0.00000595	0.0001	0.0000	T-089-6577-00316, Appendix A
	No. 1 Kiln Baghouse	50,335	lime	0.007571	lb/ton	99.20%	0.000060568	0.0015	0.0003	T-089-6577-00316, Appendix A
	No. 2 Kiln Baghouse	50,335	lime	0.007571	lb/ton	99.20%	0.000060568	0.0015	0.0003	T-089-6577-00316, Appendix A
	Micro-Pulse Baghouse (2)	50,335	lime	0.00	lb/ton	98.00%	0.000000	0.0000	0.0000	Not Applicable
	Truck Loadout Baghouse	50,335	lime	0.000425	lb/ton	99.80%	0.000001	0.0000	0.0000	Not Applicable
No. 2 BOF	10 Furnace Stack	0	molten steel	0.0275	lb/ton	99.60%	0.000110	0.0000	0.0000	July 25, 2007 Modification Request
	20 Furnace Stack	0	molten steel	0.0275	lb/ton	99.60%	0.000110	0.0000	0.0000	July 25, 2007 Modification Request
	Caster Roof Monitor	0	slabs	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Ladle Metallurgy Station	0	molten steel	0.0006636	lb/ton	99.40%	0.000004	0.0000	0.0000	T-089-6577-00316, Appendix A
	Secondary, Ventilation System Scrubber	0	molten steel	0.00065	lb/ton	80.00%	0.00013	0.0000	0.0000	July 25, 2007 Modification Request
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	0.0000627	lb/ton	97.00%	0.00000188	0.0000	0.0000	T-089-6577-00316, Appendix A
	Truck and Ladle Hopper Baghouse	0	flux	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Flux Storage and Batch Baghouse	0	flux	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Roof Monitor	0	molten steel	0.0000772	lb/ton	70.00%	0.000023	0.0000	0.0000	T-089-6577-00316, Appendix A
No. 4 BOF	Scrubber	908,965	molten steel	0.1530	lb/ton	98.70%	0.001989	0.9040	0.2064	July 25, 2007 Modification Request
	Secondary Vent System Baghouse	908,965	molten steel	0.002450	lb/ton	97.80%	0.000054	0.0245	0.0056	July 25, 2007 Modification Request
	Reladling and Desulfurization Baghouse North	386,310	hot metal	0.0000627	lb/ton	98.50%	0.00000094	0.0002	0.0000	T-089-6577-00316, Appendix A
	Reladling and Desulfurization Baghouse South	386,310	hot metal	0.0000627	lb/ton	98.50%	0.00000094	0.0002	0.0000	T-089-6577-00316, Appendix A
	Roof Monitor	908,965	molten steel	0.000127	lb/ton	70.00%	0.000038	0.0173	0.0040	T-089-6577-00316, Appendix A
	Furnace Additives Bin Loading	58,829	lime alloys	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	Torch Cut	908,965	molten steel	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable
	RHOB Condensers	908,965	molten steel	0.0000322	lb/ton		0.000032	0.0146	0.0033	Not Applicable
	RHOB Material Handling	908,965	molten steel	0.00003	lb/ton	98.00%	0.0000006	0.0003	0.0001	T-089-6577-00316, Appendix A
	Furnace Additive Hopper House	58,829	lime alloys	0.00	lb/ton		0.000000	0.0000	0.0000	Not Applicable

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
PM_{10}
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	7.60	lb/mmcf			1.836	0.4191	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	4.51	lb/mmcf			33.048	7.5452	T-089-6577-00316, Appendix A
						Total Stoves		34.883	7.9643	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	0.0	mmcf	1.90	lb/mmcf			0.000	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	0.0	mmcf	1.90	lb/mmcf			0.000	0.0000	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	7.60	lb/mmcf			0.060	0.0136	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	4.71	lb/mmcf			66.133	15.0989	T-089-6577-00316, Appendix A
						Total Boiler House		66.193	15.1125	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	0.0608	lb/mmcf		0.0608	0.004	0.0009	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	0.0608	lb/mmcf		0.0608	0.004	0.0009	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
PARTICULATE MATTER
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	1.90	lb/mmcf		1.90	0.459	0.1048	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	0.68	lb/mmcf		0.68	4.983	1.1376	T-089-6577-00316, Appendix A
						Total Stoves		5.442	1.242	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	0.0	mmcf	1.90	lb/mmcf		1.90	0.000	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	0.0	mmcf	1.90	lb/mmcf		1.90	0.000	0.0000	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	1.90	lb/mmcf		1.90	0.015	0.0034	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	0.68	lb/mmcf		0.68	9.548	2.1799	T-089-6577-00316, Appendix A
						Total Boiler House		9.563	2.183	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	1.90	lb/mmcf	99.90%	0.0019	0.000	0.0000	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	1.90	lb/mmcf	99.90%	0.0019	0.000	0.0000	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
SULFUR DIOXIDE
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	0.60	lb/mmcf		0.145	0.0331	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	14.70	lb/mmcf		107.717	24.5929	T-089-6577-00316, Appendix A
						Total Stoves	107.862	24.626	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	0.0	mmcf	0.60	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	0.0	mmcf	0.60	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	0.60	lb/mmcf		0.005	0.0011	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	14.70	lb/mmcf		206.403	47.1239	T-089-6577-00316, Appendix A
						Total Boiler House	206.407	47.125	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	0.60	lb/mmcf		0.037	0.0085	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	0.60	lb/mmcf		0.037	0.0085	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
CARBON MONOXIDE
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	84.00	lb/mmcf		20.288	4.6319	AP-42
	Stoves (BFG)	14,655.4	mmcf	579.50	lb/mmcf		4,246	969	2005 Stack Test
						Total Stoves	4,267	974	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	0.0	mmcf	84.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	0.0	mmcf	84.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	84.00	lb/mmcf		0.658	0.1502	AP-42
	Boiler House (BFG)	28,082.0	mmcf	13.70	lb/mmcf		192.362	43.9182	AIRS
						Total Boiler House	193.020	44.068	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	84.00	lb/mmcf		5.187	1.1842	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	84.00	lb/mmcf		5.187	1.1842	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
NITROGEN OXIDES
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	104.00	lb/mmcf		25.118	5.7347	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	23.00	lb/mmcf		168.537	38.4787	T-089-6577-00316, Appendix A
						Total Stoves	193.655	44.213	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	0.0	mmcf	100.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	0.0	mmcf	100.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	104.00	lb/mmcf		0.815	0.1860	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	23.00	lb/mmcf		322.943	73.7313	T-089-6577-00316, Appendix A
						Total Boiler House	323.758	73.917	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	104.00	lb/mmcf		6.422	1.4662	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	104.00	lb/mmcf		6.422	1.4662	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
VOC
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	5.50	lb/mmcf		1.328	0.3033	T-089-6577-00316, Appendix A
	Stoves (BFG)	14,655.4	mmcf	0.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
						Total Stoves	1.328	0.303	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	0.0	mmcf	5.50	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
	20 Furnace Stack Ignitor (NG)	0.0	mmcf	5.50	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	5.50	lb/mmcf		0.043	0.0098	T-089-6577-00316, Appendix A
	Boiler House (BFG)	28,082.0	mmcf	0.00	lb/mmcf		0.000	0.0000	T-089-6577-00316, Appendix A
						Total Boiler House	0.043	0.010	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	5.50	lb/mmcf		0.340	0.0775	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	5.50	lb/mmcf		0.340	0.0775	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES
LEAD
(All Additional Hot Metal Through No. 4 BOF)

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
Blast Furnace No. 7	Stoves (NG)	483.0	mmcf	0.00046	lb/mmcf		0.00011	0.00003	July 25, 2007 Modification Request
	Stoves (BFG)	14,655.4	mmcf	0.0000667	lb/mmcf		0.00049	0.00011	July 25, 2007 Modification Request
						Total Stoves	0.00060	0.00014	
No. 2 BOF	10 Furnace Stack Ignitor (NG)	0.0	mmcf	0.00046	lb/mmcf		0.00000	0.00000	AP-42
	20 Furnace Stack Ignitor (NG)	0.0	mmcf	0.00046	lb/mmcf		0.00000	0.00000	AIRS
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	0.00046	lb/mmcf		0.00000	0.00000	July 25, 2007 Modification Request
	Boiler House (BFG)	28,082.0	mmcf	0.0000667	lb/mmcf		0.00094	0.00021	July 25, 2007 Modification Request
						Total Boiler House	0.00094	0.00021	
Lime Plant	No. 1 Kiln (NG)	123.5	mmcf	0.00046	lb/mmcf		0.00003	0.00001	July 25, 2007 Modification Request
	No. 2 Kiln (NG)	123.5	mmcf	0.00046	lb/mmcf		0.00003	0.00001	July 25, 2007 Modification Request

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
CALCULATION OF ROAD PARTICULATE MATTER (TSP) EMISSIONS BY ROAD SEGMENT
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 4 BOF SHOP

PAVED ROADS

Road Segment ID	Material	Paved Road Segment Description	Silt (%)	Road Surface Silt Loading (g/m2)	Average Vehicle Weight (tons)	AP-42 TSP Emission Factor* (lb/VMT)	Additional Annual Traffic (VMT/yr)	Additional TSP Emissions (tons/yr)	Additional TSP Emissions (lbs/hr)
46P	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	1.3380	859	0.5749	0.1312
46P	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	1.3380	431	0.2884	0.0658
39P	No. 7 BF Slag	Rt. 76 Between Rt 56/71 and Rt. 74	7.4	0.24	22.5	0.4292	4,484	0.9623	0.2197
38P	No. 7 BF Slag	Rt. 56 bBetween Rt. 54 and Rt. 76	12.6	1.59	22.5	1.4490	2,405	1.7422	0.3978
7P	No. 7 BF Slag	Rt.71 S from Slag Quench Pits to Rt.71, Under Conveyor	3.4	25.76	20.0	7.4314	718	2.6692	0.6094
44P	No. 7 BF Slag	Rt. 71 Between New Coke Dump and West End of Rt. 75	15.4	1.98	20.0	1.4039	3,100	2.1763	0.4969
41P	No. 7 BF Slag	Rt.71 Between Rt.70 and New Coke Dump	14.3	0.12	20.0	0.2292	3,488	0.3998	0.0913
26P	No. 7 BF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.7931	3,034	1.2032	0.2747
24P	No. 7 BF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.4682	2,505	0.5863	0.1339
20P	No. 7 BF Slag	Rt.64 Between Propane Tank Farm Road and Rt.60	9.0	1.04	20.0	0.9213	7,864	3.6226	0.8271
19P	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.2292	6,097	0.6988	0.1595
99P	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Plant Gate	1.3	0.12	20.0	0.2292	2,363	0.2708	0.0618
34P	No. 4 BOF Scrap	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	1.0405	0	0.0000	0.0000
1P	No. 4 BOF Scrap	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	1.4595	0	0.0000	0.0000
10P	No. 4 BOF Scrap	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.4424	0	0.0000	0.0000
11P	No. 4 BOF Scrap	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	1.0733	0	0.0000	0.0000
30P	No. 4 BOF Scrap	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.6736	0	0.0000	0.0000
32P	No. 4 BOF Scrap	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.9734	0	0.0000	0.0000
64P	No. 4 BOF Scrap	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	1.7095	0	0.0000	0.0000
34P	No. 4 BOF Alloys	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	1.0405	0	0.0000	0.0000
1P	No. 4 BOF Alloys	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	1.4595	0	0.0000	0.0000
10P	No. 4 BOF Alloys	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.4424	0	0.0000	0.0000
11P	No. 4 BOF Alloys	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	1.0733	0	0.0000	0.0000
30P	No. 4 BOF Alloys	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.6736	0	0.0000	0.0000
32P	No. 4 BOF Alloys	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.9734	0	0.0000	0.0000
64P	No. 4 BOF Alloys	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	1.7095	0	0.0000	0.0000
26P	No. 4 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.7931	0	0.0000	0.0000
24P	No. 4 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.4682	0	0.0000	0.0000
20P	No. 4 BOF Slag	Rt.64 Between Propane Tank Farm Road and Rt.60	9.0	1.04	20.0	0.9213	0	0.0000	0.0000
19P	No. 4 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.2292	0	0.0000	0.0000
2P	No. 2 BOF Scrap	Rt.30	15.2	2.75	20.0	1.7346	2,000	1.7345	0.3960
8P	No. 2 BOF Scrap	Rt.21	17.1	0.85	20.0	0.8121	3,201	1.2997	0.2967
2P	No. 2 BOF Alloys	Rt.30	15.2	2.75	20.0	1.7346	567	0.4920	0.1123
8P	No. 2 BOF Alloys	Rt.21	17.1	0.85	20.0	0.8121	908	0.3687	0.0842
26P	No. 2 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.7931	2,054	0.8147	0.1860
24P	No. 2 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.4682	1,696	0.3970	0.0906
20P	No. 2 BOF Slag	Rt.64 Between Propane Tank Farm Road and Rt.60	9.0	1.04	20.0	0.9213	5,325	2.4529	0.5600
19P	No. 2 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.2292	4,128	0.4731	0.1080
33P	No. 2 BOF Lime	Rt. 56 Between Lime Plant North Entrance and Rt.41	20.6	4.64	30.0	4.4800	211	0.4732	0.1080
37P	No. 2 BOF Lime	Rt. 41 (Chisom Trail) Between Rt.56 and Rt. 43	12.8	0.12	30.0	0.4211	1,325	0.2789	0.0637
9P	No. 2 BOF Lime	Rt.43 Between Rt.40 and Rt.23 at Railroad Tracks	26.2	2.04	30.0	2.6305	299	0.3934	0.0898
8P	No. 2 BOF Lime	Rt.21	17.1	0.85	30.0	1.4919	748	0.5579	0.1274
							Paved Road Totals	24.9307	5.6919

*AP-42, 5th Edition, Equation (1), page 13.2.1-4 (October 2002)

TABLE 4-2B
ARCELOR MITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
ADDITION OF A FOURTH STOVE AT NO. 7 BLAST FURNACE
CONTEMPORANEOUS EMISSIONS CHANGES
ALL INCREASED HOT METAL USED AT NO. 4 BOF

Increases Attendant to Project	Criteria Air Pollutants Emission Rates (tons/yr)						
Facility	**PM**	**PM_{10}**	**SO_2**	**CO**	**NOx**	**VOC**	**Pb**
Blast Furnace No. 7	28.6841	56.9574	187.5734	4813.1185	204.4306	5.3091	0.0018
PCI	1.1212	1.1212	0.0000	0.0000	0.0000	0.0000	0.0000
Lime Plant	1.6960	1.5724	0.0741	111.0448	12.8440	0.6793	0.0033
No. 2 BOF	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
No. 4 BOF	100.1110	96.6143	4.5539	3767.6542	46.6481	4.0903	0.9610
No. 5 Boiler House	9.5628	66.1926	206.4074	193.0196	323.7575	0.0431	0.0009
Fugitive Emissions	25.3648	5.2986					
Shutdown of No. 2A Blooming Mill/21-Inch Bar Mill	(5.0224)	(4.9861)	(0.3698)	(52.0170)	(116.3382)	(34.4444)	(0.0533)
Project Emissions	**161.52**	**222.77**	**398.24**	**8832.82**	**471.34**	**(24.32)**	**0.91**

Contemporaneous and Creditable Changes			Criteria Air Pollutants Emission Rates (tons/yr)						
Facility	**Shutdown/ Modification Year**	**Startup Year**	**PM**	**PM10**	**SO2**	**CO**	**NOx**	**VOC**	**Pb**
No. 4 AC Station	1999		(605.80)	(605.80)	(1,355.50)	(202.50)	(3,284.00)	(20.20)	(0.36)
80-Inch No. 4 WBF Project	2001		(0.14)	(0.14)	(0.01)	1.08	(51.74)	(0.10)	
EAF Vacuum Degasser		2001	1.40	1.40	0.10	25.10	18.20	1.00	
No. 6 CGL		2001	6.10	6.10	0.50	5.43			
Slag Pits (curtailment)	2002		(402.98)	(197.00)	(287.04)	(42.71)	(12.32)	(1.16)	
Slag Granulation		2002	322.44	155.23	50.66	32.93	5.07	0.51	
Slag Pits (continued operation)*		2002	14.91	10.27	191.48	21.86	8.22	0.78	1.19E-03
EAF DRI		2002	8.68	5.84					
Contemporaneous and Creditable Emissions Changes			**(655.39)**	**(624.10)**	**(1,399.81)**	**(158.81)**	**(3,316.57)**	**(19.17)**	**(0.36)**
Net Emissions Changes			**(493.88)**	**(401.33)**	**(1,001.57)**	**8,674.01**	**(2,845.23)**	**(43.50)**	**0.55**

Project	Description
No. 4 AC Station	Shutdown in April 1999
80-Inch No. 4 WBF Project	Shutdown of two pusher furnaces and installation of No. 4 Walking Beam Furnace.
EAF Vacuum Degasser	Construction permit issued in March 1999.
No. 6 Continuous Coating Line	Construction permit issued in May 1999.
Slag Granulation/Pelletization	Installation reduced emissions by cooling and processing slag currently handled in the slag pits.
EAF Direct Reduced Iron System	Installation of system to handle Direct Reduced Iron at No. 1 EAF.

* The PTE for Slag Pits (continued operation) in 2002 has been adjusted based on the new slag throughput rate limit of 662,550 tons/yr.

Proposed Slag Pits Throughput (tons/yr)	**662,550**		**PM**	**PM10**	**SO2**	**CO**	**NOx**	**VOC**	**Pb**
Emission Factor (lbs/ton)			0.045	0.031	0.578	0.066	0.0248	0.0023	3.60E-06
PTE of Slag Pits (tons/yr)			14.91	10.27	191.48	21.86	8.22	0.78	1.19E-03

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
NET EMISSIONS CHANGES COMPARED TO NET SIGNIFICANT EMISSIONS at NO. 4 BOF

	Criteria Air Pollutants Emission Rates (tons/yr)						
	PM	**PM_{10}**	**SO_2**	**CO**	**NOx**	**VOC**	**Pb**
Net Emissions	161.52	222.77	398.24	8,832.82	471.34	(24.32)	0.91
Net Contemporaneous Emissions	(655.39)	(624.10)	(1,399.81)	(158.81)	(3,316.57)	(19.17)	(0.36)
Net Project Emissions Change	(493.88)	(401.33)	(1,001.57)	8,674.01	(2,845.23)	(43.50)	0.55
Net Significant Threshold	25	15	40	100	40	25	0.6

SSM #089-21207-00316 and SPM #089-22044-00316
SUMMARY OF FUGITIVE DUST EMISSIONS
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 4 BOF SHOP

PAVED ROADS

Road Segment ID	Area Source ID	Material	Silt (%)	Road Surface Silt Loading (g/m^2)	Average Vehicle Weight (tons)	AP-42 PM_{10} Emission Factor* (lb/VMT)	Additional Annual Traffic (VMT/yr)	Additional PM_{10} Emissions (tons/yr)	Additional PM_{10} Emissions (lbs/hr)
46P	63	No. 7 BF Slag	16.3	1.40	22.5	0.2611	859	0.1122	0.0256
46P	63	No. 7 BF Slag	16.3	1.40	22.5	0.2611	431	0.0563	0.0128
39P	56	No. 7 BF Slag	7.4	0.24	22.5	0.0838	4,484	0.1878	0.0429
38P	40	No. 7 BF Slag	12.6	1.59	22.5	0.2827	2,405	0.3399	0.0776
7P	68	No. 7 BF Slag	3.4	25.76	20.0	1.4500	718	0.5208	0.1189
44P	69	No. 7 BF Slag	15.4	1.98	20.0	0.2739	3,100	0.4246	0.0969
41P	65	No. 7 BF Slag	14.3	0.12	20.0	0.0447	3,488	0.0780	0.0178
26P	39	No. 7 BF Slag	34.9	0.82	20.0	0.1548	3,034	0.2348	0.0536
24P	39	No. 7 BF Slag	13.8	0.37	20.0	0.0914	2,505	0.1144	0.0261
20P	39	No. 7 BF Slag	9.0	1.04	20.0	0.1798	7,864	0.7069	0.1614
19P	27	No. 7 BF Slag	1.3	0.12	20.0	0.0447	6,097	0.1363	0.0311
99P	8	No. 7 BF Slag	1.3	0.12	20.0	0.0447	2,363	0.0528	0.0121
34P	8	No. 4 BOF Scrap	18.4	1.25	20.0	0.2030	0	0.0000	0.0000
1P	12	No. 4 BOF Scrap	20.4	2.11	20.0	0.2848	0	0.0000	0.0000
10P	12	No. 4 BOF Scrap	13.7	0.34	20.0	0.0863	0	0.0000	0.0000
11P	24	No. 4 BOF Scrap	28.0	1.31	20.0	0.2094	0	0.0000	0.0000
30P	31	No. 4 BOF Scrap	10.7	0.64	20.0	0.1314	0	0.0000	0.0000
32P	31	No. 4 BOF Scrap	12.6	1.13	20.0	0.1899	0	0.0000	0.0000
64P	44	No. 4 BOF Scrap	13.3	2.69	20.0	0.3336	0	0.0000	0.0000
34P	8	No. 4 BOF Alloys	18.4	1.25	20.0	0.2030	0	0.0000	0.0000
1P	12	No. 4 BOF Alloys	20.4	2.11	20.0	0.2848	0	0.0000	0.0000
10P	12	No. 4 BOF Alloys	13.7	0.34	20.0	0.0863	0	0.0000	0.0000
11P	24	No. 4 BOF Alloys	28.0	1.31	20.0	0.2094	0	0.0000	0.0000
30P	31	No. 4 BOF Alloys	10.7	0.64	20.0	0.1314	0	0.0000	0.0000
32P	31	No. 4 BOF Alloys	12.6	1.13	20.0	0.1899	0	0.0000	0.0000
64P	44	No. 4 BOF Alloys	13.3	2.69	20.0	0.3336	0	0.0000	0.0000
26P	39	No. 4 BOF Slag	34.9	0.82	20.0	0.1548	0	0.0000	0.0000
24P	39	No. 4 BOF Slag	13.8	0.37	20.0	0.0914	0	0.0000	0.0000
20P	39	No. 4 BOF Slag	9.0	1.04	20.0	0.1798	0	0.0000	0.0000
19P	27	No. 4 BOF Slag	1.3	0.12	20.0	0.0447	0	0.0000	0.0000
2P	7	No. 2 BOF Scrap	15.2	2.75	20.0	0.3385	2,000	0.3384	0.0773
8P	11	No. 2 BOF Scrap	17.1	0.85	20.0	0.1585	3,201	0.2536	0.0579
2P	7	No. 2 BOF Alloys	15.2	2.75	20.0	0.3385	567	0.0960	0.0219
8P	11	No. 2 BOF Alloys	17.1	0.85	20.0	0.1585	908	0.0719	0.0164
26P	39	No. 2 BOF Slag	34.9	0.82	20.0	0.1548	2,054	0.1590	0.0363
24P	39	No. 2 BOF Slag	13.8	0.37	20.0	0.0914	1,696	0.0775	0.0177
20P	39	No. 2 BOF Slag	9.0	1.04	20.0	0.1798	5,325	0.4786	0.1093
19P	27	No. 2 BOF Slag	1.3	0.12	20.0	0.0447	4,128	0.0923	0.0211
33P	37	No. 2 BOF Lime	20.6	4.64	30.0	0.8742	211	0.0923	0.0211
37P	30,24	No. 2 BOF Lime	12.8	0.12	30.0	0.0822	1,325	0.0544	0.0124
9P	22	No. 2 BOF Lime	26.2	2.04	30.0	0.5133	299	0.0768	0.0175
8P	11	No. 2 BOF Lime	17.1	0.85	30.0	0.2911	748	0.1089	0.0249
							Paved Road Totals	4.8645	1.1106

MATERIAL HANDLING

Material Handling ID	Area Source ID	Material		Additional PM_{10} Emissions (tons/yr)	Additional PM_{10} Emissions (lbs/hr)
1M	30	Self-fluxing Pellets		0.0720	0.0164
2M		Limestone			
3M	37	Limestone		0.0182	0.0042
4M	38	Steelmaking Slag		0.1761	0.0402
5M	64	No. 7 BF Slag		0.1117	0.0255
6M	67	No. 7 BF Slag		0.0561	0.0128
Additional Material Handling Emissions				0.4340	0.0991

	(tons/yr)	(lbs/hr)
Total Paved Roads and Material Handling Emissions	5.2986	1.2097

SSM #089-21207-00316 and SPM #089-22044-00316
CALCULATION OF ADDITIONAL VEHICLE MILES TRAVELED FOR TRUCK TRANSPORTATION OF MATERIALS
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 4 BOF

Road Segment ID	Material	Additional Material Required (tons/yr)	Percent Hauled by Truck	Additional Material Hauled by Truck (tons/yr)	Net Weight (tons/vehicle)	Empty Vehicle Weight [Tare Weight] (tons/vehicle)	Average Vehicle Weight* (tons/vehicle)	No. of Additional Trucks per Year	Road Length (mi)	Increase in VMT** per Year	Remarks
46P	No. 7 BF Slag	189,040	100%	189,040	25	10	22.5	7,562	0.057	859	From Slag Granulator / Slag Pit to Storage
46P	No. 7 BF Slag	94,520	100%	94,520	25	10	22.5	3,781	0.057	431	Trucked to Dock 6 for water transportation
39P	No. 7 BF Slag	94,520	100%	94,520	25	10	22.5	3,781	0.593	4,484	
38P	No. 7 BF Slag	94,520	100%	94,520	25	10	22.5	3,781	0.318	2,405	
7P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.076	718	Sent offsite by truck only
44P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.328	3,100	
41P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.369	3,488	
26P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.321	3,034	
24P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.265	2,505	
20P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.832	7,864	
19P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.645	6,097	
99P	No. 7 BF Slag	94,520	100%	94,520	20	10	20	4,726	0.250	2,363	
34P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.239	0	Remainder of scrap transported by train
1P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.206	0	
10P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.205	0	
11P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.466	0	
30P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.361	0	
32P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.318	0	
64P	No. 4 BOF Scrap	0	30%	0	20	10	20	0	0.240	0	
34P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.239	0	
1P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.206	0	
10P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.205	0	
11P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.466	0	
30P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.361	0	
32P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.318	0	
64P	No. 4 BOF Alloys	0	100%	0	20	10	20	0	0.240	0	
26P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.321	0	Shipped offsite by truck from slag processing area adjacent to No. 4 BOF Shop.
24P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.265	0	
20P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.832	0	
19P	No. 4 BOF Slag	0	100%	0	20	10	20	0	0.645	0	
2P	No. 2 BOF Scrap	120,000	55%	66,000	20	10	20	3,300	0.303	2,000	Remainder of scrap transported by train
8P	No. 2 BOF Scrap	120,000	55%	66,000	20	10	20	3,300	0.485	3,201	
2P	No. 2 BOF Alloys	18,720	100%	18,720	20	10	20	936	0.303	567	
8P	No. 2 BOF Alloys	18,720	100%	18,720	20	10	20	936	0.485	908	
26P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.321	2,054	Transported by rail from No. 2 BOF to slag processing area. Shipped offsite by truck from slag processing area adjacent to No. 4 BOF Shop.
24P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.265	1,696	
20P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.832	5,325	
19P	No. 2 BOF Slag	64,000	100%	64,000	20	10	20	3,200	0.645	4,128	
33P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.137	211	Transported by truck from Lime Plant. BOF No. 4 receives lime directly from Lime Plant by conveyor.
37P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.859	1,325	
9P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.194	299	
8P	No. 2 BOF Lime	30,840	100%	30,840	40	10	30	771	0.485	748	

Percent of Blast Furnace No. 7 slag sent by truck to Dock No. 6 for offsite water transportation: 50%
Percent of Blast Furnace No. 7 slag sent to offsite sales by truck: 50%

*Average Vehicle Weight = [(Net Weight+Tare Weight)+Tare Weight]/2
**Vehicle Miles Traveled. Assumes each truck makes one pass empty and one pass loaded.

SSM #089-21207-00316 and SPM #089-22044-00316
CALCULATION OF ROAD FUGITIVE DUST EMISSIONS BY ROAD SEGMENT
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 4 BOF SHOP

PAVED ROADS

Road Segment ID	Area Source ID	Material	Paved Road Segment Description	Silt (%)	Road Surface Silt Loading (g/m^2)	Average Vehicle Weight (tons)	AP-42 PM_{10} Emission Factor* (lb/VMT)	Additional Annual Traffic (VMT/yr)	Additional PM_{10} Emissions (tons/yr)
46P	63	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	0.2611	859	0.1122
46P	63	No. 7 BF Slag	Rt. 71 Between Rt. 75 and Rt. 76 by 7BF Stockhouse Control Center	16.3	1.40	22.5	0.2611	431	0.0563
39P	56	No. 7 BF Slag	Rt. 76 Between Rt 56/71 and Rt. 74	7.4	0.24	22.5	0.0838	4,484	0.1878
38P	40	No. 7 BF Slag	Rt. 56 Between Rt. 54 and Rt. 76	12.6	1.59	22.5	0.2827	2,405	0.3399
7P	68	No. 7 BF Slag	Rt.71 S from Slag Quench Pits to Rt.71, Under Conveyor	3.4	25.76	20.0	1.4500	718	0.5208
44P	69	No. 7 BF Slag	Rt. 71 Between New Coke Dump and West End of Rt. 75	15.4	1.98	20.0	0.2739	3,100	0.4246
41P	65	No. 7 BF Slag	Rt.71 Between Rt.70 and New Coke Dump	14.3	0.12	20.0	0.0447	3,488	0.0780
26P	39	No. 7 BF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.1548	3,034	0.2348
24P	39	No. 7 BF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.0914	2,505	0.1144
20P	39	No. 7 BF Slag	Rt.64 Between Propane Tank Farm Rd and Rt.60	9.0	1.04	20.0	0.1798	7,864	0.7069
19P	27	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Road	1.3	0.12	20.0	0.0447	6,097	0.1363
99P	8	No. 7 BF Slag	Rt.64 Between Lot 40 Gate and Plant Gate	1.3	0.12	20.0	0.0447	2,363	0.0528
34P	8	No. 4 BOF Scrap	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	0.2030	0	0.0000
1P	12	No. 4 BOF Scrap	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	0.2848	0	0.0000
10P	12	No. 4 BOF Scrap	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.0863	0	0.0000
11P	24	No. 4 BOF Scrap	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	0.2094	0	0.0000
30P	31	No. 4 BOF Scrap	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.1314	0	0.0000
32P	31	No. 4 BOF Scrap	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.1899	0	0.0000
64P	44	No. 4 BOF Scrap	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	0.3336	0	0.0000
34P	8	No. 4 BOF Alloys	Rt.40 Northbound and Southbound Lanes Between South Gate and Truck Middle Gate	18.4	1.25	20.0	0.2030	0	0.0000
1P	12	No. 4 BOF Alloys	Rt.40 Southbound Lanes Between Rt.60 and Truck Middle Gate	20.4	2.11	20.0	0.2848	0	0.0000
10P	12	No. 4 BOF Alloys	Rt.40 Between Rt.60 and Rt.43	13.7	0.34	20.0	0.0863	0	0.0000
11P	24	No. 4 BOF Alloys	Rt.40 Between Rt.43 and Rt.50	28.0	1.31	20.0	0.2094	0	0.0000
30P	31	No. 4 BOF Alloys	Rt.50 and Between Rt.40 and Cleaning Services	10.7	0.64	20.0	0.1314	0	0.0000
32P	31	No. 4 BOF Alloys	Rt.56 Between Rt.50/52 and Lime Plant North Entrance	12.6	1.13	20.0	0.1899	0	0.0000
64P	44	No. 4 BOF Alloys	Rt.63 Between Rt.46 and Rt.56	13.3	2.69	20.0	0.3336	0	0.0000
26P	39	No. 4 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.1548	0	0.0000
24P	39	No. 4 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.0914	0	0.0000
20P	39	No. 4 BOF Slag	Rt.64 Propane Tank Farm Rd to Rt.60	9.0	1.04	20.0	0.1798	0	0.0000
19P	27	No. 4 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Rd	1.3	0.12	20.0	0.0447	0	0.0000
2P	7	No. 2 BOF Scrap	Rt.30	15.2	2.75	20.0	0.3385	2,000	0.3384
8P	11	No. 2 BOF Scrap	Rt.21	17.1	0.85	20.0	0.1585	3,201	0.2536
2P	7	No. 2 BOF Alloys	Rt.30	15.2	2.75	20.0	0.3385	567	0.0960
8P	11	No. 2 BOF Alloys	Rt.21	17.1	0.85	20.0	0.1585	908	0.0719
26P	39	No. 2 BOF Slag	Rt.70 Between Rt.63 and Rt.71	34.9	0.82	20.0	0.1548	2,054	0.1590
24P	39	No. 2 BOF Slag	Rt.63 Between Rt.40 and Rt.60	13.8	0.37	20.0	0.0914	1,696	0.0775
20P	39	No. 2 BOF Slag	Rt.64 Between Propane Tank Farm Rd and Rt.60	9.0	1.04	20.0	0.1798	5,325	0.4786
19P	27	No. 2 BOF Slag	Rt.64 Between Lot 40 Gate and Propane Tank Farm Rd	1.3	0.12	20.0	0.0447	4,128	0.0923
33P	37	No. 2 BOF Lime	Rt. 56 Lime Plant North Entrance to Rt.41	20.6	4.64	30.0	0.8742	211	0.0923
37P	30,24	No. 2 BOF Lime	Rt. 41 (Chisom Trail) Between Rt.56 and Rt. 43	12.8	0.12	30.0	0.0822	1,325	0.0544
9P	22	No. 2 BOF Lime	Rt.43 Between Rt.40 and Rt.23 at Railroad Tracks	26.2	2.04	30.0	0.5133	299	0.0768
8P	11	No. 2 BOF Lime	Rt.21	17.1	0.85	30.0	0.2911	748	0.1089
								Paved Road Totals	4.8645

*AP-42, 5th Edition, Equation (1), page 13.2.1-4 (October 2002)

SSM #089-21207-00316 and SPM #089-22044-00316
CALCULATION OF ROAD FUGITIVE DUST EMISSIONS BY AREA SOURCE
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 4 BOF SHOP

Road Segment ID	Area Source ID	Material	PM_{10} Emissions (tons/yr)	PM_{10} Emissions (lbs/hr)	Length of Area Source Side (m)	Length of Area Source Side (ft)	Area of Area Source (ft^2)	Emission Rate ($lb/hr/ft^2$)
2P	7	No. 2 BOF Scrap	0.3384	0.0773	500	1,640.4	2,690,912	3.6858E-08
2P	7	No. 2 BOF Alloys	0.0960	0.0219				
34P	8	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	4.4839E-09
39P	8	No. 4 BOF Alloys	0.0000	0.0000				
99P	8	No. 7 BF Slag	0.0528	0.0121				
8P	11	No. 2 BOF Lime	0.1089	0.0249	500	1,640.4	2,690,912	3.6856E-08
8P	11	No. 2 BOF Scrap	0.2536	0.0579				
8P	11	No. 2 BOF Alloys	0.0719	0.0164				
10P	12	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
1P	12	No. 4 BOF Scrap	0.0000	0.0000				
10P	12	No. 4 BOF Alloys	0.0000	0.0000				
1P	12	No. 4 BOF Alloys	0.0000	0.0000				
9P	22	No. 2 BOF Lime	0.0768	0.0175	250	820.2	672,728	2.6054E-08
11P	24	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
11P	24	No. 4 BOF Alloys	0.0000	0.0000				
19P	27	No. 2 BOF Slag	0.0923	0.0211	500	1,640.4	2,690,912	1.9401E-08
19P	27	No. 4 BOF Slag	0.0000	0.0000				
19P	27	No. 7 BF Slag	0.1363	0.0311				
37P	30	No. 2 BOF Lime	0.0544	0.0124	500	1,640.4	2,690,912	4.6175E-09
30P	31	No. 4 BOF Scrap	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
32P	31	No. 4 BOF Scrap	0.0000	0.0000				
30P	31	No. 4 BOF Alloys	0.0000	0.0000				
32P	31	No. 4 BOF Alloys	0.0000	0.0000				
33P	37	No. 2 BOF Lime	0.0923	0.0211	250	820.2	672,728	3.1336E-08
20P	39	No. 2 BOF Slag	0.4786	0.1093	750	2,460.6	6,054,552	6.6786E-08
20P	39	No. 4 BOF Slag	0.0000	0.0000				
20P	39	No. 7 BF Slag	0.7069	0.1614				
24P	39	No. 2 BOF Slag	0.0775	0.0177				
24P	39	No. 4 BOF Slag	0.0000	0.0000				
24P	39	No. 7 BF Slag	0.1144	0.0261				
26P	39	No. 2 BOF Slag	0.1590	0.0363				
26P	39	No. 4 BOF Slag	0.0000	0.0000				
26P	39	No. 7 BF Slag	0.2348	0.0536				
38P	40	No. 7 BF Slag	0.3399	0.0776	500	1,640.4	2,690,912	2.8842E-08
64P	44	No. 4 BOF Scrap	0.0000	0.0000	250	820.2	672,728	0.0000E+00
64P	44	No. 4 BOF Alloys	0.0000	0.0000				
39P	56	No. 7 BF Slag	0.1878	0.0429	500	1,640.4	2,690,912	1.5931E-08
46P	63	No. 7 BF Slag	0.1122	0.0256	250	820.2	672,728	5.7163E-08
46P	63	No. 7 BF Slag	0.0563	0.0128				
41P	65	No. 7 BF Slag	0.0780	0.0178	250	820.2	672,728	2.6473E-08
7P	68	No. 7 BF Slag	0.5208	0.1189	250	820.2	672,728	1.7675E-07
44P	69	No. 7 BF Slag	0.4246	0.0969	250	820.2	672,728	1.4411E-07

SSM #089-21207-00316 and SPM #089-22044-00316
SUMMARY OF MATERIAL HANDLING EMISSIONS BY AREA SOURCE
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 4 BOF SHOP

Material Handling ID	Area Source ID	Material	Additional PM_{10} Emissions (tons/yr)	Additional PM_{10} Emissions (lbs/hr)	Length of Area Source Side (m)	Length of Area Source Side (ft)	Area of Area Source (ft^2)	Emission Rate ($lb/hr/ft^2$)
1M	30	Self-fluxing Pellets	0.0538	0.0123	500	1,640.4	2,690,912	6.1110E-09
2M		Limestone	0.0182	0.0042				
3M	37	Limestone	0.0182	0.0042	250	820.2	672,728	6.1689E-09
4M	38	Steelmaking Slag	0.1761	0.0402	500	1,640.4	2,690,912	1.4939E-08
5M	64	No. 7 BF Slag	0.1117	0.0255	250	820.2	672,728	3.7905E-08
6M	67	No. 7 BF Slag	0.0561	0.0128	250	820.2	672,728	1.9027E-08
Additional Material Handling Emissions			0.4340	0.0991				

SSM #089-21207-00316 and SPM #089-22044-00316
CALCULATION OF FUGITIVE DUST EMISSIONS BY AREA SOURCES
ALL ADDITIONAL HOT METAL PROCESSED THROUGH NO. 4 BOF SHOP

Area Source ID	Road PM_{10} Emissions (lbs/hr)	Material Handling PM_{10} Emissions (lbs/hr)	Total PM_{10} Emissions (lbs/hr)	Length of Area Source Side (m)	Length of Area Source Side (ft)	Area of Area Source (ft^2)	Emission Rate ($lb/hr/ft^2$)
7	0.0992	0.0000	0.0992	500	1,640.4	2,690,912	3.6858E-08
8	0.0121	0.0000	0.0121	500	1,640.4	2,690,912	4.4839E-09
11	0.0992	0.0000	0.0992	500	1,640.4	2,690,912	3.6856E-08
12	0.0000	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
22	0.0175	0.0000	0.0175	250	820.2	672,728	2.6054E-08
24	0.0000	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
27	0.0522	0.0000	0.0522	500	1,640.4	2,690,912	1.9401E-08
30	0.0124	0.0164	0.0289	500	1,640.4	2,690,912	1.0728E-08
31	0.0000	0.0000	0.0000	500	1,640.4	2,690,912	0.0000E+00
37	0.0211	0.0042	0.0252	250	820.2	672,728	3.7505E-08
38	0.0000	0.0402	0.0402	500	1,640.4	2,690,912	1.4939E-08
39	0.4044	0.0000	0.4044	750	2,460.6	6,054,552	6.6786E-08
40	0.0776	0.0000	0.0776	500	1,640.4	2,690,912	2.8842E-08
44	0.0000	0.0000	0.0000	250	820.2	672,728	0.0000E+00
56	0.0429	0.0000	0.0429	500	1,640.4	2,690,912	1.5931E-08
63	0.0385	0.0000	0.0385	250	820.2	672,728	5.7163E-08
64	0.0000	0.0255	0.0255	250	820.2	672,728	3.7905E-08
65	0.0178	0.0000	0.0178	250	820.2	672,728	2.6473E-08
67	0.0000	0.0128	0.0128	250	820.2	672,728	1.9027E-08
68	0.1189	0.0000	0.1189	250	820.2	672,728	1.7675E-07
69	0.0969	0.0000	0.0969	250	820.2	672,728	1.4411E-07

Arcelor Mittal Indiana Harbor East
SSM #089-21207-00316 and SPM #089-22044-00316
Blast Furnace No. 7 Stove Addition
Emission Increase
No. 7 Blast Furnace at 772,620 Tons Hot Metal Per Year

Emission Unit	Emission Location	Changes in Annual Emission Rates of Criteria Air Pollutants (tons/yr)						
		PM	PM10	SO2	CO	NOx	VOC	Pb
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	3.1790	4.3495	34.2657	108.1668	4.7902	1.7799	0.0005
	Casthouse Baghouse No. 2 (west)	1.6213	2.7889	34.2657	428.8041	4.7902	1.7799	0.0002
	Casthouse Fugitives	11.5893	8.1125	3.8631	4.6357	0.4636	0.3477	0.0004
	Coke Transfer Station	0.0297	0.0148	0.0000	0.0000	0.0000	0.0000	0.0000
	Stockhouse Coke Baghouse	0.1335	0.1187	0.0000	0.0000	0.0000	0.0000	0.0000
	Stockhouse Pellet Baghouse	0.3238	0.3238	0.0000	0.0000	0.0000	0.0000	0.0000
	Slag Pit Operations	6.3658	6.3658	7.3170	4.8292	0.7317	0.0732	0.0001
	Stoves (NG)	0.4589	1.8356	0.1449	20.2877	25.1181	1.3284	0.0001
	Stoves (BFG)	4.9828	33.0479	107.7170	4246.3950	168.5368	0.0000	0.0005
	Blast Furnace No. 7 Total	**28.6841**	**56.9574**	**187.5734**	**4813.1185**	**204.4306**	**5.3091**	**0.0018**
PCI	Coal Transfer Baghouse A	0.1045	0.1045	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Storage Baghouse C	0.1455	0.1455	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Pulverizer Baghouse D	0.1431	0.1431	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Pulverizer Baghouse E	0.1431	0.1431	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Storage Baghouse F	0.1526	0.1526	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Storage Baghouse G	0.1526	0.1526	0.0000	0.0000	0.0000	0.0000	0.0000
	Coal Unloading	0.2799	0.2799	0.0000	0.0000	0.0000	0.0000	0.0000
	PCI Total	**1.1212**	**1.1212**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
Lime Plant	Silo Baghouses	0.5530	0.5530	0.0000	0.0000	0.0000	0.0000	0.0001
	No. 1 Kiln Baghouse	0.3575	0.3575	0.0000	50.3354	0.0000	0.0000	0.0015
	No. 2 Kiln Baghouse	0.3575	0.3575	0.0000	50.3354	0.0000	0.0000	0.0015
	Micro-Pulse Baghouse (2)	0.1762	0.1762	0.0000	0.0000	0.0000	0.0000	0.0000
	Truck Loadout Baghouse	0.2517	0.1208	0.0000	0.0000	0.0000	0.0000	0.0000
	No. 1 Kiln (NG)	0.0001	0.0038	0.0371	5.1870	6.422	0.3396	0.0000
	No. 2 Kiln (NG)	0.0001	0.0038	0.0371	5.1870	6.422	0.3396	0.0000
	Lime Plant Total	**1.6960**	**1.5724**	**0.0741**	**111.0448**	**12.8440**	**0.6793**	**0.0033**
No. 2 BOF	10 Furnace Stack	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	20 Furnace Stack	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	10 Furnace Stack (NG)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	20 Furnace Stack (NG)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Caster Roof Monitor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Ladle Metallurgy Station	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Gas Cleaning System	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Secondary, Ventilation System Scrubber	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Charging Aisle and Reladling Desulfurization Baghouse	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Truck and Ladle Hopper Baghouse	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Flux Storage and Batch Baghouse	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Roof Monitor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	No. 2 BOF Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
No. 4 BOF	Scrubber	77.7165	72.4395	0.4545	3650.1387	36.3586	0.4545	0.9040
	Gas Cleaning System	0.0000	0.0000	0.0000	21.3607	0.0000	0.0000	0.0000
	Secondary Vent System Baghouse	4.0419	4.3029	0.4545	63.1730	9.0896	2.2724	0.0245
	Reladling and Desulfurization Baghouse North	0.9890	3.3319	1.8157	0.0000	0.4636	0.1932	0.0002
	Reladling and Desulfurization Baghouse South	0.9890	3.3319	1.8157	0.0000	0.4636	0.1932	0.0002
	Roof Monitor	13.6345	8.3170	0.0136	1.8952	0.2727	0.0682	0.0173
	Furnace Additives Bin Loading	0.0294	0.0294	0.0000	0.0000	0.0000	0.0000	0.0000
	Torch Cut	1.5907	0.9203	0.0000	0.0000	0.0000	0.9090	0.0000
	RHOB Condensers	0.1818	0.0909	0.0000	9.7259	0.0000	0.0000	0.0146
	RHOB Material Handling	0.9090	0.9090	0.0000	0.0000	0.0000	0.0000	0.0003
	RHOB Gas Cleaning System	0.0000	0.0000	0.0000	21.3607	0.0000	0.0000	0.0000
	Furnace Additive Hopper House	0.0294	2.9415	0.0000	0.0000	0.0000	0.0000	0.0000
	No. 4 BOF Total	**100.1110**	**96.6143**	**4.5539**	**3767.6542**	**46.6481**	**4.0903**	**0.9610**
No. 5 Boiler House	Boiler House (NG)	0.0149	0.0595	0.0047	0.6579	0.8145	0.0431	0.0000
	Boiler House (BFG)	9.5479	66.1331	206.4027	192.3617	322.9430	0.0000	0.0009
	Boiler House (Mixed Gas)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	No. 5 Boiler House Total	**9.5628**	**66.1926**	**206.4074**	**193.0196**	**323.7575**	**0.0431**	**0.0009**

ArcelorMittal Indiana Harbor East
SSM #089-21207-00316 and SPM #089-22044-00316
Calculation of Change in Hours of Operation
Baghouses with PM10 Limits (lbs/hr)

Emission Location	Hours of Operation		Average Hours of Operation	Hours Per Year	Increase in Hours of Operation	Model Operation Hours
	1999	2000				
Casthouse No. 1	8,466	8,476	8,471.0	8,760	289.0	289.0
Casthouse No. 2	8,466	8,476	8,471.0	8,760	289.0	289.0
Coal Pulverizer Baghouse	8,466	8,476	8,471.0	8,760	289.0	289.0
Lime Plant	8,247	8,072	8,159.5	8,760	600.5	200.0
No. 4 BOF Secondary Vent System	8,497	8,298	8,397.5	8,760	362.5	362.5

ARCELORMITTAL INDIANA HARBOR EAST
SSM #089-21207-00316 and SPM #089-22044-00316
Calculation of Annual Change in Production/Throughput Rate

Emission Unit	Emission Location	Annual Production/ Thruput Change	Units	Comments
Blast Furnace No. 7	Casthouse Baghouse No. 1 (east)	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Casthouse Baghouse No. 2 (west)	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Casthouse Baghouse No. 1 (east)	386,310	hot metal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on permitted increase in hot metal from No. 7 Blast Furnace.
	Casthouse Baghouse No. 2 (west)	386,310	hot metal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on permitted increase in hot metal from No. 7 Blast Furnace.
	Casthouse Fugitives	772,620	hot metal	Based on hot metal increase
	Coke Transfer Station	296,686	coke	Based on hot metal increase
	Stockhouse Coke Baghouse	296,686	coke	Based on hot metal increase
	Stockhouse Pellet Baghouse	1,295,275	pellet	Increase in IDEM public notice SPM
	Slag Granulation	146,341	slag	Based on minimum actual slag granulation ratio x hot metal increase.
	Slag Pit	81,527	slag	Based on minimum actual slag granulation ratio x hot metal increase.
PCI	Coal Transfer Baghouse A	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Storage Baghouse C	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Pulvurizer Baghouse D	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Coal Pulvurizer Baghouse E	289	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Coal Pulvurizer Baghouse D	373,155	coal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Pulvurizer Baghouse E	373,155	coal	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Storage Baghouse F	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Storage Baghouse G	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
	Coal Unloading	373,155	coal	Based on the difference of actual lbs coal per ton hot metal (after) and 320 lbs coal per ton hot metal (before).
Lime Plant	Silo Baghouses	200.0	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	No. 1 Kiln Baghouse	200.0	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	No. 2 Kiln Baghouse	200.0	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Silo Baghouses	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	No. 1 Kiln Baghouse	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	No. 2 Kiln Baghouse	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Micro-Pulse Baghouse (2)	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Truck Loadout Baghouse	50,335	lime	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
No. 2 BOF	10 Furnace Stack	0	molten steel	Total change in steel production divided between 10 Furnace and 20 Furnace Stacks.
	20 Furnace Stack	0	molten steel	Total change in steel production divided between 10 Furnace and 20 Furnace Stacks.
	Caster Fume Collection	0	slabs	Total change in steel production
	Ladle Metallurgy Station	0	molten steel	Total change in steel production
	Gas Cleaning System	0	molten steel	Total change in steel production
	Secondary, Ventilation System Scrubber	0	molten steel	Total change in steel production
	Charging Aisle and Reladling Desulfurization Baghouse	0	hot metal	Based on change in hot metal production
	Truck and Ladle Hopper Baghouse	0	flux	Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Flux Storage and Batch Baghouse	0	flux	Based on actual lbs lime per ton steel and the total amount of change in tons of steel produced.
	Roof Monitor	0	molten steel	Total change in steel production
No. 4 BOF	Scrubber	908,965	molten steel	Total change in steel production
	Gas Cleaning System	908,965	molten steel	Total change in steel production
	Secondary Vent System Baghouse	363	hours	Used for calculation of PM and PM10 emission rates. Based on the difference in the maximum hours of operation and the average hours of operation in 1999 and 2000.
	Secondary Vent System Baghouse	908,965	molten steel	Used for calculation of SO2, CO, NOx, VOC and Lead emission rates. Based on change in total change in steel production.
	Reladling and Desulfurization Baghouse North	386,310	hot metal	Based on change in hot metal production
	Reladling and Desulfurization Baghouse South	386,310	hot metal	Based on change in hot metal production
	Roof Monitor	908,965	molten steel	Total change in steel production
	Furnace Additives Bin Loading	58,829	lime alloys	Total change in steel production
	Torch Cut	908,965	molten steel	Total change in steel production
	RHOB Condensers	908,965	molten steel	Total change in steel production
	RHOB Material Handling	908,965	molten steel	Total change in steel production
	RHOB Gas Cleaning System	908,965	molten steel	Total change in steel production
	Furnace Additive Hopper House	58,829	lime alloys	Total change in steel production
Blast Furnace No. 7	Stoves (NG)	483	mmcf	Based on change in hot metal production in tons hot metal per year and maximum BFG combust/tons hot metal Jan 05-Apr 07
	Stoves (BFG)	14,655	mmcf	Based on change in hot metal production in tons hot metal per year and maximum BFG combust/tons hot metal Jan 05-Apr 07
No. 2 BOF	10 Furnace Stack (NG)	0.00	mmcf	Based on actual mmscf of natural gas per ton of steel produced multiplied by the change in steel production.
	20 Furnace Stack (NG)	0.00	mmcf	Based on actual mmscf of natural gas per ton of steel produced multiplied by the change in steel production.
No. 5 Boiler House	Boiler House (NG)	15.7	mmcf	Based on change in amount of NG consumed.
	Boiler House (BFG)	28,082	mmcf	Based on change in amount of BFG generated in mmcf/yr less BFG consumed at No. 7 BF.
Lime Plant	No. 1 Kiln (Residual Oil)	0.0000	10^3 gal	Revised on February 21, 2003
	No. 1 Kiln (NG)	123.5000	mmcf	IDEM Public Noticed SSM
	No. 2 Kiln (Residual Oil)	0.0000	10^3 gal	Revised on February 21, 2003
	No. 2 Kiln (NG)	123.5000	mmcf	IDEM Public Noticed SSM

ArcelorMittal Indiana Harbor East
SSM #089-21207-00316 and SPM #089-22044-00316
Summary of Calculations Used to Estimate Change in Annual Production/Throughput Rate
All Hot Metal Increase Through No. 4 BOF Shop

Calculation of Change in Hot Metal Production Rate		**Comments**
Change in total steel production rate at No. 2 BOF (tons steel/yr)	0	Change in hot metal/ratio hot metal to steel
Change in total steel production rate at No. 4 BOF (tons steel/yr)	908,965	Change in hot metal/ratio hot metal to steel
Ratio of hot metal to steel	0.850	Hot metal to steel ratio of 0.85 from 7/11/07 E-mail
Change in hot metal annual production/throughput change (tons/yr)	772,620	From Section D.0 of Title V Permit

Calculation of Change in Pellet Throughput Rate		**Comments**
Ratio of pellet throughput rate per ton of hot metal produced		
Change in pellet annual production/throughput change (tons/yr)	1,295,275	Increase in IDEM public notice SPM

Calculation of Change in Coke Consumption Rate		**Comments**
Ratio of coke consumption rate per ton of hot metal produced	0.384	Based on actual operating data
Change in annual coke consumption rate (tons/yr)	296,686	ratio x change in hot metal production rate

Calculation of Change in Slag Granulation and Slag Pit Production Rate		**Comments**
Ratio of slag generation per ton of hot metal produced	0.295	Maximum-Production records 1/05-4/07
Total slag generation rate (tons/yr)	227,868	change in tons hot metal x ratio of tons slag per ton hot metal
Ratio of slag granulation to total slag production	0.64	Minimum-Production records 1/05-4/07
Ratio of slag to total slag production	0.36	Based on total slag generated and granulation ratio
Revised Slag Granulation Potential Production Rate (tons/yr)	146,341	granulated ratio x total slag generation rate
Revised Slag Pit Potential Production Rate (tons/yr)	81,527	pit ratio x total slag generation rate

Calculation of PCI Change in Throughput Rate		**Comments**
Pounds of PCI consumed per ton of hot metal (before)	320	Based on 160 kg PCI/metric ton HM
Pounds of PCI consumed per ton of hot metal (after)	431	Maximum-Production records 1/05-4/07
Average tons of hot metal thruput (before)	3,737,016	October 1998 through September 2000
Average tons of hot metal thruput (after)	4,509,636	3,737,016 + change in hot metal production rate)
Tons of PCI consumed per year (before)	597,923	320 / 2000 x 3,737,016
Tons of PCI consumed per year (after)	971,077	lb/ton from production records 1/05-4/07 / 2000 x (3,737,016 + change in hot metal production rate)
Change in PCI consumed per year	373,155	Difference between before and after

Calculation of Lime Change in Throughput Rate		**Comments**
Ratio of pounds of lime per ton of steel at BOF	110.8	Maximum-Production records 1/05-4/07
Change in lime consumed per year (tons/yr)	50,335	Maximum ratio from production records 1/05-4/07 x change in No. 2 BOF steel production

Calculation of Change in Total Steel Production Rate		**Comments**
Change in total steel production rate at No. 2 BOF (tons steel/yr)	0	
Change in total steel production rate at No. 4 BOF (tons steel/yr)	908,965	

Calculation of Fuel Consumption Rates at No. 7 BF Stoves		**Comments**
BFG stoves consumption rate in mmcf per ton of hot metal	0.0190	Maximum-Production records 1/05-4/07
NG stoves consumption rate in mmcf per ton of hot metal	0.000625	Maximum-Production records 1/05-4/07
Change in BFG Consumption Rate (mmscf/yr)	14,655	Change in tons of hot metal x BFG consumption rate in mmscf per ton hot metal
Change in NG Consumption Rate (mmscf/yr)	483	Change in tons of hot metal x NG consumption rate in mmscf per ton hot metal

Calculation of Fuel Consumption Rate at No. 5 Boiler House		**Comments**
No. 7 BF BFG Generation Rate (mmscf/ton hot metal)	48,750	
Change in No. 7 BF BFG generation rate (mmscf/yr)	37,665	Change in tons of hot metal x BFG generatio rate in mmscf per ton hot metal
Change in BFG Consumption Rate at No. 5 Boiler House (mmscf/yr)	28,082	Change in No. 7 BF BFG generation rate - Change in No. 7 BF BFG consumption rate
2001 NG consumption rate (mmscf/yr)	483.38	2001 EIS Report
2001 BFG consumption rate (mmscf/yr)	100,287.83	2001 EIS Report
2001 MG consumption rate (mmscf/yr)	960.22	2001 EIS Report
2001 No. 7 BF production rate (tons/yr)	3,105,587	2001 EIS Report
Mixed Gas heating value as a percent of natural gas heating value	71.90%	71.9 percent of natural gas heating value
Mixed gas heating value	733.38	1020 BTU/scf x 71.90 percent
NG Heat Input (MMBTU/yr)	493,048	2001 NG consumption rate x natural gas heating value
BFG Heat Input (MMTU/yr)	9,025,905	2001 BFG consumption rate x BFG Heating Value
MG Heat Input (MMBTU/yr)	704,206	2001 MG consumption rate x mixed gas heating value
Total heat input (MMBTU/yr)	10,223,158	Sum of NG, BFG and MG heat inputs
2001 total heat input per ton of hot metal	3.29	Total heat input / tons hot metal
Change in total heat input at No. 5 Boiler House (MMBTU/yr)	2,543,357.08	Change in hot metal production x 2001 total heat input per ton of hot metal
Change in BFG heat input at No. 5 Boiler House (MMBTU/yr)	2,527,380.00	Change in BFG consumption rate x BFG heating value
Remaining heat input at No. 5 Boiler House made up by natural gas (MMBTU/yr)	15,977.08	Total heat input - heat input from BFG
Change in NG Consumption Rate at No. 5 Boiler House (mmscf/yr)	15.7	

Calculation of Fuel Consumption Rate at No. 2 BOF Furnace Flare Stacks		**Comments**
Consumption rate per ton of steel (mmscf/ton)	0.000015	Maximum-Production records 1/05-4/07
Change in No. 10 Furnace Flare Stack consumption rate (mmscf/yr)	0.00	Consumption rate x change in tons of steel produced
Change in No. 20 Furnace Flare Stack consumption rate (mmscf/yr)	0.00	Consumption rate x change in tons of steel produced

Calculation of Furnace Additives Bin Loading/Hopper House Throughput Rate		**Comments**
Ratio of tons of lime/flux handled per ton of steel produced	0.06472	Maximum-Production records 1/05-4/07
Change in Furnace Additive Bin Loading throughput rate (tons/yr)	58,829.08	Change in steel production x ratio
Change in Furnace Additive Hopper House throughput rate (tons/yr)	58,829.08	Change in steel production x ratio

Calculation of Fuel Consumption Rates at Lime Plant		**Comments**
Natural Gas Heating Value (BTU/scf)	1,020	Inland Steel
Heat Consumption Rate (MMBTU/ton of lime)	5.00	Inland Steel heat consumption per ton of lime
Change in lime consumed per year (tons/yr)	50,335	Maximum ratio from production records 1/05-4/07 x change in No. 2 BOF steel production
Total Heat Input (MMBTU/yr)	251,677	Heat Consumption Rate x change in steel production
Natural Gas Heat Input (MMBTU/yr)	251,677.1	Total heat input x percent natural gas
Change in Natural Gas Consumption Rate (mmscf/yr)	246.74	Natural gas heat input / natural gas heating value

Appendix A-3: Emission Calculations
Revised Emission Limits for the Units in Condition D.0.5

Company Name: **ArcelorMittal USA, Inc.**
Address: **3210 Watling Street, East Chicago, IN 46312**
SSM: **089-21207-00316**
SPM: **089-22044-00316**
Reviewer: **ERG/YC**
Date: **September 3, 2008**

Table 1
CALCULATION OF BASELINE EMISSIONS PRIOR TO NO. 7 BLAST FURNACE MODIFICATION

Facility		Criteria Air Pollutants Emission Rates (tons/year)						
		PM	PM10	SO2	CO	NOx	VOC	Pb
Blast Furnace No. 7	Annual After Project*	300.66	460.63	893.52	2,096.70	852.88	31.39	0.0100
	Due to Project**	31.94	49.86	156.29	316.15	149.19	5.49	0.0017
	Baseline	268.72	410.77	737.23	1,780.55	703.69	25.90	0.0083
PCI	Annual After Project*	13.36	12.18	0.00	0.00	0.00	0.00	0.0000
	Due to Project**	1.11	0.90	0.00	0.00	0.00	0.00	0.0000
	Baseline	12.25	11.28	0.00	0.00	0.00	0.00	0.0000
Lime Plant	Annual After Project*	56.98	60.29	0.25	375.71	43.53	2.30	0.0100
	Due to Project**	1.52	1.53	0.04	65.72	7.61	0.40	0.0019
	Baseline	55.46	58.76	0.21	309.99	35.92	1.90	0.0081
No. 2 BOF***	Annual After Project*	326.93	295.78	262.40	30,392.66	239.30	20.49	0.5600
	Due to Project**	57.19	51.73	45.90	5,316.18	41.75	3.58	0.0985
	Baseline	269.75	244.05	216.50	25,076.48	197.55	16.91	0.4615
No. 4 BOF***	Annual After Project*	566.19	530.53	25.24	18,408.93	227.48	20.21	0.9100
	Due to Project**	0.00	0.00	0.00	0.00	0.00	0.00	0.0000
	Baseline	566.19	530.53	25.24	18,408.93	227.48	20.21	0.9100
No. 5 Boiler House	Annual After Project*	54.67	362.37	1,180.03	1,103.47	1,850.89	0.24	0.0100
	Due to Project**	9.56	63.39	206.41	193.02	323.76	0.04	0.0009
	Baseline	45.11	298.98	973.62	910.45	1,527.13	0.20	0.0091
Fugitive Emissions	Annual After Project*	164.76	34.42	0.00	0.00	0.00	0.00	0.0000
	Due to Project**	28.82	6.02	0.00	0.00	0.00	0.00	0.0000
	Baseline	135.94	28.40	0.00	0.00	0.00	0.00	0.0000
Totals	Annual After Project	1,156.62	1,460.42	2,336.20	33,968.54	2,986.60	54.42	0.9400
	Due to Project	130.13	173.43	408.65	5,891.07	522.31	9.52	0.1030
	Baseline	1,026.49	1,286.99	1,927.55	28,077.47	2,464.29	44.90	0.8370

*Source: SSM 089-16966-00316 Addendum to TSD, Appendix A, Page 1 of 18
**Source: SSM 089-16966-00316 TSD, Appendix A, Page 1 of 20
*** In case of No. 2 and No. 4 BOF, only the emissions from the worst case BOF operation was added to calculate the worst case annual emission.

Table 2

REQUEST FOR MODIFICATION TO TITLE V PERMIT - SECTION D.0
ARCELORMITTAL INDIANA HARBOR EAST
CALCULATION OF REVISED ANNUAL EMISSIONS FOR SECTION D.0

Facility		Criteria Air Pollutants Emission Rates (tons/year)							Remarks
		PM	PM10	SO2	CO	NOx	VOC	Pb	
Blast Furnace No. 7	Baseline	268.72	410.77	737.23	See CO Limit Calculation Spreadsheet for CO Revised CO Emission Limit Calculation	703.69	25.90	0.0083	
	Due to Project**	28.68	56.96	187.57		204.43	5.31	0.0018	
	Annual After Project*	297.40	467.73	924.80		908.12	31.21	0.0101	
PCI	Baseline	12.25	11.28	0.00		0.00	0.00	0.0000	
	Due to Project**	1.12	1.12	0.00		0.00	0.00	0.0000	
	Annual After Project*	13.38	12.40	0.00		0.00	0.00	0.0000	
Lime Plant	Baseline	55.46	58.76	0.21		35.92	1.90	0.0081	
	Due to Project**	1.70	1.57	0.07		12.84	0.68	0.0033	
	Annual After Project*	57.15	60.33	0.28		48.76	2.58	0.0114	
No. 2 BOF	Baseline	269.75	244.05	216.50		197.55	16.91	0.4615	
	Due to Project**	67.48	60.56	54.00		48.87	4.20	0.1223	
	Annual After Project*	337.23	304.61	270.50		246.42	21.11	0.5838	
No. 4 BOF	Baseline	566.19	530.53	25.24		227.48	20.21	4.1728	Increased baseline to reflect stack test for old scrubber.
	Due to Project**	100.11	96.61	4.55		46.65	4.09	0.9610	
	Annual After Project*	666.30	627.14	29.79		274.13	24.30	5.1339	
No. 5 Boiler House	Baseline	45.11	298.98	973.62		1,527.13	0.20	0.0091	
	Due to Project**	9.56	66.19	206.41		323.76	0.04	0.0009	
	Annual After Project*	54.67	365.18	1,180.03		1,850.89	0.24	0.0100	
Fugitive Emissions	Baseline	135.94	28.40	0.00		0.00	0.00	0.0000	
	Due to Project**	25.36	5.30	0.00		0.00	0.00	0.0000	
	Annual After Project*	161.31	33.70	0.00		0.00	0.00	0.0000	
Total Rolling 12-Month Average Emissions Totals for Above Units	Baseline	1,026.49	1,286.99	1,927.55		2,464.29	44.90	4.1983	Adjusted to reflect increase in No. 4 BOF baseline.
	Due to Project**	166.54	227.76	448.05		589.90	10.23	0.9671	
	Annual After Project*	1,193.03	1,514.75	2,375.60		3,054.20	55.13	5.1654	

*Baseline plus revised increases due to the project.
**Revised emission increases due to project from updated production ratios and emission factors.
*** In case of No. 2 and No. 4 BOF, only the emissions from the worst case BOF operation was added to calculate the worst case annual emission.

Table 3

REQUEST FOR MODIFICATION TO TITLE V PERMIT - SECTION D.0
ARCELORMITTAL INDIANA HARBOR EAST
CALCULATION OF SECTION D.0 CARBON MONOXIDE LIMITATIONS

Calculate Current Section D.0 Limit without Stoves

	CO (tons/yr)
Current CO limit per Part 70 Permit Section D.0	33,968.54
Baseline Blast Furnace No. 7 Stoves @ 2914.50 lbs	12,765.51
Current Section D.0 CO limit without stoves	21,203.03

Compare Non-Blast Furnace Revised Emissions with Permit Application

Emission Unit	CO Increase Due to Project (tons/yr)		
	Current Request	Permit TSD*	Difference
PCI	0.0000	0.0000	0.0000
Lime Plant	111.0448	65.7183	45.3265
No. 2 BOF**	6,254.1240	5,316.1817	937.9423
No. 4 BOF**	0.0000	0.0000	0.0000
No. 5 Boiler House	193.0196	193.0187	0.0009
Fugitive Emissions	0.0000	0.0000	0.0000
Total Non-Blast Furnace Increases			*983.2697*

Calculate New Section D.0 CO Limit

	CO (tons/yr)
Current Section D.0 CO limit without stoves	21,203.03
Blast Furnace No. 7 Stoves at 3,968 lbs CO/hr	17,379.84
Total Non-Blast Furnace Increases	983.27
Revised Section D.0 CO Limit	*39,566.14*

*Source: SSM 089-16966-00316 TSD, Appendix A, Page 1 of 20

** In case of No. 2 and No. 4 BOF, only the emissions from the worst case BOF operation was added to calculate the worst case annual emission.

*** This is based on the stack test results on November 18, 2004.

Table 4

REQUEST FOR MODIFICATION TO TITLE V PERMIT - SECTION D.0
ARCELORMITTAL INDIANA HARBOR EAST
COMPARISON OF CURRENT TO REQUESTED SECTION D.0 LIMITATIONS

Facility		Criteria Air Pollutants Emission Rates (tons/year)						
		PM	PM10	SO2	CO	NOx	VOC	Pb
Blast Furnace No. 7	Current Limit	300.66	460.63	893.52	See CO Limit Calculation Spreadsheet for CO Revised CO Emission Limit Calculation	852.88	31.39	0.0100
	Proposed Limit	297.40	467.73	924.80		908.12	31.21	0.0101
	Difference	-3.26	7.10	31.28		55.24	-0.18	0.0001
PCI	Current Limit	13.36	12.18	0.00		0.00	0.00	0.0000
	Proposed Limit	13.38	12.40	0.00		0.00	0.00	0.0000
	Difference	0.02	0.22	0.00		0.00	0.00	0.0000
Lime Plant	Current Limit	56.98	60.29	0.25		43.53	2.30	0.0100
	Proposed Limit	57.15	60.33	0.28		48.76	2.58	0.0114
	Difference	0.17	0.04	0.03		5.23	0.28	0.0014
No. 2 BOF**	Current Limit	326.93	295.78	262.40		239.30	20.49	0.5600
	Proposed Limit	337.23	304.61	270.50		246.42	21.11	0.5838
	Difference	10.30	8.83	8.10		7.12	0.62	0.0238
No. 4 BOF**	Current Limit	566.19	530.53	25.24		227.48	20.21	0.9100
	Proposed Limit	666.30	627.14	29.79		274.13	24.30	5.1339
	Difference	100.11	96.61	4.55		46.65	4.09	4.2239
No. 5 Boiler House	Current Limit	54.67	362.37	1,180.03		1,850.89	0.24	0.0100
	Proposed Limit	54.67	365.18	1,180.03		1,850.89	0.24	0.0100
	Difference	0.00	2.81	0.00		0.00	0.00	0.0000
Fugitive Emissions	Current Limit	164.76	34.42	0.00		0.00	0.00	0.0000
	Proposed Limit	161.31	33.70	0.00		0.00	0.00	0.0000
	Difference	-3.45	-0.72	0.00		0.00	0.00	0.0000
Totals	Current Limit	1,156.62	1,460.42	2,336.20	33,968.54	2,986.60	54.44	0.9400
	Proposed Limit	**1,250.21**	**1,566.48**	**2,375.32**	**39,566.14**	**3,081.90**	**58.32**	**5.1654**
	Difference	93.59	106.06	39.12	5,597.60	95.30	3.88	4.2254

** In case of No. 2 and No. 4 BOF, only the emissions from the worst case BOF operation was added to calculate the worst case annual emission.

Indiana Department of Environmental Management
Office of Air Quality

Appendix B
Best Available Control Technology (BACT) Determinations

Source Background and Description

Source Name:	ArcelorMittal USA, Inc.
Source Location:	3210 Watling Street, East Chicago, Indiana 46312
County:	Lake
SIC Code:	3312
Operation Permit No.:	089-6577-00316
Operation Permit Issuance Date:	September 12, 2006
Significant Source Modification No.:	089-21207-00316
Significant Permit Modification No.:	089-22044-00316
Permit Reviewer:	ERG/YC

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following Best Available Control Technology (BACT) review for a Prevention of Significant Deterioration Permit (PSD) permit, a Part 70 Significant Permit Modification, and a Part 70 Significant Permit Modification to an iron and steel mill, owned and operated by ArcelorMittal USA, Inc., located at 3210 Watling Street, East Chicago, Indiana 46312.

The source proposed to modify No. 7 Blast Furnace in 2003. This modification was permitted in SSM #089-16966-00316, issued on November 26, 2003, and the CO emissions from this modification were subject to the requirements of 326 IAC 2-2 (PSD). Several CO emission limitations for the affected units were established in SSM #089-16966-00316, and the Permittee was required to perform CO stack testing to demonstrate compliance with these limits. The emissions from the No. 7 Blast Furnace currently vent through the following:

(a) Four (4) Furnace Stoves (Stack 170);

(b) No. 5 Boiler House (Stack 134); and

(c) Flares.

The casthouse emissions from the No. 7 Blast Furnace building are vented through the following units:

(a) West Casthouse Baghouse (Stack 166); and

(b) East Casthouse Baghouse (Stack 167)

According to the stack tests performed on November 16 through 18, 2004, the CO emissions from West Casthouse Baghouse (Stack 166) and No. 7 Blast Furnace Stoves (Stack 170) are not in compliance with the CO emission limitations established in SSM #089-16966-00316, issued on November 26, 2003. The Permittee requested to revise the CO emission limit for West Casthouse Baghouse (Stack 166) and No. 7 Blast Furnace Stoves (Stack 170).

Since the requested changes are considered changes to the existing PSD BACT limits, the Permittee is required to perform a PSD BACT analysis for the CO emissions from West Casthouse Baghouse (Stack 166) and No. 7 Blast Furnace Stoves (Stack 170). There are no physical changes or changes in operation methods for the existing No. 7 Blast Furnace proposed under this permit modification. Therefore, IDEM,

OAQ has re-evaluated the PSD BACT analysis for the CO emissions from the following units at the No.7 Blast Furnace:

(a) West Casthouse Baghouse (Stack 166); and

(b) Four (4) Furnace Stoves (Stack 170).

IDEM, OAQ conducts BACT analyses in accordance with the “Top-Down” Best Available Control Technology process, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below:

(a) Identify all potentially available control options;

(b) Eliminate technically infeasible control options;

(c) Rank remaining control technologies by control effectiveness;

(d) Evaluate the most effective controls and document the results as necessary; and

(e) Select BACT.

In accordance with EPA guidance, the BACT analysis should take into account the energy, environmental, and economic impacts. Emission reductions may be achieved through the application of available control techniques, changes in process design, and/or operational limitations.

A summary of the BACT review for West Casthouse Baghouse is provided in Section B.1, the BACT review for No. 7 Blast Furnace Stoves is provided in Section B.2. These BACT determinations are based on the following information:

(a) The BACT analysis information submitted by the Permittee on June 21, 2005 and April 25, 2007;

(b) Information from vendors/suppliers;

(c) The EPA RACT/BACT/LAER (RBLC) Clearinghouse; and

(d) State and local air quality permits.

Appendix B.1
Best Available Control Technology (BACT) Determination
For West Casthouse Baghouse (Stack 166)

Introduction:

CO is formed during the reaction of carbon in the furnace burden and hot blast air inside of the blast furnace. The CO is the reducing agent in the smelting of iron oxides to elemental iron. The excess CO, not used in the smelting process, remains in the process off gas. The excess CO is a by-product of the iron-making process and is called Blast Furnace Gas (BFG). The BFG is collected near the top of the blast furnace and ducted under pressure to a gas cleaning system (dust catchers and scrubbers) where particulate matter is removed from the gas stream. The BFG is then directed to the existing stoves as supplement fuel and to convert the CO in the BFG to CO_2. The fugitive emissions from the No. 7 blast furnace building are vented through West Casthouse Baghouse (stack 166) and East Casthouse Baghouse (stack 167).

In SSM #089-16966-00316, issued on November 26, 2003, both stacks 166 and 167 have a CO emission limit of 0.56 lbs/ton of metal produced. According to the stack testing results on November 16 through 18, 2004, the CO emissions from stack 166 are 1.73 lbs/ton, which exceeds the emission limit of 0.56 lbs/ton. The Permittee requested to adjust the CO emission limit for West Casthouse Baghouse (stack 166) to 2.22 lbs/ton of metal produced, which is equivalent to the 95% confidence interval of the stack test results on November 16, 2004.

The Permittee stated that the CO emissions from West Casthouse Baghouse are greater than the CO emissions from East Casthouse Baghouse because West Casthouse Baghouse evacuates the canopy hoods on both sides of the furnace and collects additional CO emissions that previously vented through the roof monitor.

Step 1 - Identify Control Options

IDEM, OAQ has considered the following add-on control technologies to control the CO emissions from West Casthouse Baghouse. All of the technologies are based on the oxidation of CO to carbon dioxide (CO_2).

Control Technology	Typical Control Efficiencies
Combustion in the Existing Blast Furnace Stoves	98+%
Combustion in the Existing Boilers	98+%
Thermal Oxidizer w/ Heat Exchanger (Recuperative)	98+%
Flare	98+%

Step 2 - Eliminate Technically Infeasible Control Options

The use of flares, stoves, or boilers is not technically feasible because of the following:

The lower explosive limit (LEL) of CO is 12.5 %, which is the minimum CO concentration necessary for a combustible gas stream. The CO concentration at the West Casthouse Baghouse is only 0.04%, which is significantly below the LEL needed to combust CO at a flare or in a boiler. In addition, BFG, which is currently combusted in the stoves, boiler, or flare, is a very low heat value fuel gas. Mixing dilute gas streams from the West Casthouse Baghouse will reduce the combustion efficiencies in the flares or the boilers, which results in additional CO emissions.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The remaining technical feasible control technology is a thermal oxidizer with a control efficiency of 98% for CO.

Step 4 - Evaluate the Most Effective Controls and Document Results

The exhaust rate of West Casthouse Baghouse is 334,800 dscfm. This will require about 4,400 MMSCF per year of natural gas to raise the temperature of the exhaust gas to enable combustion of CO from West Casthouse Baghouse. The natural gas combustion will generate about 307 tons per year of NOx and 184 tons per year of CO emissions. Since this source is located in ozone nonattainment area, the additional NOx emissions will have a significant adverse impact on the local air quality. In addition, the cost of NG is estimated to be over $44,000,000 per year.

These adverse energy and environmental impacts for the installation of a thermal oxidizer with West Casthouse Baghouse will substantially offset the expected CO reduction to be achieved from a thermal oxidizer. Therefore, no add-on control device is feasible for the CO emissions from West Casthouse Baghouse (Stack 166).

The Permittee also stated that it would be inappropriate to reduce the CO emission rate at East Casthouse Baghouse (Stack 167) to offset an increase at the West Casthouse Baghouse because the CO emission limit of 0.56 lbs/ton for Stack 167 was established based on the stack testing results in January 1990. There are no configuration changes to the air stream vent to East Casthouse Baghouse. Therefore, the CO emission limit for East Casthouse Baghouse reflects the actual emissions from this unit and should remain unchanged.

Step 5 - Select BACT

The Permittee proposed to revise the CO emission rate limit for the Casthouse Baghouse (Stack 166) from 0.56 lbs/ton to 2.22 lbs/ton. This is equivalent to the 95% confidence interval of the stack test results on November 16, 2004. IDEM, OAQ has agreed that the CO emission limit of 2.22 lbs/ton is the revised BACT for the CO emissions from West Casthouse Baghouse (Stack 166).

Appendix B.2
Best Available Control Technology (BACT) Determination
For No. 4 Blast Furnace Stoves (Stack 170)

Introduction:

In SSM #089-16966-00316, issued on November 26, 2003, the CO emissions from No. 7 Blast Furnace Stoves were given the PSD BACT limits listed in the table below:

Stack ID, associated equipment	Type of Fuel Combusted	CO Emissions Limitations (lbs/MMSCF of Fuel)
170, No.7 Blast Furnace Stoves	Blast Furnace Gas (BFG)	13.7
	Natural gas (NG)	84
	Mix of NG and BFG	$\frac{\text{13.7 x Usage of BFG (MMSCF)+ 84 x Usage of NG (MMSCF)}}{\text{Total Usage of BFG and NG (MMSCF)}}$

Since there was no emission information available for BFG combustion in the stoves, the above emission limits were established based on the emission factors in AP-42 for BFG combustion in the boilers when the permit was prepared in 2003. SSM #089-16966-00316, issued on November 26, 2003, includes language allowing the source to request a re-evaluation on the CO emission limit for furnace stoves (Stack 170) after stack tests.

According to the stack test results on November 16 through 18, 2004, the CO emissions from No. 7 Blast Furnace Stoves (Stack 170) are 579.5 lbs/MMSCF, which are significantly greater than the CO emission limits in the table above. The Permittee stated that the CO combustion efficiency for the stoves is less than the combustion efficiency for the boilers. Therefore, the actual CO emissions are expected to be greater than the CO emission limits in the table above, which are based on the CO emission factors for boilers.

The Permittee has requested a revision to the CO emission limit for Stack 170 to 3,968 lbs/hr during the time period of rebuilding the existing three (3) stoves. The Permittee will submit a PSD BACT analysis to re-evaluate the CO emission limit for the furnace stoves (Stack 170) after the stove rebuild project is completed. Since these changes are considered changes to the existing PSD BACT limits, IDEM, OAQ has evaluated PSD BACT for No. 7 Blast Furnace based on the following two (2) scenarios:

(A) Are stoves considered BACT for the No. 7 Blast Furnace?

(B) Is any add-on control device feasible to control the CO emissions from the furnace stoves?

The BACT analysis for each scenario is listed below:

Scenario (A) – Are stoves considered the BACT for the No. 7 Blast Furnace?

Step 1A - Identify Control Options

The following available technologies were identified and evaluated to control CO emissions from the blast furnaces:

(a) The potentially applicable control technologies are shown in table below. All of the technologies are based on the oxidation of CO to carbon dioxide (CO_2).

Control Technology	Typical Control Efficiencies
Combustion in Blast Furnace Stove or Boiler	98+%
Thermal Oxidizer w/ Heat Exchanger (Recuperative)	98+%
Flare	98+%

(b) There is no BACT determination specific to CO emissions from blast furnaces identified in the search of EPA's RACT/BACT/LAER Clearinghouse (RBLC) Database. The Permittee searched for blast furnaces in Part 70 operating permits database and identified the following:

Company	Permit #	Date Issued and State	Type of Operation	Requirements
ArcelorMittal USA, Inc. (formerly Ispat Inland, Inc.)	SSM #089-16966-00316	11/26/03	Blast Furnace	Controlled by the blast furnace stoves, No. 5 Boiler, or flares.
Acme Steel Company	(Unknown)	Dec 2000 (IL)	Blast Furnace	Controlled by blast furnace stoves.
Acme Steel Company	(Unknown)	Dec 2000 (IL)	Blast Furnace	Gas flare.
Steel Dynamics, Inc.	CP #183-10097-00030	07/07/99 (IN)	NG Rotary Health Furnace	Afterburner. CO < 1.4 lbs/ton of iron.
Steel Dynamics, Inc.	SSM #033-9708-00043	03/24/98 (IN)	Submerged Arc Furnace	Thermal Oxidation. CO < 1.26 lbs/ton of iron.

Step 2A - Eliminate Technically Infeasible Control Options

Based on the results from the RBLC and state permit database search, vendor review, and an evaluation of the control technologies, IDEM, OAQ has determined that all the identified control options in step 1 are considered technically feasible. None of the control options are eliminated.

Step 3A - Rank Remaining Control Technologies by Control Effectiveness

The remaining technically feasible approaches for controlling CO emissions from blast furnaces are:

Options for CO Control	Control Efficiency
Combustion in Blast Furnace Stove or Boiler	98+%
Thermal Oxidizer w/ Heat Exchanger (Recuperative)	98+%
Flare	98+%

Step 4A - Evaluate the Most Effective Controls and Document Results

All the identified control options in Step 3A have the same control efficiency of 98% or greater. No. 7 Blast Furnace at this source is currently controlled by stoves, No. 5 boiler, and flares, which are the control options with greatest control efficiency and have been considered the BACT for the blast furnaces at other similar sources. Therefore, the furnace stoves are considered part of the BACT requirements for No. 7 Blast Furnace.

Scenario (B) – Is any add-on control device feasible to control the CO emissions from the furnace stoves?

Step 1B - Identify Control Options

IDEM, OAQ has considered the following add-on control technologies to control the CO emissions from the furnace stoves (Stack 170)

Control Technology Typical Control	Efficiencies
Thermal Oxidizer w/ Heat Exchanger (Recuperative)	98+%
Combustion in the Existing Boiler	98+%
Flare	98+%
Good Combustion Practice	Unknown

Step 2B - Eliminate Technically Infeasible Control Options

(a) The use of thermal oxidizers is not technically feasible because of the following:

Adding end-of-the-pipe control to a blast furnace stove poses risks arising from operating conditions that have not been encountered. Blast furnace stove manufacturers have indicated that the potential back pressure on the stoves created by the thermal oxidizer may cause undesirable combustion conditions within the stoves. Manufacturers also expressed concern that add-on controls would reduce combustion efficiency, which could frustrate efforts to maintain good combustion practices at the burners so that less CO reaches the stove stack. In addition, blast furnace stoves are not steady-state operations and temperature and flow rates are highly variable. The Permittee stated that discussions with pollution control vendors indicated that no add-on oxidizer technologies have been implemented at blast furnaces and the variable operating conditions at the end of a stove stack may not produce consistent results.

(b) The use of flares or boilers is not technically feasible because of the following:

The furnace stoves have already combusted the BFG and only the very low residual concentration of unburned CO remains in the exhaust gas reaching the stove stack. The lower explosive limit (LEL) of CO is 12.5 %. Based on the recent stack test data for the existing furnace stoves, the expected CO concentration is lower than 0.3%. Therefore, the exhaust gas from the furnace stoves will not have enough CO to combust in a flare added to the stove stack. In addition, the search for the BACT for the blast furnace stoves shows that no add-on controls, such as a flare, have been used to control the emissions from the blast furnace stoves.

Step 3B - Rank Remaining Control Technologies by Control Effectiveness

No add-on control device is considered technically feasible. The only remaining control option is good combustion practice.

Step 4B - Evaluate the Most Effective Controls and Document Results

The Permittee stated that the furnace stove No. 4, which has been installed and is part of the modification permitted in SSM #089-16966-00316, and the three (3) existing stoves after rebuild will have the following features that are designed to minimize CO emissions at the furnace stove stack:

(a) The partition wall between the combustion chamber and the checkers is designed to eliminate

penetration of unburned CO-containing gases through the partition wall. This is accomplished as follows:

(1) Partition wall contains multiple layers of refractory brick.

(2) Stainless steel sheets are "sandwiched" between the refractory layers of the partition wall.

(3) A "labyrinth-designed" connection between the ring wall the partition wall allows thermal expansion while preventing the unburned gases from escaping through the connection.

(b) The burner is designed to promote complete combustion of the fuel in the stoves. Complete combustion of blast furnace gas oxidizes CO to CO_2, which reduces the amount of CO at Stove Stack 170. This is accomplished as follows:

(1) The design of the burner and crown forces the air stream to impinge on the gas stream from both sides to ensure adequate mixing of the fuel and air. This promotes even burning of the flame across the burner crown.

(2) The burner has an inherent low pressure drop for both the air and gas streams, allowing for efficient firing at both low and high rates.

(c) The height of the combustion chamber is designed to maximize the mixing and combustion zones prior to entry into the checker section at the top of the stove.

(d) Prior to assembling the stove in the field, a model was built in the laboratory to simulate and perfect the stove design for this location and application.

The Permittee stated that the above design elements ensure good combustion practice for the furnace stoves and proposed to include the above design elements into the permit as part of the PSD BACT for the No. 7 furnace stoves.

Step 5 - Select BACT

Based on the discussion above, IDEM, OAQ has determined that no add-on control device is required for No. 7 Blast Furnace Stoves. IDEM has determined that the following requirements are the BACT for the CO emissions from No. 7 blast furnace stoves (Stack 170):

(a) The CO emissions from the No. 7 blast furnace stoves (stack 170) shall not exceed 3,968 lbs/hr based on a rolling 30-day average.

(b) No later than January 31, 2009, the Permittee shall install a continuous emissions monitoring system (CEMS) with stack 170 to monitor the CO emissions from No. 7 blast furnace stoves.

(c) The Permittee shall utilize a computerized monitoring system for the No. 7 blast furnace stoves to assist operational control and energy conservation.

(d) The Permittee shall complete the stove construction project (rebuilding the existing stoves No. 1 through 3) no later than March 30, 2011.

(e) After the stove rebuild project is complete, the Permittee shall submit a permit application with PSD BACT analysis to re-evaluate the PSD BACT requirements for the No. 7 blast furnace stoves based on monitoring data from the CO CEMS associated with Stack 170.

Indiana Department of Environmental Management
Office of Air Quality

Appendix C
Air Quality and Air Quality Impact Analyses

Source Background and Description

Source Name:	ArcelorMittal USA, Inc.
Source Location:	3210 Watling Street, East Chicago, Indiana 46312
County:	Lake
SIC Code:	3312
Part 70 Operating Permit No.:	089-6577-00316
Part 70 Operating Permit Issuance Date:	September 12, 2006
Significant Source Modification No.:	089-21207-00316
Significant Permit Modification No.:	089-22044-00316
Permit Reviewer:	ERG/YC

Proposed Project

ArcelorMittal USA, Inc. requested to revise the CO emission limits at their facility located in East Chicago, Indiana. This site was originally modeled and a TSD was completed in November of 2003.

OCS Environmental, Inc. (OCS) prepared the revised CO modeling for ArcelorMittal USA, Inc. The Modeling Section in the Office of Air Quality (QAQ) received the permit application on April 14, 2005. This technical support document provides the air quality analysis review of the amended permit application.

CO Emission Limits Addendum

On April 14, 2006, OCS submitted appended modeling data for CO at the ArcelorMittal facility in Lake County. The source requested to revise the CO emission limits established in PSD permit #16966, issued on November 26, 2003. Two scenarios were modeled with all additional hot metal being processed through either the No. 2 BOF shop or the No. 4 BOF shop. The model was run with the new data and the results are listed in Table 1 below.

Significant Impact Level/Area (SIA) Air Quality Levels

A significant impact analysis is conducted to determine whether a more refined analysis is required. A significant impact analysis was conducted for this modification to determine if the source exceeded the PSD significant impact levels (concentrations). If the source's concentrations exceed these levels, further air quality analysis is required. CO did not exceed significant impact levels for either scenario and refined modeling is therefore not necessary.

TABLE 1
Significant Impact Analysis

POLLUTANT	TIME AVERAGING PERIOD	MAXIMUM MODELED IMPACTS (ug/m^3)	SIGNIFICANT IMPACT LEVEL (ug/m^3)	REFINED AQ ANALYSIS REQUIRED
CO (#2 BOF)	1 Hour	1358.00	2000	No
CO (#2 BOF)	8 Hour	397.23	500	No
CO (#4 BOF)	1 Hour	1208.45	2000	No
CO (#4 BOF)	8 Hour	320.27	500	No

Indiana Department of Environmental Management
Office of Air Quality

Appendix D
Additional Environmental Impact Analyses

Source Background and Description

Source Name:	ArcelorMittal USA, Inc.
Source Location:	3210 Watling Street, East Chicago, Indiana 46312
County:	Lake
SIC Code:	3312
Part 70 Operating Permit No.:	089-6577-00316
Part 70 Operating Permit Issuance Date:	September 12, 2006
Significant Source Modification No.:	089-21207-00316
Significant Permit Modification No.:	089-22044-00316
Permit Reviewer:	ERG/YC

Since this modification is subject to the requirements of 326 IAC 2-2 (PSD), the Permittee is required to perform additional analysis, such as energy, economy, soil, and vegetation impact analysis for this modification, pursuant to 326 IAC 2-2-7. A copy of this analysis was submitted by the source on June 21, 2005 and is summarized below:

Economic Growth and Impact of Construction Analysis:

The modification project in 2003 required a variable number of workers during the construction phase of the modification. Once construction is completed, it is anticipated that the addition of the fourth stove and Blast Furnace No. 7 will not require additional staff. The small number of temporary positions required during construction is not expected to significantly affect population, labor, or housing trends in the East Chicago area. Similarly, this number is not expected to represent an added burden to local utility services (portable water, sewer, and roadway) or social services (schools, fire, and police protection). Significant worker relocation into the area will not result from project operation.

In summary, there will be no new significant emissions from secondary growth during either operation or construction of the project.

Soil and Vegetation Impact Analysis:

The project is located in a highly urbanized and industrialized setting. Soils within the plants are primarily comprised of fill material. There are no agricultural activities or natural vegetation within the significant impact area from the project. Additionally, all modeled pollutants were below SIL concentrations at plant boundary receptors. Consequently, there will be no adverse impact on soils or vegetation from this project.

Visibility Impacts on Class I Areas Analysis:

The nearest Class I area to the project is Mammoth Cave National Park in Kentucky. Because this distance to the nearest Class I area is much greater than 100 Kilometers, no impact analysis was required for Class I areas for this project.

Conclusion:

The results of this analysis conclude that the modification project in 2003 at this source has no significant adverse impact on economic growth, soils, vegetation, and Class I Areas.