



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: January 3, 2007
RE: Mittal Steel USA, Inc. / 089-23651-00316
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

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January 3, 2007

Mr. Tom Barnett
Mittal Steel USA Inc. - Indiana Harbor East
3210 Watling Street
East Chicago, IN 46312

Re: 089-23651-00316
Significant Source Modification to:
Part 70 permit No.: T089-6577-00316

Dear Mr. Barnett:

Mittal Steel USA Inc. - Indiana Harbor East was issued Part 70 operating permit T089-6577-00316 on September 12, 2006 for a steel mill facility. An application to modify the source was received on August 7, 2006. Pursuant to 326 IAC 2-7-10.5 the following emission unit is approved for construction at the source:

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

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

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

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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027 and ask for Don Robin or extension 3-5691, or dial (317) 233-5691.

Sincerely,

Missy Jackson

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments

DFR

cc: File – Lake County
Lake County Health Department
IDEM Air Compliance Section Inspector – Michael Hall
IDEM Northwest Regional Office
Compliance Data Section
Administrative and Development



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**PART 70
SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR QUALITY**

**Mittal Steel USA Inc. - Indiana Harbor East
3210 Watling Street
East Chicago, Indiana 46312**

(herein known as the Permittee) is hereby authorized to construct subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

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

Significant Source Modification No. 089-23651-00316	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: January 3, 2007

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- 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

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

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

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 - HCl 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

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 (NO_x) [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

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 NO_x 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 (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.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

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 (SO₂) [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

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

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

- 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

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

G Iron and Steel MACT

- 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
Emergency Occurrence Report
Semi-Annual Natural Gas Fired Boiler Certification
Quarterly Report
Quarterly Deviation and Compliance Monitoring Report

Appendix A

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.

Responsible Official:	Leonard Churderewicz
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) 399-4325 Thomas Barnett
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 and Emission Offset Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories under PSD and Emission Offset Rules

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

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

- (a) Mittal Steel USA Inc. - Indiana Harbor East (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 Mittal Steel USA Inc. - Indiana Harbor East and each on-site contractor, solely for administrative purposes. The companies may maintain separate reporting and compliance certification.

Company Name	TV Permit Number
Mittal Steel USA Inc.- Indiana Harbor East	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)]

Mittal Steel USA Inc. - Indiana Harbor East 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 as 164, installed in 1997, with 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 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, 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 multicyclones 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 excentric 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 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 and cooling operations exhausting through stacks 144 and 145, respectively.
 - (7) Slag handling operations.
 - (8) EAF Shop Roof Monitor (stack 142).
- (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)]

Mittal Steel USA Inc. - Indiana Harbor East Plant (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 (100EF) or;
 - (2) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20EC (68EF); 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

Mittal Steel USA Inc. - Indiana Harbor East Plant (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 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 (SO₂)[326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a), the SO₂ 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 Exceedences. Failure to take response steps in accordance with Section C- Response to Excursions or Exceedences 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.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Mittal Steel USA Inc. – Indiana Harbor East
Source Address: 3210 Watling Street, East Chicago, IN 46312
Mailing Address: 3210 Watling Street, East Chicago, IN 46312
Source Modification No.: 089-23651-00316

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

Please check what document is being certified:

- 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:

Date:

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Mittal Steel USA Inc. – Indiana Harbor East
3210 Watling Street
East Chicago, Indiana 46312

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make
these representations on behalf of _____.
(Company Name)
4. I hereby certify that _____ (Company Name), _____
_____ (complete source location), Indiana, _____ (zip code), has constructed the
_____ (operation/facility) in conformity with the requirements and intent of the
construction permit application received by the Office of Air Quality on _____ (date) and as
permitted pursuant to Source Modification No. 027-22018-00046 issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20 _____.

My Commission expires:

Signature

Name (typed or printed)

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

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

Source Description and Location	
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<p>Source Name: Source Location: County: SIC Code: Operation Permit No.: Operation Permit Issuance Date: Significant Source Modification No.: Significant Permit Modification No.: Permit Reviewer:</p>	<p>Mittal Steel USA Inc. - Indiana Harbor East 3210 Watling Street, East Chicago, IN 46312 Lake 3312 T 089-6577-00316 September 12, 2006 089-23651-00316 089-23470-00316 Donald F. Robin, P.E. (317) 233-5691 drobin@idem.in.gov</p>
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Source Definition

Mittal Steel USA Inc. - Indiana Harbor East. is an integrated steel mill consists of a source with on-site contractors:

- (1) Mittal Steel USA Inc. - Indiana Harbor East (Plant ID 089-00316), the primary operation, is located at 3210 Watling Street, East Chicago, Indiana;
- (2) 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;
- (3) East Chicago Recovery (Plant ID 089-00358), the on-site contractor (a briquetting facility), is located at 3236 Watling Street, East Chicago, Indiana;
- (4) 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;
- (5) Oil Technology, Inc. (Plant ID 089-00369), the on-site contractor (a used oil recycling facility), is located at 3236 Watling Street, East Chicago, Indiana;
- (6) 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;
- (7) 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;
- (8) 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; and
- (9) LAFARGE Canada, Inc. (Plant ID 089-00458), the on-site contractor (a slag granulator and pelletizer operation), is located at 3210 Watling Street, East Chicago, Indiana.

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

contractors as one source.

Separate Part 70 permits have been issued to Mittal Steel USA Inc. - Indiana Harbor East and each on-site contractor, solely for administrative purposes.

Company Name	TV Permit Number
Mittal Steel USA Inc. - Indiana Harbor East	089-6577-00316
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 Canada, Inc.	089-14766-00458

Existing Approvals

The source was issued Part 70 Operating Permit No. 089-6577-00316 on September 12, 2006. There have been no approvals issued to this source since this issuance.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM10	Maintenance Attainment
PM2.5	Basic Nonattainment
SO ₂	Maintenance Attainment
NO _x	Attainment
8-hour Ozone	Moderate Nonattainment
CO	Maintenance Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana

Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.

- (d) 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.
- (e) Since this source is classified as a steel mill, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (f) Fugitive Emissions
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

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	Potential To Emit (tons/year)
PM	greater than 100
PM-10	greater than 100
SO ₂	greater than 100
VOC	greater than 100
CO	greater than 100
NO _x	greater than 100
Total HAPs	greater than 25

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because PM2.5 and VOC, nonattainment regulated pollutants, are emitted at a rate of 100 tons per year or more.
- (c) These emissions are based upon the permit modification application and the Technical Support Document for the applicant's Part 70 Operating Permit 089-6577-00316.
- (d) This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2004 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	No data
PM10	2,231
SO ₂	3,504
VOC	1,702
CO	52,537
NO _x	5,920
Pb	5.46

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Mittal Steel USA, Inc. – Indiana Harbor East on June 21, 2006, relating to the installation of a new slab grinder for processing slabs before entering the Hot Strip Mills. Production rates shall remain the same and the addition of this equipment will not debottleneck any operations. The following is a list of the modified emission units and pollution control devices:

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

The applicant has requested this modification in order to improve product quality and reduce operating costs.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

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

Pollutant	Potential To Emit (tons/year)
PM	66.83
PM ₁₀	19.40
SO ₂	0.00
VOC	0.00
CO	0.00
NO _x	0.00
Pb	0.07

HAPs	Potential To Emit (tons/year)
Chromium	0.17
Cobalt	0.07
Manganese	1.50
Nickel	0.07
TOTAL	1.81

This modification qualifies for a significant source modification in accordance with 326 IAC 2-7-10.5(f)(4) because the PTE of PM exceeds the threshold for minor source modifications, which is 25 tons per year.

Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because the modification includes a case-by-case determination of an emission limitation and therefore does not qualify for a minor permit modification.

Permit Level Determination – PSD and Emission Offset

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

Process/Emission Unit (Emission Unit ID No.)	Potential to Emit for Adding Grinder to No. 2 Slab Yard (tons/year)						
	PM	PM10	SO ₂	VOC	CO	NO _x	Pb
No. 2 slab grinder	14.97	12.60	0.00	0.00	0.00	0.00	0.01
Significant Level or Major Source Threshold	25	15	40	40	100	40	0.60

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. In addition, this modification to an existing major stationary source is not major because the emissions increases are less than the significant levels for VOC, NO_x, and PM10 (as a surrogate for PM2.5). Therefore, pursuant to 326 IAC 2-1.1-5, the nonattainment NSR requirements do not apply.

The applicant has submitted as part of the application engineering estimates and laboratory data for emission factors utilizing a similar grinding operation in order to demonstrate to the minor status of this project as it relates to PSD and Nonattainment NSR. The table below shows the provided efficiencies for PM, PM10, and PM2.5 with respect to capture and control of the proposed baghouse. The claimed capture efficiency of 95% is not well documented in the application. Therefore, IDEM has calculated the necessary theoretical capture efficiency necessary to avoid PSD and Nonattainment NSR (for PM2.5) and included these values as the final column of the following table.

Pollutant	% Capture as Stated in Application	% Control as Stated in the Application	Theoretical Capture Necessary to Avoid PSD and Nonattainment NSR
PM	95%	81.69%	76.7%
PM10	95%	36.94%	62.1%
PM2.5	95%	0.00%	0.00%

The calculations for theoretical capture of these pollutants are shown in detail in the emissions

calculations of Appendix A.

Although the application has presented an emission factor for PM2.5, emissions of PM10 will be utilized as a surrogate for PM2.5 for purposes of compliance demonstration.

Since this source is considered a major PSD and emission offset source and the unrestricted potential to emit of this modification is greater than twenty-five (25) tons of PM per year and fifteen (15) tons of PM₁₀ per year, this source has elected to limit the potential to emit of this modification as follows:

- (a) The PM emissions from No. 2 Slab Yard Grinder shall be limited to less than 5.7 lbs/hr.
- (b) The PM10 emissions from No. 2 Slab Yard Grinder shall be limited to less than 3.42 lbs/hr.

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

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 089-6577-00316. Deleted language appears as ~~strike throughs~~ and new language appears in **bold**:

1. Conditions A.3 and D.14 have been modified to include the new grinder and description.

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

Mittal Steel USA Inc. - Indiana Harbor East Plant ID 089-00316, consists of the following permitted emission units and pollution control devices:

- ...
(o) Shops comprised of the following facilities, process equipment, and operational practices:
 - ...
(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/PM10 control, and exhausting to stack 95.

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:**
 - ...
(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/PM10 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.)

2. A new Condition D.14.2 has been inserted limiting emissions of the No. 2 Slab Yard Grinder to levels below the significance thresholds for prevention of significant deterioration and nonattainment NSR. Part (c) of the condition sets a minimum control device capture efficiency of 85%. Condition D.14.6 (formerly Condition D.14.5) has been revised to include the requirement to operate the new grinder baghouse while the grinder is in operation. Condition D.14.7 has been added to the permit to require stack testing to demonstrate compliance with Condition D.14.2.

Conditions have been renumbered as shown and the Table of Contents has been modified to reflect these changes.

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

- (a) **The former Mold Foundry, No. 6 Roll shop, Electric shop, and 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.

- 3. **Compliance monitoring and record keeping Conditions D.14.8, D14.9, and D.14.11 (formerly Conditions D.14.6, D.14.7, and D.14.9 respectively) have been revised to include the No. 2 Slab Yard grinder baghouse with the existing baghouse.**

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

D.14.68 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.

- (bc) 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.
- (ed) 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.
- (de) 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.
- (ef) 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.14.79 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 ~~is are~~ in operation ~~once per day~~ and is 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.

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

D.14.911 Record Keeping Requirements

- (a) To document compliance with Condition D.14.68 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.14.79, 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.
5. The Titles of Conditions D.8.9 and D.14.3 have been changed to include Prevention of Significant Deterioration. The titles are now consistent with the rule citations and the condition requirements. The table of contents has also been updated.

6. The signature block of the permit cover page has been modified as follows:

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 Significant Permit Modification No.: 089-23470-00316	
Issued by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: September 12, 2011

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-23651-00316 and Significant Permit Modification 089-23470-00316. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

APPENDIX A

Source Name: Mittal Steel USA Inc. - Indiana Harbor East
Source Location: 3210 Watling Street, East Chicago, IN 46312
County: Lake
Significant Source Modification No.: 089-23651-00316
Significant Permit Modification No.: 089-23470-00316

Theoretical Capture Efficiency (CAP) Required Rendering the Requirements of PSD and Nonattainment NSR not applicable:

PM:

Significance Level: 25 tpy
Uncontrolled Potential To Emit (UPTE): 66.83 tpy
Stated Control Efficiency of Baghouse (CON): 81.69%

Equation:

$$\text{Emissions} = \text{UPTE} - [\text{UPTE} * \text{CAP} * \text{CON}]$$
$$66.83 - (66.83)(\text{CAP})(81.69\%)$$

Assume Emissions = 24.95 tpy to remain below PSD significance threshold

$$24.95 = 66.83 - (54.59)(\text{CAP})$$

$$\text{CAP} = (66.83 - 24.95) / 54.59$$

$$\boxed{\text{CAP} = 76.7\%}$$

PM10/PM2.5:

Significance Level: 15 tpy
Uncontrolled Potential To Emit (UPTE): 19.40 tpy
Stated Control Efficiency of Baghouse (CON): 36.94%

Equation:

$$\text{Emissions} = \text{UPTE} - [\text{UPTE} * \text{CAP} * \text{CON}]$$
$$19.40 - (19.40)(\text{CAP})(36.94\%)$$

Assume Emissions = 14.95 tpy to remain below PSD significance threshold

$$14.95 = 19.40 - (7.17)(\text{CAP})$$

$$\text{CAP} = (19.40 - 14.95) / 7.17$$

$$\boxed{\text{CAP} = 62.1\%}$$