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 4, 2010

RE: ArcelorMittal USA, Inc./ 089-28972-00316

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.

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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

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Mr. Brian Wolters
MEU Environmental
3001 Dickey Road, Station 001
East Chicago, Indiana 46312

November 4, 2010

Re: 089-28972-00316
Significant Permit Modification to:
Part 70 Source (TV 089-6577-00316)

Dear Mr. Wolters:

ArcelorMittal USA, Inc. was issued Part 70 Operating Permit T089-6577-00316 on September 12, 2006 for an integrated iron and steel mill. An application to modify the source's Part 70 Operating Permit was received on February 12, 2010. 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 incorporating applicable requirements for the following emission units permitted in Significant Source Modification No. 089-28917-00316:

(a) Addition of one (1) 561.6 million British thermal units per hour (MMBtu/hr) boiler, identified as Boiler No. 504 to existing No. 5 Boilerhouse fired using the No. 7 Blast Furnace Gas (BFG) generated during the iron making process that is currently being flared, and natural gas as supplemental fuel, including ancillary equipment (deaerator, feedwater pump, BFG supply line, boiler control equipment, etc.) necessary to operate the boiler.

The boiler will generate 350,000 pounds of steam per hour that will be sent to existing generators to generate 38.14 Megawatts of electricity for in-plant use, resulting in less electrical power purchased by the plant.

All other conditions of the permit shall remain unchanged and in effect. Please find a copy of the revised Part 70 permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Aida De Guzman OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Aida De Guzman or extension (3-4972), or dial (317) 233-4972.

Sincerely,

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

Attachments
APD

cc: Lake County
Lake County Health Department
Compliance and Enforcement Branch
Permit Administration Support Section
Northwest Regional Office

IDEM

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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.: 089-25725-00316, issued July 9, 2008
Second Administrative Amendment No.: 089-26796-00316, issued August 20, 2008
Third Significant Permit Modification No.: 089-22044-00316, issued November 3, 2008
Fourth Significant Permit Modification No.: 089-18491-00316, issued on May 26, 2010

Fifth Significant Permit Modification No.: 089-28972-00316	
Issued by/Original Signed By: For Donald F. Robin, P.E., Section Chief Permits Branch Office of Air Quality	Issuance Date: november 4,2010 Expiration Date: September 12, 2011

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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]

Compliance Determination Requirements
D.10.4 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.11.4 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

D.12 FACILITY OPERATION CONDITIONS - Coated Products

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.12.1 Particulate Matter [326 IAC 6.8-6]
D.12.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]
D.12.3 Sulfur Dioxide (SO2) [326 IAC 7-4.1-1]
D.12.4 Nitrogen Oxide (NOx) [326 IAC 2-2]
D.12.5 Emission Offsets [326 IAC 2-3]
D.12.6 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

Compliance Determination Requirements
D.12.7 Particulate Matter (PM)

D.13 FACILITY OPERATION CONDITIONS - Utilities

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.13.1 Particulate Matter [326 IAC 6.8-2]
D.13.2 Particulate Emission Limitations [326 IAC 6.8-1-2]
D.13.3 Sulfur Dioxide (SO2) [326 IAC 7-4.1-11]
D.13.4 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2-3]
D.13.5 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]
D.13.6 Equipment and Operational Specifications [326 IAC 2-2]
D.13.7 Operation Restriction – Shutdown of No.4 AC Station [326 IAC 2-2][326 IAC 2-3]

Compliance Determination Requirements
D.13.8 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]
D.13.9 NO_x Continuous Emission Rate Monitoring Requirement [326 IAC 3-5]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.13.10 Sulfur Dioxide (SO_2) Sampling and Analysis [326 IAC 7-4.1-11(d)]
D.13.11 Maintenance of NOx CEMS [326 IAC 2-7-5(3)(A)(iii)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.13.12 Record Keeping Requirements
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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 Prevention of Significant Deterioration and Emission Offset [326 IAC 2-2][326 IAC 2-3]
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Compliance Determination Requirements
D.14.4 Particulate Control [326 IAC 2-7-6(6)]

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D.14.5 Visible Emissions Notations [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.14.6 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]
D.14.7 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.14.8 Record Keeping Requirements

D.15 FACILITY OPERATION CONDITIONS - Storage Vessels

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]
D.15.1 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

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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.1 **Clean Air Interstate Rule (CAIR) Nitrogen Oxides Annual, Sulfur Dioxide, and Nitrogen Oxides Ozone Season Trading Programs**

E.1.1 Automatic Incorporation of Definitions [326 IAC 24-3-7(e)] [40 CFR 97.323(b)]
E.1.2 Standard Permit Requirements [326 IAC 24-3-4(a)] [40 CFR 97.306(a)]
E.1.3 Monitoring, Reporting, and Record Keeping Requirements [326 IAC 24-3-4(b)] [40 CFR 97.306(b)]
E.1.4 Nitrogen Oxides Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]
E.1.5 Excess Emissions Requirements [326 IAC 24-3-4(d)] [40 CFR 97.306(d)]
E.1.6 Record Keeping Requirements [326 IAC 24-3-4(e)] [326 IAC 2-7-5(3)] [40 CFR 97.306(e)]
E.1.7 Reporting Requirements [326 IAC 24-3-4(e)] [40 CFR 97.306(e)]
E.1.8 Liability [326 IAC 24-3-4(f)] [40 CFR 97.306(f)]
E.1.9 Effect on Other Authorities [326 IAC 24-3-4(g)] [40 CFR 97.306(g)]
E.1.10 CAIR Designated Representative and Alternate CAIR Designated Representative [326 IAC 24-3-6] [40 CFR 97, Subpart BBBB]

E.2 **Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units**

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR Part 60, Subpart A]
E.2.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Db]

F Fugitive Dust Sources

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

G.1 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]
G.1.2 National Emission Standards for Hazardous Air Pollutants (HAPs): Integrated iron and Steel Manufacturing - Sinter Plants [40 CFR 63, Subpart FFFFF] [326 IAC 20-1]

G.2 Coal Preparation Plants

G.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]
G.2.2 New Source Performance Standards for Coal Preparation Plants [40 CFR 60, Subpart Y] [326 IAC 12]

G.3 Lime Manufacturing Plants

G.3.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
G.3.2 National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants [40 CFR 63, Subpart AAAAA]

G.4 Steel Pickling

G.4.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]
G.4.2 National Emission Standards for Hazardous Air Pollutants for Steel Pickling-HCl Process Facilities and Hydrochloric Acid Regeneration Plants [326 IAC 20-1-1] [40 CFR 63, Subpart CCC]

G.5 Storage Vessels

G.5.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]
G.5.2 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60, Subpart Kb] [326 IAC 12]

Certification
Emergency Occurrence Report
Semi-Annual Natural Gas Fired Boiler Certification
Quarterly Reports
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.

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

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

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;

(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 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; and

(k) Phoenix Services LLC, dba Metal Services LLC (Plant ID 089-00536), the on-site contactor (a slag and kish processing operation) is located at 3236 Watling Street, East Chicago, Indiana 46312.

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
Phoenix Services LLC, dba Metal Services LLC	089-26806-00536

The source includes ArcelorMittal Indiana Harbor, LLC, an integrated steel mill with the following on-site contractors:

(a) ArcelorMittal Indiana Harbor, LLC (Plant ID 089-00318), the primary operation, is located at 3001 Dickey Road, East Chicago, Indiana;

(b) Oil Tech, Inc (Plant ID 089-00375), the on-site contractor (a used oil recycling facility), is located at 3001 Dickey Road, East Chicago, Indiana;

(c) International Mill Service (Plant ID 089-00353), the on-site contractor (a steel slab scarfer) is located at 3001 Dickey Road, East Chicago, Indiana;

(d) Edward Levy (Plant ID 089-00339), the on-site contractor (a slag processing facility), is located at 3001 Dickey Road, East Chicago, Indiana;

(e) Ironside Energy, LLC (Plant ID 089-00448), the on-site contractor (an industrial steam and electric power cogeneration plant), is located at 3001 Dickey Road, East Chicago, Indiana;

(f) Phoenix Services, LLC (Plant ID 089-00538), the on-site contractor (a slag and kish processing plant), is located at 3001 Dickey Road, East Chicago, Indiana;

(g) Beemsterboer Slag Corporation (Plant ID 089-00537), the on site contractor (a metallurgical coke screening plant), is located at 3001 Dickey Road, East Chicago, Indiana; and

(h) Mid-Continental Coal and Coke (Plant ID 089-00507, the on site contractor (metallurgical coke screening plant), is located at 3001 Dickey Road, East Chicago, Indiana.

Company Name	TV Permit Number
ArcelorMittal Indiana Harbor, LLC	089-7099-00318
Oil Technology	089-7517-00375
International Mill Service	089-7562-00353
Edward Levy	089-6260-00339
Ironside Energy	089-11557-00448
Phoenix Services, LLC	089-27232-00538
Beemsterboer Slag Corporation	089-27146-00537
Mid-Continental Coal and Coke	089-21801-00507

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

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. The scrubber system equipment was modernized in 2007. 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), 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 284 MMBtu/hr fueled by natural gas or residual fuel oil, with exhaust from kilns routed back to preheaters and then to a set of multiclones. The remaining emissions from the kilns and preheaters are controlled by two (2) baghouses (“213-1” & “213-2”) exhausting through stacks 45 and 49.

(3) Dust fines are sent to two dust bins, with emissions controlled by baghouses (“217-1” & “217-2”) 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 (“413”) 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 at the truck loadout area with exhaust controlled by loadout baghouse (“408”) and exhausting through stack 48. Lime product handling emissions from transfer points between both sides of lime cooler rotary valves and lime product/reject handling belts inside the firing building are controlled by a baghouse (“420”) exhausting through stack 50. 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 particulate emissions controlled by a baghouse having a flow rate of 40,000 acfm and a Wet Gas Scrubber for Sulfur Dioxide (SO2) emissions control 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 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.

(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. 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.

(2) 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.

(3) 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.

(4) 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 consisting of Boilers 501-503 installed in 1976, each with an estimated maximum heat input of 520 MMBtu/hr exhausting through stack 134 and No. 504 Boiler approved in 2010 for construction with an estimated maximum heat input of 561.6 MMBtu/hr exhausting through stack 134a. The boilers are fired by blast furnace gas from No. 7 Blast Furnace gas and natural gas, 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).

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

and

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

(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) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:

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

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require 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 and Enforcement Branch, 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 Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified 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 Administration and Support Section, 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 Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and 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 Administration and Support Section, 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
Compliance and Enforcement Branch, 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

The notification which shall be submitted by the Permittee does require 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, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.

(b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy 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, 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.

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

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

(d) 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
Compliance and Enforcement Branch, 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, 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, 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.

Compliance Determination Requirements

D.1.4 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.1.5 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.1.6 Record Keeping Requirements

(a) To document compliance with Conditions D. 1.3 and D.1.5, 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.7 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.1.6 (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.

Compliance Determination Requirements

D.2.13 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 and Enforcement Branch, 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 five (5) years from the date of this valid compliance demonstration.

(b) 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.2.14 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.2.15 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 when dust suppression is required to limit product fugitives. Operations may continue without operation of the dust collection systems when coke material moisture content acts as an alternative dust suppression.

(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 under normal damper operating

configurations. When the west baghouse is inoperable, casting may continue using cross-over control configuration routing control of both canopy and #3 and #4 taphole emissions to the east baghouse (167).

(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 under normal damper operating configurations. When the east baghouse is inoperable, casting may continue using cross-over control configuration routing control of both canopy and #1 and #2 taphole emissions to the west baghouse (166).

(e) Pursuant to construction permit 089-9033-00316, issued on February 26, 1998, the baghouses for the coke handling equipment (Stack IDs 164 and 169) shall be in operation when dust suppression is required to limit product fugitives. Operations may continue without operation of the dust collection systems when coke material moisture content acts as an alternative dust suppression.

(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.2.16 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.2.17 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.2.18 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.2.19 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.2.18(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.2.19 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.2.20 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.2.18(c).

(b) To document compliance with Conditions D.2.12 and D.2.17, the Permittee shall maintain the following records:

(1) Records of the total coke oven gas, blast furnace gas, fuel oil, and natural gas usage for each day at the 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.2.16, the Permittee shall maintain records of the occurrence of alarm events at the flare and response steps taken to correct the same.

(f) To document compliance with Conditions D.2.18 and D.2.19, 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.21 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.2.17. 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, 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, the PM10 emissions from the upper screening station baghouse (11) when in operation 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.

(c) 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.

(d) 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.

(e) 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.

(f) 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 limit and as the approved alternate test method for the sinter plant VOC limit set forth in the Iron and Steel MACT.

(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.

Compliance Determination Requirements

D.3.5 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 and Enforcement Branch, the Permittee shall perform 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 and is approved by the Commissioner. These tests shall be repeated at least once every five (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.3.6 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 no later than the time at which the exhaust temperature reaches 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 is only required to operate when required by product fugitives. Therefore, operations may continue using alternative dust suppression operating practices, such as water addition to the sinter bed, during periods of baghouse inoperability, (including but not limited to maintenance, bag failure or other conditions).

(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.3.7 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.3.8 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.3.9 Record Keeping Requirements

(a) To document compliance with Conditions D.3.3 and D.3.8, 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.10 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.3.11 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.3.9 (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.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, 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, 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.

Compliance Determination Requirements

D.4.3 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 and C. When dust suppression is required to limit product fugitives. Operations may continue without operation of the dust collection systems when coal material moisture content acts as an alternative dust suppression. Daily visible emission notations shall be conducted at transfer points when the baghouses are not operating.

(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.4.4 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) In the case of batch or discontinuous operations, readings shall be taken during normal operations.

(c) If visible emissions are observed, and corrective actions cannot be initiated within one hour of the observation, the Permittee shall record the reason that corrective action cannot be taken within the hour and an employee certified to perform an EPA Method 9 evaluation shall determine whether opacity exceeds twenty percent (20%) in one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4; and:

(1) If the opacity exceeds twenty percent (20%) per Method 9, the Permittee shall shut down the associated process as soon as practicable, unless either: (1) the Permittee is able to bring opacity to under twenty percent (20%) per Method 9 within a reasonable period of time; or (2) the situation qualifies as an "emergency" under 326 IAC 2-7-1(12). If the Permittee continues to operate the associated process after determining that opacity exceeds twenty percent (20%) per Method 9, then the Permittee shall perform an additional Method 9 reading once every four daylight hours until opacity is returned to under twenty percent (20%). Once the Permittee is able to return opacity to under twenty percent (20%) per this subsection (d), then Permittee shall perform response actions according to subsection (c)(1), (2) and/or (3), as appropriate.

(2) If opacity does not exceed twenty percent (20%) per the Method 9 observation referenced above, inspection of the baghouse shall be scheduled at the next available process downtime. Repairs shall be scheduled as expeditiously as practical, based on the inspection results.

(3) If opacity exceeds twenty percent (20%) per any Method 9 observations referenced above, the Permittee must notify IDEM, if the Permittee anticipates that operations will continue for ten (10) days or more before the failed baghouse units will be repaired or replaced.

(d) 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 Exceedances shall be considered a deviation from this permit.

D.4.5 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 an extended range established by an IDEM approved compliance 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 in accordance with the manufacturer's instructions but not less frequently than once per year.

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

D.4.6 Record Keeping Requirements

(a) In order to document compliance with Condition D.4.4, 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.4.5, 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, 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.

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, 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.

D.5.3 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (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 production of leaded steel shall occur at the No. 1 EAF Shop.

Compliance Determination Requirements

D.5.8 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 and Enforcement Branch, 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 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.5.9 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. When the baghouse is not operating, operations may continue using the following alternative procedures.

(i) Lime shall not be off loaded using rear dumping trucks. Bottom off loading trailers shall be used.

(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 the No. 10 or No. 20 furnace is operating under normal conditions. When the No. 10 or No. 20 furnace is operating and the secondary ventilation scrubber is not operating, operations may continue using the following alternative BOF charging procedures.

(1) The charging aisle emission control system shall be in operation.

(2) Each hot metal charge shall be greater than 120 seconds in duration.

(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) 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.5.10 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.5.11 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.5.12 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.5.13 Record Keeping Requirements

(a) To document compliance with Conditions D.5.4 and D.5.12, the Permittee shall maintain the following records:

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

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

D.5.14 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.5.13(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.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 and modernized in 2007. 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), 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 Lake County PM10 emission requirements [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17, 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.6.2 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 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.6.3 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (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.6.4 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. 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. 4 BOF secondary vent stack (37) shall not exceed 0.001 lbs/ton and 0.535 lbs/hour.

D.6.5 PM10 and PM2.5 PSD and Nonattainment NSR Minor Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

Prior to the operation of the No. 504 Boiler and thereafter:

(a) The PM10 and PM2.5 emissions from the No. 4 off-gas scrubber system, exhausting through stack 38, associated with the two (2) BOFs, identified as No. 50 and No. 60 shall be limited to 40.79 pounds hour and 39.57 pounds per hour, respectively. These limits are for filterable PM10 and filterable PM2.5 only.

(b) The No. 4 BOF Shop Mold Fume Exhaust baghouse shall be in operation at all times that the molds are in operation and the PM10 and PM2.5 emissions from this Baghouse shall be limited to 0.41 pound per hour for each pollutant. These limits are for filterable PM10 and filterable PM2.5 only.

(c) The Permittee shall not utilize the bottom stirring process (installed during the vessel reline in 2008) at the No.60 BOF vessel in the No.4 Steel Production Shop (No.4 SP) in support of the No. 504 Boiler project.

(d) The total molten steel transferred from the No.4 SP to the LMF and Casters at No.2 Steel Production Shop (No.2 SP) using the rail link constructed in 2009 (designated as Project X) shall not exceed 3,522,720 tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with this Condition, including Condition D.13.5, Condition D.12.6 of this permit, Condition D.1.6, Condition D.7.5 in SPM 089-29300-00536 of ArcelorMittal Indiana Harbor, LLC (West Plant), Conditions D.1.3, D.3.1 and D.3.2 in SPM No. 089-29271-00356 of Beemsterboer Slag Corporation, and Condition D.1.3 in SPM No. 089 29316-00537 of Beemsterboer Slag Corporation shall result in total emission reduction of 87.12 tons of PM10 per year, 64.48 tons of PM2.5 per year, 173.52 ton of SO2 per year, 128.92 tons of NOx per year and 12.09 tons of CO per year and shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to the No. 504 Boiler permitted in SSM 089-28917-00316.

Compliance Determination Requirements

D.6.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.6.1 and D.6.2, the Permittee shall perform TSP and opacity testing on the No. 4 BOF (stack 38) utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) Prior to startup of the No. 504 Boiler, the Permittee shall perform filterable PM testing on the No. 4 off-gas scrubber system, associated with the two (2) BOFs, identified as No.50 and No.60 to demonstrate compliance with D.6.5(a) for the filterable PM10 and filterable PM2.5 emission limits using the ratio of 67% for PM10 to PM (PM10/PM) and the ratio of 65% for PM2.5 to PM (PM2.5/PM). This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(c) Prior to startup of the 504 Boiler, the Permittee shall perform filterable PM 2.5 and filterable PM10 testing on the baghouse associated with No. 4 BOF Caster Mold to demonstrate compliance with Condition D.6.5(b). This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance

testing required by this condition.

D.6.7 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 the No. 50 or N0. 60 furnaces are operating under normal conditions.

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

In order to comply with condition D.6.4, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

D.6.9 Visible Emissions Notations

Prior to the operation of the No. 504 Boiler and thereafter:

(a) Visible emission notations of the caster mold baghouse stack 214 shall be performed. These notations shall be taken 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, including trained personnel under contract with the source, is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.6.10 Baghouse Monitoring

Prior to the operation of the No. 504 Boiler and thereafter, the Permittee shall record the pressure drop across the baghouse at least once per day when the associated No. 4 BOF Caster Mold is in operation. When for any one reading the pressure drop range is outside the normal range of 4.5 to 10 inches of water or the range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is below the above mentioned minimum, or pressure drop that is outside the range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instruments used for determining the flow rate shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once semi-annually.

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D.6.11 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). Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.6.12 Record Keeping Requirements

(a) To document the compliance status with Conditions D.6.4 and D.6.8, 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.

(b) Prior to the operation of the No. 504 Boiler and thereafter, in order to document the compliance status with Condition D.6.9 the Permittee shall maintain records of once per day visible emission notations of the caster mold baghouse (214) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) Prior to the operation of the No. 504 Boiler and thereafter, to document the compliance status with condition D.6.10, the Permittee shall maintain the records once per day of the pressure drop across the caster mold fume 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 a pressure drop reading (e.g. the process did not operate that day).

(d) To document the compliance status with condition D.6.5(d), the Permittee shall maintain the records of the molten steel that Project X transferred from the No.4 SP to the LMF and Casters at No.2 SP using the rail link constructed in 2009.

(d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.6.13 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 the limits in Condition D.6.4, in order to document compliance with Conditions D.6.4 and D.6.12(a. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The quarterly report shall be submitted no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(b) A quarterly report to document the compliance status with Condition D.6.5(d) shall be submitted for the molten steel that Project X transferred from the No.4 SP to the LMF and Casters at No.2 SP using the rail link constructed in 2009. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The quarterly report shall be submitted no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

SECTION D.7 FACILITY OPERATION CONDITIONS

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

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 284 MMBtu/hr fueled by natural gas or residual fuel oil, with exhaust from kilns routed back to preheaters and then to a set of multiclones. The remaining emissions from the kilns and preheaters are controlled by two (2) baghouses ("213-1" & "213-2") exhausting through stacks 45 and 49.

(3) Dust fines are sent to two dust bins, with emissions controlled by baghouses ("217-1" & "217-2") 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 ("413") 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 at the truck loadout area with exhaust controlled by loadout baghouse ("408") and exhausting through stack 48. Lime product handling emissions from transfer points between both sides of lime cooler rotary valves and lime product/reject handling belts inside the firing building are controlled by a baghouse ("420") exhausting through stack 50. 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 Lake County PM10 emission requirements [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17, 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.7.2 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.

Compliance Determination Requirements

D.7.3 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.7.4 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

The Permittee shall record the pressure drop across the 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 an extended range established by an IDEM approved compliance 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 in accordance with the manufacturer's instructions but not less frequently than once per year.

D.7.5 Broken or Failed Bag Detection [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) For a single compartment baghouses (217-1, 217-2 exhausting to stacks 46-1 and 46-2) controlling emissions from the dust bins, in the event that bag failure is observed, the feed to the dust bin controlled by the failed unit 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 and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouses (408 exhausting to stack 48) controlling emissions from the truck loadout only from the ten silos, in the event that bag failure is observed, the feed controlled by the failed unit shall be shut down immediately during truck loadout 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 and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(c) For a single compartment baghouses (413 exhausting to stack 47) controlling controlling fugitives from transfer points above the silos inside the enclosed silo building, in the event that bag failure is observed, the feed controlled by the failed unit 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 and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(d) For a single compartment baghouses (420 exhausting to stack 47) controlling fugitives from project/reject belts from inside the firing building, in the event that bag failure is observed, the feed to the feed controlled by the failed unit 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 and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.7.6 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.7.7 Record Keeping Requirements

(a) To document compliance with Condition D.7.4, the Permittee shall maintain the records of the pressure drop across the baghouses once per day during normal operation.

(b) To document compliance with Conditions D.7.4 and D.7.6, 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.

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

D.7.8 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.7.7(c). The quarterly report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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 particulate emissions controlled by a baghouse having a flow rate of 40,000 acfm and a Wet Gas Scrubber for Sulfur Dioxide (SO2) emissions control 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, 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 (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, 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 and SSM 089-20235-00316 issued July 11, 2005, 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: 0.643 pounds of SO_2 per ton of steel for non-sulfur bearing heats, 1.091pounds of SO_2 per ton of steel for 1100 series steel, and 2.312 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 not exceed 792,077 tons per year 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.

Compliance Determination Requirements

D.8.10 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.8.3 and D.8.4, the Permittee shall perform SO2 and opacity testing on the electric arc furnace baghouse (stack 141) utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate compliance with Condition D.8.9, the Permittee shall perform lead (Pb) emissions testing on stacks 136, 137, and 138 for the No. 1 Electric Arc Furnace Shop utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(c) In order to demonstrate compliance with Conditions D.8.4(c) and D.8.6, the Permittee shall perform SO2 emissions testing on the Ladle Metallurgical Facility Wet Gas Scrubber (stack 143) utilizing methods as approved by the Commissioner not later than 180 days after the issuance of this SPM No. 089-28972-00316. Subsequent testing shall be conducted once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.8.11 Particulate and Sulfur Dioxide (SO2) Controls [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 and the wet gas scrubber for SO2 control shall be in operation at all times that the ladle metallurgical station is processing steel.

(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) In the event that a scrubber failure has been observed, failed units and the associated process will be shut down upon completion of processing of the steel in process at the Electric Arc Furnace and until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). The Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.8.12 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, 138 and 143) 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.8.13 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 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 an extended range established by an IDEM approved compliance stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The 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 an extended range established by an IDEM approved compliance stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(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 an extended range established by an IDEM approved compliance stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated in accordance with the manufacturer's instructions or replaced but not less frequently than once per year.

D.8.14 Wet Gas Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall monitor and record the recirculation water flow rate and pH of the scrubbing liquid for the wet gas scrubber associated with the LMF Station at least once per day. When for any one reading, the flow rate is below the minimum of 460 gallons per minute or the minimum established during the latest stack test, and when the pH of the scrubbing liquid drops below 7.0 or the level established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A scrubbing flow rate reading that is below the above mentioned minimum and scrubbing liquid pH that drops below the level mentioned above are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The instruments used for determining the scrubbing liquid flow rate and pH shall be subject to approval by IDEM, OAQ, and shall be calibrated (in accordance with the manufacturer's instructions) or replaced but not less frequently than once per year.

D.8.15 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.8.16 Record Keeping Requirements

(a) To document the compliance status with Conditions D.8.5 and D.8.15, the Permittee shall maintain the following records:

(1) Records of the 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 the compliance status 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 the compliance status with Condition D.8.12, 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 the compliance status with condition D.8.13, 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) In order to document the compliance status with condition D.8.14, the Permittee shall maintain the once per day records of the water recirculation flow rate and pH during normal operation. The Permittee shall include in its daily record when recirculation water flow and pH are not taken and the reason for the lack of recirculation water flow rate and pH (e.g. the process did not operate that day).

(f) 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.

(g) 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.

(h) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.8.17 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 status with Conditions D. 8.6 and D.8.16(a). Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The quarterly report shall be submitted no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(b) A quarterly summary of the information to document compliance with Condition D.8.9(d) shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

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 (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).

Compliance Determination Requirements

D.9.6 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 from the date of the last valid compliance test, whichever is earlier or an alternative date as determined by OAQ, Compliance and Enforcement Branch, 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.9.7 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.9.8 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.9.3 and D.9.7 (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 6.8-6-17(c), the 12" Bar Mill billet reheat furnace (89) shall fire natural gas only.

D.10.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (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.

Compliance Determination Requirements

D.10.4 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 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (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).

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. 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.

(2) 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.

(3) 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.

(4) 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 Particulate Matter [326 IAC 6.8-6]

Pursuant to326 IAC 6.8-6-17(c), the following combustion sources shall fire natural gas only:

(a) No. 5 Galvanizing Line (182)

(b) No. 1 Normalizing Line (184)

(c) No. 3 Continuous Anneal Line (173)

(d) No. 5 and No. 6 Batch Anneals (112 and 113)

D.12.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (Nonattainment Area Particulate Limitations), the particulate matter emissions from the reducing furnace (81A), galvanneal furnace (182A), flame heating furnace (183) and annealing furnace (174) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.12.3 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.12.4 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 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.

(c) 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.12.5 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.12.6 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The No. 3 Galvanizing Line and No. 4 Aluminizing Line shall be permanently shutdown and removed from operation, prior to the operation of the No. 504 Boiler.

Compliance with this Condition, including Conditions D.6.5 and D.13.5 of this permit, Condition D.1.6, Condition D.7.5 in SPM 089-29300-00536 of ArcelorMittal Indiana Harbor, LLC (West Plant), Conditions D.1.3, D.3.1 and D.3.2 in SPM No. 089-29271-00356 of Beemsterboer Slag Corporation, and Condition D.1.3 in SPM No. 089- 29316-00537 of Beemsterboer Slag Corporation shall result in total emission reduction of 87.12 tons of PM10 per year, 64.48 tons of PM2.5 per year, 173.52 ton of SO2 per year, 128.92 tons of NOx per year and 12.09 tons of CO per year and shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to the source modification permitted in SSM 089-28917-00316.

Compliance Determination Requirements

D.12.7 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.

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 consisting of Boilers 501-503 installed in 1976, each with an estimated maximum heat input of 520 MMBtu/hr exhausting through stack 134 and No. 504 Boiler approved in 2010 for construction with an estimated maximum heat input of 561.6 MMBtu/hr exhausting through stack 134a. The boilers are fired by blast furnace gas from No. 7 Blast Furnace gas and natural gas, produce steam, which is used in three turbo blowers to produce blast air, at generators to produce electrical power, and for general plant use. No. 504 Boiler uses natural gas for pilots and as backup fuel with maximum annual rate limited to 492 MMCF.

(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 Particulate Matter [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-17 (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 501-504 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.13.2 Particulate Emission Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, the particulate emissions from the No. 504 Boiler shall not exceed 0.01 gr/dscf.

D.13.3 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 501-504, shall not exceed 0.198 lbs/MMBtu and 265.2 lbs/hour.

D.13.4 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.13.7 show that the CO emission limitations in condition D.13.3 are not achievable in practice, the Permittee can request the Department to re-evaluate the CO emissions limitations in D.13.3 (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.13.5 PM10, PM2.5, SO2, NOx and CO PSD and Emission Offset Credit Limits [326 IAC 2-2] [326 IAC 2-3]

(a) The total natural gas fuel usage at the No. 504 Boiler (pilot light and supplemental fuel) shall be limited to 492 million cubic feet (MMCF) per twelve consecutive month period, with compliance determined at the end of each month.

(b) When No. 7 Blast Furnace is in operation during a twelve (12) consecutive month period, the minimum quantity of No. 7 Blast Furnace Gas (BFG) fuel usage at the No. 504 Boiler shall be greater than or equal to 3,288,088 million British thermal units (MMBtu) per twelve consecutive month period, with compliance at the end of each month.

(c) The PM10 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).

(d) The PM2.5 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).

(e) The NOx emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 29.91 pounds per hour (lbs/hr).

(f) The CO emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.138 pound per MMBtu (lb/MMBtu).

(g) The shutdown in March 9, 2010 of Heritage Slag Products, LLC production plant (Plant ID 089- 00481) shall be permanent.

Compliance with this Condition, including Conditions D.6.5 and D.12.6 of this permit, Condition D.1.6, Condition D.7.5 in SPM 089-29300-00536 of ArcelorMittal Indiana Harbor, LLC (West Plant), Conditions D.1.3, D.3.1 and D.3.2 in SPM No. 089-29271-00356 of Beemsterboer Slag Corporation, and Condition D.1.3 in SPM No. 089 29316-00537 of Beemsterboer Slag Corporation shall result in total emission reduction of 87.12 tons of PM10 per year, 64.48 tons of PM2.5 per year, 173.52 ton of SO2 per year, 128.92 tons of NOx per year and 12.09 tons of CO per year and shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to the No. 504 Boiler permitted in SSM 089-28917-00316.

D.13.6 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 (Boilers 211-213).

D.13.7 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.

Compliance Determination Requirements

D.13.8 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]

(a) Not later than sixty (60) days of achieving maximum production rate, but no later than one hundred eighty (180) days after the startup of No. 504 Boiler, the Permittee shall perform CO emissions testing when the boiler is burning BFG, utilizing methods as approved by the Commissioner to demonstrate compliance with the CO emission factor or Condition D.1.3.5(f) used in the PTE calculations of the No. 504 Boiler. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. This test does not require a repeat testing.

(b) The PM 2.5 and PM10 testing on the No. 504 Boiler to show compliance with emission factors or Condition D.1.3.5(c and (d) used in the PTE calculations of the No. 504 Boiler shall be performed not later than 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or not later than 180 days of achieving normal operation of the No. 504 Boiler, whichever comes later. This testing shall be conducted utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. This test does not require a repeat testing.

D.13.9 NO_x Continuous Emission Rate Monitoring Requirement [326 IAC 3-5]

To demonstrate the compliance status with the NOx emissions limit in D.13.5(e) for the No. 504 Boiler, the Permittee shall install a continuous emissions monitoring system as allowed under the Clean Air Act and 326 IAC 3-5-1(d).

The Permittee shall install, calibrate, certify, operate and maintain a continuous emissions monitoring system to monitor NOx emissions, in accordance with 326 IAC 3-5-2 through 326 IAC 3-5-7.

(1) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after the monitor installation, a complete written continuous monitoring standard operating procedure (SOP), in accordance with the requirements of 326 IAC 3-5-4.

(2) Relative accuracy tests and routine quarterly audits shall be performed in accordance with the contents of the standard operating procedures pursuant to 326 IAC 3-5-5.

(3) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

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

D.13.10 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.13.3, for No.2 AC Station Boilers 211-213 and No. 5 Boilerhouse 501-504, the Permittee shall comply with the sampling and analysis protocol in accordance with 326 IAC 7-4.1-11(b)(1).

D.13.11 Maintenance of NOx CEMS [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the NOx continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(b) The continuous emissions monitoring system (CEMS) shall be operated at all times the emissions unit or process is operating except for reasonable periods of monitor system downtime due to necessary calibration or maintenance activities or malfunctions. Calibration and maintenance activities shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a).

(c) Except as otherwise provided by a rule or provided specifically in this permit, whenever a continuous emission monitor system (CEMS) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, the Permittee shall perform supplemental monitoring by using calibrated handheld monitors to measure the NOx emissions on a once per shift basis, unless the CEMS operation is restored prior to the end of the shift.

The handheld monitors shall be approved by the IDEM, OAQ.

(d) The Permittee shall keep records in accordance with 326 IAC 3-5-6(b) that includes the following:

(1) All documentation relating to:

(A) design, installation, and testing of all elements of the monitoring system; and

(B) required corrective action or compliance plan activities.

(2) All maintenance logs, calibration checks, and other required quality assurance activities.

(3) All records of corrective and preventive action.

(4) A log of plant operations, including the following:

(A) Date of facility downtime.

(B) Time of commencement and completion of each downtime.

(C) Reason for each downtime.

(e) The Permittee shall keep records that describe the supplemental monitoring implemented during the downtime to assure compliance with applicable emission limitations.

(f) In accordance with 326 IAC 3-5-7(5), the Permittee shall submit reports of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately.

The reports shall include the following:

(1) Date of downtime.

(2) Time of commencement.

(3) Duration of each downtime.

(4) Reasons for each downtime.

(5) Nature of system repairs and adjustments.

(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.

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 the compliance status with Conditions D.13.3, D.13.5 and D.13.10, the Permittee shall maintain the following records:

(1) Records of the total blast furnace gas and natural gas usage for each day at the No.2 AC Station Boilers 211-213 and No. 5 Boilerhouse 501-504.

(2) Records of the average sulfur content and heating value for each day for each fuel type used during the calendar quarter.

(2) Records of any compliance emissions calculations.

(b) To document the compliance status with Conditions D.13.9 and D.13.11, the Permittee shall maintain records of the continuous emission monitoring data in accordance with 326 IAC 3-5.

(c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.13.13 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.13.3 and D.13.12(a). Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The quarterly report shall be submitted no later than thirty (30) days after the end of the quarter

being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(b) A quarterly report to document the compliance status with Condition D.13.5(a) and (b) shall be submitted for the natural gas and Blast Furnace Gas (BFG) fuel usage at the No. 504 Boiler no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(c) Records of excess NOx emissions (defined in 326 IAC 3-5-7) from the continuous emissions monitoring system. These reports shall be submitted no later than thirty (30) calendar days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(d) A quarterly summary of the CEMs data used to document compliance with Condition D.13.5(e) shall be submitted no later than thirty (30) calendar days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

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).

(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, 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 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.14.3 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.

Compliance Determination Requirements

D.14.4 Particulate Control [326 IAC 2-7-6(6)]

(a) The former Mold Foundry, No. 6 Roll shop, Electric shop, and No. 4 Roll Shop 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.

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

D.14.5 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) 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.14.6 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 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 an extended range established by an IDEM approved compliance 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 in accordance with the manufacturer's instructions but not less frequently than once per year.

D.14.7 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.14.8 Record Keeping Requirements

(a) To document compliance with Condition D.14.5 the Permittee shall maintain records of once per day visible emission notations of the former mold foundry baghouse (43) stack exhaust.

(b) To document compliance with Condition D.14.6, the Permittee shall maintain once per day records of the pressure drop across the former mold foundry baghouse (43) 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 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.

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

D.15.2 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 (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.1 Clean Air Interstate Rule (CAIR) Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-3-1(a)

ORIS Code: 10474

CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a), and 326 IAC 24-3-1(a)

(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.

(2) No. 5 Boilerhouse consisting of Boilers 501-503 installed in 1976, each with an estimated maximum heat input of 520 MMBtu/hr exhausting through stack 134 and No. 504 Boiler approved in 2010 for construction with an estimated maximum heat input of 561.6 MMBtu/hr exhausting through stack 134a. The boilers are fired by blast furnace gas from No. 7 Blast Furnace gas and natural gas, 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.)

E.1.1 Automatic Incorporation of Definitions [326 IAC 24-3-7(e)] [40 CFR 97.323(b)]

This CAIR permit is deemed to incorporate automatically the definitions of terms under 326 IAC 24-3-2.

E.1.2 Standard Permit Requirements [326 IAC 24-3-4(a)] [40 CFR 97.306(a)]

(a) The owners and operators of each CAIR NO_X ozone season source and CAIR NO_X ozone season unit shall operate each source and unit in compliance with this CAIR permit.

(b) The CAIR NO_X ozone season units subject to this CAIR permit are Boilers 211-213 in No. 2 AC Station and Boilers 501-504 in No. 5 Boilerhouse.

E.1.3 Monitoring, Reporting, and Record Keeping Requirements [326 IAC 24-3-4(b)] [40 CFR 97.306(b)]

(a) The owners and operators, and the CAIR designated representative, of each CAIR NO_X ozone season source and CAIR NO_X ozone season unit at the source shall comply with the applicable monitoring, reporting, and record keeping requirements of 326 IAC 24-3-11.

(b) The emissions measurements recorded and reported in accordance with 326 IAC 24-3-11 shall be used to determine compliance by each CAIR NO_X ozone season source with the CAIR NO_X ozone season emissions limitation under 326 IAC 24-3-4(c).

E.1.4 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]

(a) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X ozone season source and each CAIR NO_X ozone season unit at the source shall hold, in the source's compliance account, CAIR NO_X ozone season allowances available for compliance deductions for the control period under 326 IAC 24-3-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_X ozone season units at the source, as determined in accordance with 326 IAC 24-3-11.

(b) A CAIR NO_X ozone season unit shall be subject to the requirements under 326 IAC 24-3-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-3-4(c)(2), and for each control period thereafter.

(c) A CAIR NO_X ozone season allowance shall not be deducted for compliance with the requirements under 326 IAC 24-3-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO_X ozone season allowance was allocated.

(d) CAIR NO_X ozone season allowances shall be held in, deducted from, or transferred into or among CAIR NO_X ozone season allowance tracking system accounts in accordance with 326 IAC 24-3-9, 326 IAC 24-3-10, and 326 IAC 24-3-12.

(e) A CAIR NO_X ozone season allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO_X ozone season trading program. No provision of the CAIR NO_X ozone season trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-3-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.

(f) A CAIR NO_X ozone season allowance does not constitute a property right.

(g) Upon recordation by the U.S. EPA under 326 IAC 24-3-8, 326 IAC 24-3-9, 326 IAC 24-3-10, or 326 IAC 24-3-12, every allocation, transfer, or deduction of a CAIR NO_X ozone season allowance to or from a CAIR NO_X ozone season source's compliance account is incorporated automatically in this CAIR permit.

E.1.5 Excess Emissions Requirements [326 IAC 24-3-4(d)] [40 CFR 97.306(d)]

The owners and operators of a CAIR NO_X ozone season source and each CAIR NO_X ozone season unit that emits nitrogen oxides during any control period in excess of the CAIR NO_X ozone season emissions limitation shall do the following:

(a) Surrender the CAIR NO_X ozone season allowances required for deduction under 326 IAC 24-3-9(j)(4).

(b) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-3-4, the Clean Air Act (CAA), and applicable state law.

E.1.6 Record Keeping Requirements [326 IAC 24-3-4(e)] [326 IAC 2-7-5(3)] [40 CFR 97.306(e)]

Unless otherwise provided, the owners and operators of the CAIR NO_X ozone season source and each CAIR NO_X ozone season unit at the source shall keep 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 from the date the document was created:

(a) The certificate of representation under 326 IAC 24-3-6(h) for the CAIR designated representative for the source and each CAIR NO_X ozone season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation. The certificate and documents shall be retained on site at the source or at a central location within Indiana for those owners or operators with unattended sources beyond such five (5) year period until such documents are superseded because of the submission of a new account certificate of representation under 326 IAC 24-3-6(h) changing the CAIR designated representative.

(b) All emissions monitoring information, in accordance with 326 IAC 24-3-11, provided that to the extent that 326 IAC 24-3-11 provides 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 CAIR NO_X ozone season trading program.

(d) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_X ozone season trading program or to demonstrate compliance with the requirements of the CAIR NO_X ozone season trading program.

This period may be extended for cause, at any time before the end of five (5) years, in writing by IDEM, OAQ or the U.S. EPA. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

E.1.7 Reporting Requirements [326 IAC 24-3-4(e)] [40 CFR 97.306(e)]

(a) The CAIR designated representative of the CAIR NO_X ozone season source and each CAIR NO_X ozone season unit at the source shall submit the reports required under the CAIR NO_X ozone season trading program, including those under 326 IAC 24-3-11.

(b) Pursuant to 326 IAC 24-3-4(e) and 326 IAC 24-3-6(e)(1), each submission under the CAIR NO_X ozone season trading program shall include the following certification statement by the CAIR designated representative: “I am authorized to make this submission on behalf of the owners and operators of the source or 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."

(c) Where 326 IAC 24-3 requires a submission to IDEM, OAQ, the information shall be submitted to:

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

(d) Where 326 IAC 24-3 requires a submission to U.S. EPA, the information shall be submitted to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue, NW
Mail Code 6204N
Washington, DC 20460

E.1.8 Liability [326 IAC 24-3-4(f)] [40 CFR 97.306(f)]

The owners and operators of each CAIR NO_X ozone season source and each CAIR NO_X ozone season unit shall be liable as follows:

(a) Each CAIR NO_X ozone season source and each CAIR NO_X ozone season unit shall meet the requirements of the CAIR NO_X ozone season trading program.

(b) Any provision of the C CAIR NO_X ozone season trading program that applies to a CAIR NO_X ozone season source or the CAIR designated representative of a CAIR NO_X ozone season source shall also apply to the owners and operators of such source and of the CAIR NO_X ozone season units at the source.

(c) Any provision of the CAIR NO_X ozone season trading program that applies to a CAIR NO_X ozone season unit or the CAIR designated representative of a CAIR NO_X ozone season unit shall also apply to the owners and operators of such unit.

E.1.9 Effect on Other Authorities [326 IAC 24-3-4(g)] [40 CFR 97.306(g)]

No provision of the CAIR NO_X ozone season trading program, a CAIR permit application, a CAIR permit, or an exemption under 326 IAC 24-3-3 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X ozone season source or CAIR NO_X ozone season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act (CAA).

E.1.10 CAIR Designated Representative and Alternate CAIR Designated Representative [326 IAC 24-3-6] [40 CFR 97, Subpart BBBB]

Pursuant to 326 IAC 24-3-6:

(a) Except as specified in 326 IAC 24-3-6(f)(3), each CAIR NO_X ozone season source, including all CAIR NO_X ozone season units at the source, shall have one (1) and only one (1) CAIR designated representative, with regard to all matters under the CAIR NO_X ozone season trading program concerning the source or any CAIR NO_X ozone season unit at the source.

(b) The provisions of 326 IAC 24-3-6(f) shall apply where the owners or operators of a CAIR NO_X ozone season source choose to designate an alternate CAIR designated representative.

Except as specified in 326 IAC 24-3-6(f)(3), whenever the term "CAIR designated representative" is used, the term shall be construed to include the CAIR designated representative or any alternate CAIR designated representative.

SECTION E.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

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

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

(2) One (1) blast furnace gas and natural gas-fired 561.6 million British thermal units per hour (MMBtu/hr) Boiler, identified as 504 Boiler.

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

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR Part 60, Subpart A]

The Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A– General Provisions, which are incorporated by reference as 326 IAC 12-1-1, for this boiler, in accordance with schedule in 40 CFR Part 60, Subpart A.

E.2.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Db]

Pursuant to 40 CFR Part 60, Subpart Db, this boiler shall comply with the following provisions:

40 CFR § 60.40b
40 CFR § 60.41b
40 CFR § 60.49b(a) and (d)

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 (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 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.

(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, 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. The department may request a revision of the control plan pursuant to 326 IAC 6.8-10, 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 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.

(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. 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 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 (Lake County Particulate Matter Contingency Measures) because it is subject to the requirements of 326 IAC 6.8-10.

(c) Permittee has submitted a Fugitive Dust Control Plan to the IDEM in accordance with 326 IAC 6.8-10 and has been attached to the Part 70 Permit. Permittee shall keep records consistent with its Fugitive Dust Control Plan.

SECTION G.1

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]

(a) The provisions of 40 CFR 63, Subpart A- General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the affected sources, except when otherwise specified by Table 4 to 40 CFR 63, Subpart FFFFF.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

G.1.2 National Emission Standards for Hazardous Air Pollutants (HAPs): Integrated iron and Steel Manufacturing - Sinter Plants [40 CFR 63, Subpart FFFFF] [326 IAC 20-1]

The Permittee shall comply with the following provisions of 63, Subpart FFFFF (included as Attachment A of the permit), which are incorporated by reference in 326 IAC 20-1:

(a) 40 CFR 63.7780

(b) 40 CFR 63.7781

(c) 40 CFR 63.7782

(d) 40 CFR 63.7783

(e) 40 CFR 63.7790

(f) 40 CFR 63.7800

(g) 40 CFR 63.7810

(h) 40 CFR 63.7820

(i) 40 CFR 63.7821

(j) 40 CFR 63.7822

(k) 40 CFR 63.7823

(l) 40 CFR 63.7824

(m) 40 CFR 63.7825

(n) 40 CFR 63.7826

(o) 40 CFR 63.7830

(p) 40 CFR 63.7831

(q) 40 CFR 63.7832

(r) 40 CFR 63.7833

(s) 40 CFR 63.7834

(t) 40 CFR 63.7835

(u) 40 CFR 63.7840

(v) 40 CFR 63.7841

(w) 40 CFR 63.7842

(x) 40 CFR 63.7843

(y) 40 CFR 63.7850

(z) 40 CFR 63.7851

(aa) 40 CFR 63.7852

(bb) Table 1

(cc) Table 2

(dd) Table 3

(ee) Table 4

SECTION G.2

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.)

G.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) The provisions of 40 CFR 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this Section G.2, except when otherwise specified in 40 CFR 60, Subpart Y.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

G.2.2 New Source Performance Standards for Coal Preparation Plants [40 CFR 60, Subpart Y] [326 IAC 12]

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

(1) 40 CFR 60.250;

(2) 40 CFR 60.251;

(3) 40 CFR 60.252;

(4) 40 CFR 60.253(a)(1);

(5) 40 CFR 60.253(b); and

(6) 40 CFR 60.254.

SECTION G.3

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

The No.1 and No. 2 Kiln baghouses (45), (49), and their associated cooler(s), and processed stone handling (PSH) operation system(s)

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

G.3.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

(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.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

G.3.2 National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants [40 CFR 63, Subpart AAAAA]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart AAAAA (included as Attachment C of the permit), which are incorporated by reference in 326 IAC 20-1:

(a) 40 CFR 63.7080

(b) 40 CFR 63.7081

(c) 40 CFR 63.7082

(d) 40 CFR 63.7083

(e) 40 CFR 63.7090

(f) 40 CFR 63.7111

(g) 40 CFR 63.7112

(h) 40 CFR 63.7113

(i) 40 CFR 63.7114

(j) 40 CFR 63.7120

(k) 40 CFR 63.7121

(l) 40 CFR 63.7130

(m) 40 CFR 63.7131

(n) 40 CFR 63.7132

(o) 40 CFR 63.7133

(p) 40 CFR 63.7140

(q) 40 CFR 63.7141

(r) 40 CFR 63.7142

(s) 40 CFR 63.7143

(t) Table 1

(u) Table 2

(v) Table 3

(w) Table 4

(x) Table 5

(y) Table 6

(z) Table 7

(aa) Table 8

SECTION G.4

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

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

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

(c) 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.

(d) 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.)

G.4.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63. 63.1155, the Permittee shall comply with the provisions of 40 CFR Part 63 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the Pickle Line except as otherwise specified in 40 CFR Part 63, Subpart CCC.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

G.4.2 National Emission Standards for Hazardous Air Pollutants for Steel Pickling-HCl Process Facilities and Hydrochloric Acid Regeneration Plants [326 IAC 20-1-1] [40 CFR 63, Subpart CCC]

The Permittee which engages in the steel pickling-HCl process shall comply with the following provisions of 40 CFR 63, Subpart CCC (included as Attachment D of this permit), with a compliance date of June 22, 2001:

(1) 40 CFR 63.1155

(2) 40 CFR 63.1156

(3) 40 CFR 63.1157(a)

(4) 40 CFR 63.1159(b)

(5) 40 CFR 63.1160(a) and (b)

(6) 40 CFR 63.1161(a) and (b)

(7) 40 CFR 63.1162(a) and (c)

(8) 40 CFR 63.1163

(9) 40 CFR 63.1164

(10) 40 CFR 63.1165

(11) 40 CFR 63.1166

(12) Table 1

SECTION G.5

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

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

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

G.5.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) The provisions of 40 CFR 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this Section G.5, except when otherwise specified in 40 CFR 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

G.5.2 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60, Subpart Kb] [326 IAC 12]

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

(1) 40 CFR 60.110b

(2) 40 CFR 60.111b

(3) 40 CFR 60.251

(4) 40 CFR 60.251

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

PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, 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 AND ENFORCEMENT BRANCH

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, 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 AND ENFORCEMENT BRANCH

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
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 AND ENFORCEMENT BRANCH

PART 70 QUARTERLY REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, 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 AND ENFORCEMENT BRANCH

PART 70 QUARTERLY REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, 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 AND ENFORCEMENT BRANCH

PART 70 QUARTERLY REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Permit No.: T089-6577-00316
Facility: No. 504 Boiler
Parameter: Natural Gas Fuel (NG) Usage and Blast Furnace Gas (BFG) Usage
NG Limit: less than 492 Million cubic feet (MMCF) per 12 consecutive month period
BFG Limit: greater than 3,288,088 Million British thermal units (MMBtu) per 12 consecutive month period

QUARTER:_____ YEAR:_____

Month	COLUMN 1 FUEL USAGE THIS MONTH		COLUMN 2 FUEL USAGE 11 MONTHS		COLUMN 1+2 FUEL USAGE 12 MONTH TOTAL	
	BLAST FURNACE GAS	NATURAL GAS	BLAST FURNACE GAS	NATURAL GAS	BLAST FURNACE GAS	NATURAL GAS
Month 1						
Month 2						
Month 3						

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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

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

PART 70 QUARTERLY REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Permit No.: T089-6577-00316
Facility: Project X
Parameter: Molten Steel
Limit: The molten steel transferred from the No.4 SP to the LMF and casters at No.2 SP using the rail link constructed in 2009 shall be limited to 3,522,720 tons per 12 consecutive month period.

QUARTER:_____ YEAR:_____

Month	COLUMN 1 MOLTEN STEEL TRANSFERRED THIS MONTH	COLUMN 2 MOLTEN STEEL TRANSFERRED 11 MONTHS	COLUMN 1+2 MOLTEN STEEL TRANSFERRED 12 MONTH TOTAL
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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

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

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, 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

Appendix B

Title 40: Protection of Environment
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NO_X) standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are subject to the PM and NO_Xstandards under this subpart and to the sulfur dioxide (SO_2) standards under subpart D (§60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NO_Xstandards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are also subject to the NO_Xstandards under this subpart and the PM and SO_2standards under subpart D (§60.42 and §60.43).

(c) Affected facilities that also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; §60.104) are subject to the PM and NO_Xstandards under this subpart and the SO_2standards under subpart J (§60.104).

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the $NO_X$and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under §60.281 is not considered a modification under §60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is subject to subpart Ea, subpart Eb, or subpart AAAA of this part is not covered by this subpart.

(i) Heat recovery steam generators that are associated with combined cycle gas turbines and that meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40).

(k) Any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.41b Definitions.

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

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO_2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, coke oven gas, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Cogeneration , also known as combined heat and power, means a facility that simultaneously produces both electric (or mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Gaseous fuel means any fuel that is a gas at ISO conditions. This includes, but is not limited to, natural gas and gasified coal (including coke oven gas).

Gross output means the gross useful work performed by the steam generated. For units generating only electricity, the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units, the gross useful work performed is the gross electrical or mechanical output plus 75 percent of the useful thermal output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output or to enhance the performance of the unit (*i.e.* , steam delivered to an industrial process).

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems. For gasified coal or oil that is desulfurized prior to combustion, the *Potential sulfur dioxide emission rate* is the theoretical SO_2emissions (ng/J or lb/MMBtu heat input) that would result from combusting fuel in a cleaned state without using any post combustion emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and not located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.30 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.50 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.42b Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction) and the emission limit determined according to the following formula:

$$E_s = \frac{(K_a H_a + K_b H_b)}{(H_a + H_b)}$$

Where:

E_s= SO_2emission limit, in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (or 1.2 lb/MMBtu);

K_b= 340 ng/J (or 0.80 lb/MMBtu);

H_a= Heat input from the combustion of coal, in J (MMBtu); and

H_b= Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) or 20 percent (0.20) of the potential SO_2emission rate (80 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable. For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(c) On and after the date on which the performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of SO_2emissions, shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 50 percent of the potential SO_2emission rate (50 percent reduction) and that contain SO_2in excess of the emission limit determined according to the following formula:

$$E_s = \frac{(K_c H_c + K_d H_d)}{(H_c + H_d)}$$

Where:

E_s= SO2 emission limit, in ng/J or lb/MM Btu heat input;

K_c= 260 ng/J (or 0.60 lb/MMBtu);

K_d= 170 ng/J (or 0.40 lb/MMBtu);

H_c= Heat input from the combustion of coal, in J (MMBtu); and

H_d= Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and listed in paragraphs (d)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/MMBtu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under paragraphs (d)(1), (2), (3) or (4) of this section. For facilities complying with paragraphs (d)(1), (2), or (3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from the exhaust gases entering the duct burner; or

(4) The affected facility burns coke oven gas alone or in combination with natural gas or very low sulfur distillate oil.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section and §60.45b(a), the SO_2emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential SO_2emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential SO_2emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO_2control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the SO_2control system is not being operated because of malfunction or maintenance of the SO_2control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in §60.45b(c) or §60.45b(d), and following the monitoring procedures as described in §60.47b(a) or §60.47b(b) to determine SO_2emission rate or fuel oil sulfur content; or (2) maintaining fuel records as described in §60.49b(r).

(k)(1) Except as provided in paragraphs (k)(2), (k)(3), and (k)(4) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO_2emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. For facilities complying with the percent reduction standard and paragraph (k)(3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in paragraph (k) of this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(2) Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO_2emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO_2emissions limit in paragraph (k)(1) of this section.

(3) Units that are located in a noncontinental area and that combust coal, oil, or natural gas shall not discharge any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.50 lb/MMBtu) heat input if the affected facility combusts oil or natural gas.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.43b Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 that combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input, (i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(4) An affected facility burning coke oven gas alone or in combination with other fuels not subject to a PM standard under §60.43b and not using a post-combustion technology (except a wet scrubber) for reducing PM or SO_2emissions is not subject to the PM limits under §60.43b(a).

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce SO_2emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if (i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood;

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood; and

(iii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input;

(i) If the affected facility combusts only municipal-type solid waste; or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less;

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less;

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for municipal-type solid waste, or municipal-type solid waste and other fuels; and

(iv) Construction of the affected facility commenced after June 19, 1984, but on or before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that can combust coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(g) The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.

(h)(1) Except as provided in paragraphs (h)(2), (h)(3), (h)(4), (h)(5), and (h)(6) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input,

(2) As an alternative to meeting the requirements of paragraph (h)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, no owner or operator of

an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity of 73 MW (250 MMBtu/h) or less shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity greater than 73 MW (250 MMBtu/h) shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 37 ng/J (0.085 lb/MMBtu) heat input.

(5) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility not located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.30 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

(6) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.5 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.44b Standard for nitrogen oxides (NOX).

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X(expressed as NO_2) in excess of the following emission limits:

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(1) Natural gas and distillate oil, except (4):		
(i) Low heat release rate	43	0.10
(ii) High heat release rate	86	0.20
(2) Residual oil:		
(i) Low heat release rate	130	0.30
(ii) High heat release rate	170	0.40
(3) Coal:		
(i) Mass-feed stoker	210	0.50
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70
(iv) Lignite, except (v)	260	0.60
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340	0.80
(vi) Coal-derived synthetic fuels	210	0.50
(4) Duct burner used in a combined cycle system:		
(i) Natural gas and distillate oil	86	0.20
(ii) Residual oil	170	0.40

(b) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_Xin excess of a limit determined by the use of the following formula:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{no}H_{no}) + (EL_cH_c)}{(H_{go} + H_{no} + H_c)}$$

Where:

E_n= NO_Xemission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas or distillate oil, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(c) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain NO_Xin excess of the emission limit for the coal or oil, or mixtures of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_Xin excess of 130 ng/J (0.30 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere any gases that contain NO_Xin excess of the emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{ro}H_{ro}) + (EL_cH_c)}{(H_{go} + H_{ro} + H_c)}$$

Where:

E_n= NO_Xemission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil and/or byproduct/waste, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a NO_Xemission limit that shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as NO_Xemissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific NO_Xemission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, by conducting a 30-day performance test as provided in §60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The NO_Xemission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific NO_Xemission limit will be established at the NO_Xemission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing NO_Xemissions. In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_Xlimit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the NO_Xemission limit that applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on NO_Xemissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the NO_Xemission limits required by this section. The owner or operator of the affected facility shall demonstrate that when

hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the NO_Xemission limits of this section. The NO_Xemission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).) In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_Xlimit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(h) For purposes of paragraph (i) of this section, the NO_Xstandards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NO_Xemission limits under this section.

(l) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction or reconstruction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X(expressed as NO_2) in excess of the following limits:

(1) If the affected facility combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels: A limit of 86 ng/J (0.20 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas; or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

$$E_n = \frac{(0.10 \times H_{go}) + (0.20 \times H_r)}{(H_{go} + H_r)}$$

Where:

E_n= NO_Xemission limit, (lb/MMBtu);

H_{go}= 30-day heat input from combustion of natural gas or distillate oil; and

H_r= 30-day heat input from combustion of any other fuel.

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this output-based limit must demonstrate compliance according to the procedures of §60.48Da(i) of subpart Da of this part, and must monitor emissions according to §60.49Da(c), (k), through (n) of subpart Da of this part.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2emission standards in §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels or distillate oil are allowed to exceed the limit 30 operating days per calendar year for SO_2control system maintenance.

(b) In conducting the performance tests required under §60.8, the owner or operator shall use the methods and procedures in appendix A (including fuel certification and sampling) of this part or the methods and procedures as specified in this section, except as provided in §60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential SO_2emission rate (% P_s) and the SO_2emission rate (E_s) pursuant to §60.42b following the procedures listed below, except as provided under paragraph (d) and (k) of this section.

(1) The initial performance test shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the SO_2standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal, only oil, or a mixture of coal and oil is combusted, the following procedures are used:

(i) The procedures in Method 19 of appendix A–7 of this part are used to determine the hourly SO_2emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS of §60.47b(a) or (b).

(ii) The percent of potential SO_2emission rate (%P_s) emitted to the atmosphere is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$= Potential SO_2emission rate, percent;

$\%R_g$= SO_2removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$= SO_2removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly SO_2emission rate (E_{ho}^{o}) is used in Equation 19–19 of Method 19 of appendix A of this part to compute an adjusted 30-day average emission rate (E_{ao}^{o}). The Eho° is computed using the following formula:

$$E_{ho}^{o} = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

Where:

E_{ho}^{o} = Adjusted hourly SO_2emission rate, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2emission rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted; and

X_k= Fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(ii) To compute the percent of potential SO_2emission rate ($\%P_s$), an adjusted $\%R_g$($\%R_g^{o}$) is computed from the adjusted E_{ao}^{o} from paragraph (b)(3)(i) of this section and an adjusted average SO_2inlet rate (E_{ai}^{o}) using the following formula:

$$\%R_g^{o} = 100\left(1.0 - \frac{E_{ao}^{o}}{E_{ai}^{o}}\right)$$

To compute E_{ai}^{o} , an adjusted hourly SO_2inlet rate (E_{hi}^{o}) is used. The E_{hi}^{o} is computed using the following formula:

$$E_{hi}^{o} = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi}^{o} = Adjusted hourly SO_2inlet rate, ng/J (lb/MMBtu); and

E_{hi}= Hourly SO_2inlet rate, ng/J (lb/MMBtu).

(4) The owner or operator of an affected facility subject to paragraph (c)(3) of this section does not have to measure parameters $E_w$or $X_k$if the owner or operator elects to assume that X_k= 1.0. Owners or operators of affected facilities who assume X_k= 1.0 shall:

(i) Determine %$P_s$following the procedures in paragraph (c)(2) of this section; and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with SO_2emission limits under §60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of §60.42b(d) does not have to measure parameters $E_w$or $X_k$in paragraph (c)(3) of this section if the owner or operator of the affected facility elects to measure SO_2emission rates of the coal or oil following the fuel sampling and analysis procedures in Method 19 of appendix A–7 of this part.

(d) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility that combusts only very low sulfur oil, natural gas, or a mixture of these fuels, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a CEMS is used, or based on a daily average if Method 6B of appendix A of this part or fuel sampling and analysis procedures under Method 19 of appendix A of this part are used.

(e) The owner or operator of an affected facility subject to §60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under §60.8, compliance with the SO_2emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for $SO_2$for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the

30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under §60.8, compliance with the SO_2emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for $SO_2$for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for $SO_2$are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid SO_2emissions data in calculating $\%P_s$and E_{ho}under paragraph (c), of this section whether or not the minimum emissions data requirements under §60.46b are achieved. All valid emissions data, including valid SO_2emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating $\%P_s$and E_{ho}pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the SO_2control systems when oil is combusted as provided under §60.42b(i), emission data are not used to calculate $\%P_s$or $E_s$under §60.42b(a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under §60.42b(i).

(j) The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO_2standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).

(k) The owner or operator of an affected facility seeking to demonstrate compliance in §§60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The PM emission standards and opacity limits under §60.43b apply at all times except during periods of startup, shutdown, or malfunction. The NO_Xemission standards under §60.44b apply at all times.

(b) Compliance with the PM emission standards under §60.43b shall be determined through performance testing as described in paragraph (d) of this section, except as provided in paragraph (i) of this section.

(c) Compliance with the NO_Xemission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the PM emission limits and opacity limits under §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods:

(1) Method 3A or 3B of appendix A–2 of this part is used for gas analysis when applying Method 5 of appendix A–3 of this part or Method 17 of appendix A–6 of this part.

(2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 of appendix A–6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A–3 of this part may be used in Method 17 of appendix A–6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A–6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160±14 °C (320±25 °F).

(5) For determination of PM emissions, the oxygen (O_2) or CO_2sample is obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using:

(i) The O_2or CO_2measurements and PM measurements obtained under this section;

(ii) The dry basis F factor; and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for NO_Xrequired under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_Xunder §60.48(b).

(1) For the initial compliance test, $NO_X$from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_Xemission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed in §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal (except as specified under §60.46b(e)(4)) or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NO_Xemission standards in §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated for each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NO_Xstandards under §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, gasified coal, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_Xstandards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_Xemissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_Xemission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility that combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in §60.49b(e), the requirements of §60.48b(g)(1) apply and the provisions of §60.48b(g)(2) are inapplicable.

(f) To determine compliance with the emissions limits for NO_Xrequired by §60.44b(a)(4) or §60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

(i) The emissions rate (E) of NO_Xshall be computed using Equation 1 in this section:

$$E = E_{ig} + \left(\frac{H_g}{H_b}\right)\left(E_{ig} - E_g\right) \qquad \text{(Eq.1)}$$

Where:

E = Emissions rate of $NO_X$from the duct burner, ng/J (lb/MMBtu) heat input;

E_{sg}= Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part;

H_g= Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);

H_b= Heat input rate to the duct burner, in J/hr (MMBtu/hr); and

E_g= Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part.

(ii) Method 7E of appendix A of this part shall be used to determine the NO_Xconcentrations. Method 3A or 3B of appendix A of this part shall be used to determine O_2concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring $NO_X$and $O_2$and meet the requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_Xemissions rate at the outlet from the steam generating unit shall constitute the NO_Xemissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method or the heat input method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in §60.44b(j) that has a heat input capacity greater than 73 MW (250 MMBtu/hr) shall:

(1) Conduct an initial performance test as required under §60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the NO_Xemission standards under §60.44b using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the NO_Xemission standards under §60.44b over a minimum of 3 consecutive steam generating unit operating hours at

maximum heat input capacity using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the PM limit in paragraphs §60.43b(a)(4) or §60.43b(h)(5) shall follow the applicable procedures in §60.49b(r).

(j) In place of PM testing with Method 5 or 5B of appendix A–3 of this part, or Method 17 of appendix A–6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall comply with the requirements specified in paragraphs (j)(1) through (j)(14) of this section.

(1) Notify the Administrator one month before starting use of the system.

(2) Notify the Administrator one month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of the CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (j) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraphs (j)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (j)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (j)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30-to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and

(ii) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in theFederal Register,whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and

(iii) For O_2(or CO_2), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours per 30-day rolling average.

(14) After July 1, 2011, within 90 days after completing a correlation testing run, the owner or operator of an affected facility shall either successfully enter the test data into EPA's WebFIRE data base located at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main* or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the SO_2standards in §60.42b shall install, calibrate, maintain, and operate CEMS for measuring SO_2concentrations and either O_2or CO_2concentrations and shall record the output of the systems. For units complying with the percent reduction standard, the $SO_2$and either O_2or CO_2concentrations shall both be monitored at the inlet and outlet of the SO_2control device. If the owner or operator has installed and certified $SO_2$and O_2or CO_2CEMS according to the requirements of §75.20(c)(1) of this chapter and appendix A to part 75 of this chapter, and is continuing to meet the ongoing quality assurance requirements of §75.21 of this chapter and appendix B to part 75 of this chapter, those CEMS may be used to meet the requirements of this section, provided that:

(1) When relative accuracy testing is conducted, SO_2concentration data and CO_2(or O_2) data are collected simultaneously; and

(2) In addition to meeting the applicable $SO_2$and CO_2(or O_2) relative accuracy specifications in Figure 2 of appendix B to part 75 of this chapter, the relative accuracy (RA) standard in section 13.2 of Performance Specification 2 in appendix B to this part is met when the RA is calculated on a lb/MMBtu basis; and

(3) The reporting requirements of §60.49b are met. $SO_2$and CO_2(or O_2) data used to meet the requirements of §60.49b shall not include substitute data values derived from the missing data procedures in subpart D of part 75 of this chapter, nor shall the SO_2data have been bias adjusted according to the procedures of part 75 of this chapter.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2input rate, or

(2) Measuring SO_2according to Method 6B of appendix A of this part at the inlet or outlet to the SO_2control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$and CO_2measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 or 3B of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily SO_2emission rate, E_D, shall be determined using the procedure described in Method 6A of appendix A of this part, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/MMBtu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/MMBtu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19 of appendix A of this part.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average SO_2emission rates measured by the CEMS required by paragraph (a) of this section and required under §60.13(h) is expressed in ng/J or lb/MMBtu heat input and is used to calculate the average emission rates under §60.42(b). Each 1-hour average SO_2emission rate must be based on 30 or more minutes of steam generating unit operation. The hourly averages shall be calculated according to §60.13(h)(2). Hourly SO_2emission rates are not calculated if the affected facility is operated less than 30 minutes in a given clock hour and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) Except as provided for in paragraph (e)(4) of this section, all CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Except as provided for in paragraph (e)(4) of this section, quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the SO_2CEMS at the inlet to the SO_2control device is 125 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO_2control device is 50 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted. Alternatively, SO_2span values determined according to section 2.1.1 in appendix A to part 75 of this chapter may be used.

(4) As an alternative to meeting the requirements of requirements of paragraphs (e)(1) and (e)(2) of this section, the owner or operator may elect to implement the following alternative data accuracy assessment procedures:

(i) For all required $CO_2$and O_2monitors and for $SO_2$and NO_Xmonitors with span values greater than or equal to 100 ppm, the daily calibration error test and calibration adjustment procedures described in sections 2.1.1 and 2.1.3 of appendix B to part 75 of this chapter may be followed instead of the CD assessment procedures in Procedure 1, section 4.1 of appendix F to this part.

(ii) For all required $CO_2$and O_2monitors and for $SO_2$and NO_Xmonitors with span values greater than 30 ppm, quarterly linearity checks may be performed in accordance with section 2.2.1 of appendix B to part 75 of this chapter, instead of performing the cylinder gas audits (CGAs) described in Procedure 1, section 5.1.2 of appendix F to this part. If this option is selected: The frequency of the linearity checks shall be as specified in section 2.2.1 of appendix B to part 75 of this chapter; the applicable linearity specifications in section 3.2 of appendix A to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.2.3 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.2.4 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the cylinder gas audits described in Procedure 1, section 5.1.2 of appendix F to this part shall be performed for $SO_2$and NO_Xspan values less than or equal to 30 ppm; and

(iii) For SO_2, CO_2, and O_2monitoring systems and for NO_Xemission rate monitoring systems, RATAs may be performed in accordance with section 2.3 of appendix B to part 75 of this chapter instead of following the procedures described in Procedure 1, section 5.1.1 of appendix F to this part. If this option is selected: The frequency of each RATA shall be as specified in section 2.3.1 of appendix B to part 75 of this chapter; the applicable relative accuracy specifications shown in Figure 2 in appendix B to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.3.2 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.3.3 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the relative accuracy specification in section 13.2 of Performance Specification 2 in appendix B to this part shall be met on a lb/MMBtu basis for SO_2(regardless of the SO_2emission level during the RATA), and for

$NO_X$when the average NO_Xemission rate measured by the reference method during the RATA is less than 0.100 lb/MMBtu.

(f) The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under §60.45b(k) is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility subject to the opacity standard under §60.43b shall install, calibrate, maintain, and operate a continuous opacity monitoring systems (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard under §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), or (5) of this section who elects not to install a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43b and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A–4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 30 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A–7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A–7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.* , 90 seconds per 30 minute period) the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.* , 90 seconds) or conduct a new Method 9 of appendix A–4 of this part performance test using the procedures in paragraph (a) of this section within 30 calendar days according to the requirements in §60.46d(d)(7).

(ii) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243–02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO_Xstandard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring $NO_X$and O_2(or CO_2) emissions discharged to the atmosphere, and shall record the output of the system; or

(2) If the owner or operator has installed a NO_Xemission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

(c) The CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average NO_Xemission rates measured by the continuous NO_Xmonitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or

lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for $NO_X$is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NO_Xspan values shall be determined as follows:

Fuel	Span values for NO_X (ppm)
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NO_Xspan values determined according to section 2.1.2 in appendix A to part 75 of this chapter.

(3) All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

(f) When NO_Xemission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen

content of 0.30 weight percent or less, natural gas, distillate oil, gasified coal, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NO_Xemission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in §60.41b, that is subject to the NO_Xstandards in §60.44b(a)(4), §60.44b(e), or §60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NO_Xemissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NO_Xemissions.

(j) The owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), (5), or (6) of this section is not required to install or operate a COMS if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO_2emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO_2or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under §60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO_2or PM emissions; or

(4) The affected facility does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section; or

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A) through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(C) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(5) The affected facility uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part; or

(6) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

(k) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.46b(j). The CEMS specified in paragraph §60.46b(j) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and

(4) Notification that an emerging technology will be used for controlling emissions of SO_2. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2, PM, and/or NO_Xemission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NO_Xstandard in §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. An affected facility burning coke oven gas alone or in combination with other gaseous fuels or distillate oil shall submit this plan to the Administrator for approval within 360 days of the initial startup of the affected facility or by November 30, 2009, whichever date comes later. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_Xemission rates (*i.e.* , ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.* , the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.* , flue gas O_2level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO_Xemission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(g).

(d) Except as provided in paragraph (d)(2) of this section, the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of this section.

(1) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(2) As an alternative to meeting the requirements of paragraph (d)(1) of this section, the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D4629 (incorporated by reference, see §60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For an affected facility subject to the opacity standard in §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in §60.48b(a) shall maintain records according to the requirements specified in paragraphs (f)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO_Xstandards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO_Xemission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO_Xemission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_Xemission rates are in excess of the NO_Xemissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards in §60.43b(f) or to the operating parameter monitoring requirements in §60.13(i)(1).

(2) Any affected facility that is subject to the NO_Xstandard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, gasified coal, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NO_Xemissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_Xemission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NO_Xunder §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the SO_2standards under §60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period;

(2) Each 30-day average SO_2emission rate (ng/J or lb/MMBtu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken; For an exceedance due to maintenance of the SO_2control system covered in paragraph 60.45b(a), the report shall identify the days on which the maintenance was performed and a description of the maintenance;

(3) Each 30-day average percent reduction in SO_2emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which SO_2or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken;

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(6) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(7) Identification of times when hourly averages have been obtained based on manual sampling methods;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3;

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part; and

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of §60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average SO_2emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which $S0_2$or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and description of corrective action taken;

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(5) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(6) Identification of times when hourly averages have been obtained based on manual sampling methods;

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(8) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Procedure 1 of appendix F 1 of this part. If the owner or operator elects to implement the alternative data assessment procedures described in §§60.47b(e)(4)(i) through (e)(4)(iii), each data assessment report shall include a summary of the results of all of the RATAs, linearity checks, CGAs, and calibration error or drift assessments required by §§60.47b(e)(4)(i) through (e)(4)(iii).

(m) For each affected facility subject to the SO_2standards in §60.42(b) for which the minimum amount of data required in §60.47b(c) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates;

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19 of appendix A of this part, section 7;

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19 of appendix A of this part, section 7; and

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19 of appendix A of this part, section 7.

(n) If a percent removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) is used to determine the overall percent reduction (*i.e.* , $\%R_o$) under §60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit; and

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 of appendix A of this part and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in §60.44b(j), the results of any NO_Xemission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO_Xemission test.

(r) The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:

(1) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain

an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

(2) The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

(i) The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;

(ii) The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;

(iii) The ratio of different fuels in the mixture; and

(iv) The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

(s) Facility specific NO_Xstandard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) *Definitions* .

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 289 ng/J (0.67 lb/MMBtu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) *Emission monitoring* . (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(ii) The NO_Xemission limit shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b(i).

(iii) The monitoring of the NO_Xemission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) Facility-specific NO_Xstandard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions* .

Air ratio control damper is defined as the part of the low NO_Xburner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 473 ng/J (1.1 lb/MMBtu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides* . (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The NO_Xemission limit shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(iii) The monitoring of the NO_Xemission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(u) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia* . (1) This paragraph (u) applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site") and only to the natural gas-fired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of §§60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low NO_Xtechnology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NO_Xemissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a performance test to quantify criteria pollutant emissions.

(2) [Reserved]

(v) The owner or operator of an affected facility may submit electronic quarterly reports for $SO_2$and/or $NO_X$and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

(x) Facility-specific NO_Xstandard for Weyerhaeuser Company's No. 2 Power Boiler located in New Bern, North Carolina:

(1) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 215 ng/J (0.5 lb/MMBtu).

(2) *Emission monitoring for nitrogen oxides* . (i) The NO_Xemissions shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(ii) The monitoring of the NO_Xemissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the No. 2 Power Boiler shall submit a report on any excursions from the limits required by paragraph (x)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of the No. 2 Power Boiler shall keep records of the monitoring required by paragraph (x)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the No. 2 Power Boiler shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(y) Facility-specific NO_Xstandard for INEOS USA's AOGI located in Lima, Ohio:

(1) *Standard for NO* $_X$. (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct/waste are simultaneously combusted, the NO_Xemission limit is 645 ng/J (1.5 lb/MMBtu).

(2) *Emission monitoring for NO* $_X$. (i) The NO_Xemissions shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(ii) The monitoring of the NO_Xemissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the AOGI shall submit a report on any excursions from the limits required by paragraph (y)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the AOGI shall keep records of the monitoring required by paragraph (y)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the AOGI shall perform all the applicable reporting and recordkeeping requirements of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5089, Jan. 28, 2009]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Significant Source Modification and a Significant Permit Modification

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.:	089-28917-00316
Significant Permit Modification No.:	089-28972-00316
Permit Reviewer:	Aida De Guzman

On July 22, 2010, the Office of Air Quality (OAQ) had a notice published in The Post Tribune, Merrillville, Indiana and The Times, Munster, Indiana stating that ArcelorMittal USA, Inc. applied for a significant source modification and a significant permit modification to its Part 70 Operating Permit. These permits will allow ArcelorMittal to construct and operate one (1) 561.6 million British thermal units per hour (MMBtu/hr) boiler, identified as Boiler No. 504 to existing No. 5 Boilerhouse fired using the No. 7 Blast Furnace Gas (BFG) generated during the iron making process that is currently being flared, and natural gas as supplemental fuel, including ancillary equipment (deaerator, feedwater pump, BFG supply line, boiler control equipment, etc.) necessary to operate the boiler.

The notice also stated that OAQ proposed to issue permits for these operations and provided information on how the public could review the proposed permits and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not these permits should be issued as proposed.

On August 23, 2010, the Permittee made the following comments to the draft permits. Additions are **bolded** and deletions are ~~struck-through~~ for emphasis:

Comment 1:

Technical Support Document

<u>Table 2 – Netting Analysis, No. 4 BOF Mold Fume Exhaust Baghouse</u> – In the project net emissions increase calculations on page 20 of 22 of TSD App A, IDEM did not include building capture efficiency in the emissions decrease calculations for this change. RTP Environmental provided documentation supporting the use of 50% control efficiency for building enclosure to IDEM. This level of control efficiency is consistent with the observations of material collected inside the buildings and the nature of fugitive process that is affected by reducing the exposure to cross wind. ArcelorMittal restates its earlier position that the creditable emissions decreases from the Mold Fume Exhaust Baghouse appropriately relied upon the building control efficiency in calculations for PM / PM10 / PM2.5 emissions.

Response1:

EPA's policy has long been that emissions reductions must be made federally enforceable to be creditable when used to net out of PSD review. This is reflected in the draft October 1990 New Source Review Workshop Manual and many other EPA's issued Memorandum pertaining to New Source Permitting. In order for emission reductions to be federally-enforceable, they must be practically enforceable, quantifiable and verifiable through stack test, recordkeeping and compliance demonstration.

To appropriately limit the emissions from a facility the Permittee must rely upon restrictions on the production or operation, limitations on quantities of raw materials consumed, fuel combusted, hours of operation, or a condition that requires the operation of control equipment to reduce the emissions to a specified emission rate. In addition, where add-on controls are required, the permit should specify efficiency level and operating parameters that would be verified through a stack test and be monitored to assure that the control is working properly and continuously meeting the emission limit.

Based upon this reasoning, claiming emissions reduction through the use of a building to control particulate emissions would not result in a practically enforceable permit requirement because it is virtually impossible to quantify the emission reduction. Further, it cannot be stack tested to verify whether it meets the limit associated with the emission reduction, and there are no operating parameters that can be established for it. Therefore, no changes have been to the permits as a result of this comment.

Comment 2:

<u>Table 3 – Netting Analysis, Proposed Contractor Emissions Increases Decreases</u> – ArcelorMittal provided the contemporaneous emissions increases and decreases from the various contractors at the Indiana Harbor site in response to the specific information requested by IDEM. However, as noted in our March 17, 2010 letter and also stated in our appeal of the Part 70 Permit T089-6577-00316, the onsite contractors are independent entities that are neither under ArcelorMittal's control nor are 'persons under common control'. Therefore, it is ArcelorMittal's position that in accordance with relevant definitions including the definitions of 'building, structure, facility or installation' at 326 IAC 2-2-1 and 326 IAC 2-3-1, these onsite contractors are not considered part of the Indiana Harbor "major stationary source". ArcelorMittal preserves its position against inclusion of these onsite contractors as part of the Indiana Harbor major stationary source and inclusion of these contractor changes related information should not be considered a waiver or compromise of this position as it may apply to this and any other permitting actions or permit appeals.

Response 2:

IDEM, OAQ disagrees. As explained in detail in the "Source Definition" section of the Technical Support Document for these permits SSM No. 089-28917-00316 and SPM No. 089-28972-00315, IDEM, OAQ determined that ArcelorMittal USA, Inc. and its contractors, and ArcelorMittal Indiana Harbor, LLC and its contractors are part of the same stationary source and also part of the same major source. The requirements under the major source definition under Title V rules are nearly identical to the elements used to determine if the plants are part of the same stationary source as defined in 326 IAC 2-2-1 and 326 IAC 2-3-1. If the plants are part of the same stationary source then they will also be part of the same major source. Therefore, no changes have been made to the source determination as a result of this comment.

Comment 3:

326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) - Page 13 of 46 of TSD – In item (3)(A) of the limitations and reductions section, IDEM noted a change for Beemsterboer Slag Corporation in Significant Permit Modification No.089-29271-00356 that requires permanent removal of three diesel fuel generators GS043, GS038 and GS040. GS043 was used for No.1 Slag Plant and GS038 and GS040 were used for North End Crushing Plant. In our May 12, 2010 submittal, prior to startup of the 504 Boiler, ArcelorMittal on behalf of Beemsterboer proposed to discontinue use of diesel generators to provide power to the two plants and instead use line power. As such the creditable emissions decreases of regulated NSR pollutants from the two plants are included in the net emissions increases analysis.

Significant Permit Modification 089-29271-00356 required Beemsterboer to permanently shutdown GS043, GS038, and GS040 units prior to startup of the 504 Boiler project. However, this is inconsistent with our proposal for generating creditable decrease from these operations. These diesel generators are portable units that are used to provide power to other operations at the site in addition to No.1 Slag Plant and North End Crushing Plant.

ArcelorMittal and Beemsterboer request that the permit conditions in 089-29271-00356 should be revised to require operation of No.1 Slag Plant and North End Crushing Plant using only line power after startup of the 504 Boiler. This will allow Beemsterboer to operate the three generators to power other plant equipment that is unaffected by the creditable emissions decrease.

Response 3:

If generators GS043, GS038 and GS040, which were removed from powering the No.1 Slag Plant and North End Crushing Plant at Beemsterboer are merely relocated and operated longer at their maximum capacity to power the other Beemsterboer equipment (or any other equipment at the source), the effect is that emission reductions are zero and no true emissions reductions occur. Therefore, the permanent removal and shutdown of these three generators will remain to keep the emission reduction creditable. Therefore, no changes have been made to the TSD for SSM 089-28917-00316 and SPM No. 089-28972-00316 and Beemsterboer Slag Corporation (Plant ID 089-00356) permits as a result of this comment.

Comment 4:

D.8.14(a) – This condition requires Permittee to monitor and record three parameters for the wet gas scrubber:

(a) Recirculation water flow rate
(b) pH of the scrubbing liquid
(c) Pressure drop across the wet gas scrubber

These requirements to monitor three different parameters for the wet gas scrubber operation are unnecessary and onerous for providing reasonable assurance of compliance. USEPA issued a revised guidance document illustrating compliance assurance monitoring (CAM) plan examples. The 'Wet Gas Scrubber for SO_2 control' example presented by USEPA in this document relies on two parameters for the CAM Plan:

(a) Scrubber liquid flow rate
(b) Scrubber liquid pH

Therefore, consistent with the USEPA's suggested monitoring approach for wet gas scrubber for SO_2 control, recirculation water flow rate and pH only need to be monitored for the LMF wet gas

scrubber performance. Conditions D.8.14 Wet Gas Scrubber Parametric Monitoring and D.8.16 Record Keeping Requirements should be revised by deleting the monitoring and recordkeeping requirements on the pressure drop.

Response 4:

Based on the EPA CAM Guidance, monitoring two operating parameters; liquid flow rate and liquid pH for packed bed type scrubbers is sufficient for monitoring the scrubber's continuous compliance. Therefore, Conditions D.8.14 and D.8.16 have been revised by deleting the pressure drop monitoring and recordkeeping requirements for the packed bed type wet gas scrubber.

D.8.14 Wet Gas Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall monitor and record the recirculation water flow rate and pH of the scrubbing liquid ~~and pressure drop across~~ **for** the wet gas scrubber associated with the LMF Station at least once per day. When for any one reading, ~~the pressure drop range across the scrubber is outside the range of 2.0 to 10.0 inches or the range established during the latest stack test, and when~~ the flow rate is below the minimum of 460 gallons per minute or the minimum established during the latest stack test, and when the pH of the scrubbing liquid drops below 7.0 or the level established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A ~~pressure drop reading that is outside the above mentioned range,~~ scrubbing flow rate reading that is below the above mentioned minimum ~~and~~ **or** scrubbing liquid pH that drops below the level mentioned above are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The instruments used for determining the ~~pressure drop of the control device and~~ scrubbing liquid flow rate and pH shall be subject to approval by IDEM, OAQ, and shall be calibrated (in accordance with the manufacturer's instructions) or replaced but not less frequently than once per year.

D.8.16 Record Keeping Requirements

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(e) In order to document the compliance status with condition D.8.14, the Permittee shall maintain the once per day records of the ~~pressure drop across the wet gas scrubber, its~~ water recirculation flow rate and pH during normal operation. The Permittee shall include in its daily record when ~~a pressure drop reading,~~ recirculation water flow and pH are not taken and the reason for the lack of ~~pressure drop reading,~~ recirculation water flow rate and pH (e.g. the process did not operate that day).

Comment 5:

D.13.5 – In this draft condition, IDEM established the short term emission limits for PM10, PM2.5, NOx and CO for the proposed 504 Boiler in terms of lb/MMBtu of heat input. IDEM established these limits based on the emission factors used in the emissions calculations for the new boiler (see Page 3 of 22 of TSD App A). As described in the permit application for the 504 Boiler project, this project involves future curtailment of blast furnace gas (BFG) flaring at the existing flare and correspondingly using this amount of BFG in the new boiler for beneficial use at the plant. This aspect is highlighted in the draft permit condition D.13.5(b) requiring a minimum amount of BFG combustion at the new boiler.

ArcelorMittal used the same emission factors for all pollutants except NOx for the flare and the boiler. As such any variability in actual emission performance or exceedence of permit limit in lb/MMBtu for a regulated NSR pollutant will have no effect on the 'net emission increase' for the 504 Boiler project. This is because both the pre-project baseline actual emissions and post project potential to emit for the flare and the boiler will be adjusted resulting in no change to the net emissions increase. As such to minimize the risk of administrative non-compliance with the permit conditions that are inconsequential towards the applicability of regulations, ArcelorMittal prefers that IDEM delete sub-items (c), (d), (e), and (f) in the draft condition D.13.5:

Alternatively, if IDEM intends to retain the NOx short term limit (since the emission factor for the new boiler is lower than that for the flare), we prefer that sub-items (c), (d), and (f) be deleted from the draft condition D.13.5. The NOx emission limit in sub-item (e) should be converted to a mass rate limit in terms of lb/hour as noted below:

Maximum Heat Input Rate (BFG)	523.4 MMBtu/hour
BFG NOx EF	0.05 lb/MMBtu
Pilot Heat Input Rate (NG)	38.2 MMBtu/hour
NG NOx EF	0.098 lb/MMBtu
NOx Emission Rate (BFG Rate >= 90%)	(523.4 * 0.05) + (38.2 * 0.098) = 30.17 lb/hour

Presently, the NOx emission factor for blast furnace gas combustion in the new boiler is provided based on the limited information available about the proposed installation. ArcelorMittal will know more about the NOx emissions performance for the new boiler once the equipment specification / bids are finalized; however, actual performance testing/monitoring may reveal a NOx emission rate different from what was assumed in the application. ArcelorMittal requests that IDEM add the permit language as proposed in D.13.5(e) below, that was also used in the Ispat Inland Inc. permit No. 089-16966-00316 which allows the Permittee to petition for a revision of the permit limit based on actual performance of the proposed 504 Boiler.

D.13.5 PM10, PM2.5, SO2, NOx and CO PSD and Emission Offset Credit Limits [326 IAC 2-2] [326 IAC 2-3]

(a) The total natural gas fuel usage at the No. 504 Boiler (pilot light and supplemental fuel) shall be limited to 492 million cubic feet (MMCF) per twelve consecutive month period, with compliance determined at the end of each month.

(b) When No. 7 Blast Furnace is in operation during a twelve (12) consecutive month period, the minimum quantity of No. 7 Blast Furnace Gas (BFG) fuel usage at the No. 504 Boiler shall be greater than or equal to 4,126,091 million British thermal units (MMBtu) per twelve consecutive month period, with compliance at the end of each month.

~~(c) The PM10 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).~~

~~(d) The PM2.5 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).~~

(~~e~~**c**) The NOx emissions from the No. 504 Boiler when combusting **greater than 90%** Blast Furnace Gas shall be limited to ~~0.05~~**30.17** pound per ~~MMBtu~~**hour** (lb/~~MMBtu~~**hour**).

~~(f) The CO emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.138 pound per MMBtu (lb/MMBtu).~~

(~~g~~**d**) The shutdown in March 9, 2010 of Heritage Slag Products, LLC production plant (Plant ID 089- 00481) shall be permanent.

(e) If the stack tests or monitoring shows that the NOx emission limitation is not achievable in practice, the Permittee can request the Department to re-evaluate D.13.5(c) to adjust this limitation to reflect more accurate NOx emission rates observed in the test or CEMs data. 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 may, at its discretion, 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.

Response 5:

D.13.5 – IDEM agrees that any variability in actual emissions performance or exceedance of the lb/MMBtu permit limit would have no effect on the net emission increase from the No. 504 Boiler because the corresponding amount of BFG that is flared will decrease by the corresponding amount that will be combusted by the No. 504 Boiler and both flared gas and BFG gas combusted at the No. 504 Boiler are calculated using the same emission factors. Although there is no effect in the net emissions increase from the No. 504 Boiler, the netting must be creditable and made federally enforceable. Therefore, the short term emission limits in lb/MMBtu for PM10, PM2.5, and CO emission limits shall remain. Since a Continuous Emissions Monitoring System (CEMS) will be used to demonstrate compliance with the NOx emission limit, the 0.05 lb/MMBtu limit has been changed to a mass rate limit in pounds per hour (lbs/hr) as follows:

Maximum Heat Input Rate (BFG)	523.4 MMBtu/hour
BFG NOx EF	0.05 lb/MMBtu
Pilot Heat Input Rate (NG)	38.2 MMBtu/hour
NG NOx EF	0.098 lb/MMBtu
NOx Emission Rate (BFG Rate = 90%)	(523.4 * 0.05) + (38.2 * 0.098) = 29.91 lbs/hour

D.13.5 PM10, PM2.5, SO2, NOx and CO PSD and Emission Offset Credit Limits [326 IAC 2-2] [326 IAC 2-3]

(a) The total natural gas fuel usage at the No. 504 Boiler (pilot light and supplemental fuel) shall be limited to 492 million cubic feet (MMCF) per twelve consecutive month period, with compliance determined at the end of each month.

(b) When No. 7 Blast Furnace is in operation during a twelve (12) consecutive month period, the minimum quantity of No. 7 Blast Furnace Gas (BFG) fuel usage at the No. 504 Boiler shall be greater than or equal to 4,126,091 million British thermal units (MMBtu) per twelve consecutive month period, with compliance at the end of each month.

(c) The PM10 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).

(d) The PM2.5 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).

(e) The NOx emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to ~~0.05 pound per MMBtu (lb/MMBtu).~~ **29.91 pounds per hour (lbs/hr).**

(f) The CO emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.138 pound per MMBtu (lb/MMBtu)

(g) The shutdown in March 9, 2010 of Heritage Slag Products, LLC production plant (Plant ID 089- 00481) shall be permanent.

Comment 6:

D.13.13 – Condition D.13.13 requires Permittee to submit a quarterly report to document compliance with the natural gas and BFG usage at the No.504 Boiler. However, during the first 11 months of operation, fuel usage information for the new boiler for full 11 months will not be available. As such, ArcelorMittal clarifies here that the first month where available information can be used to demonstrate compliance for the new boiler will be the twelfth month after the startup. No changes to permit conditions are requested as a result of this comment.

Response 6:

IDEM acknowledges that depending on the month when an emission unit started operation, the first year of operation could either have a complete or incomplete full year of reportable information. For the months that the unit has not operated, the reportable information should be zero.

Comment 7:

D.6.5 – Condition D.6.5(a) establishes pound per hour emission limitations for filterable PM10 and filterable PM2.5 emissions for No.50 and No.60 Basic Oxygen Furnaces (BOF). As noted in our May 12, 2010 submittal to IDEM, ArcelorMittal proposed creditable emissions reductions from the BOF operations by complying with the applicable National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subpart FFFFF filterable PM emission limitation of 0.02 gr/dscf. For reductions in filterable PM10 and filterable PM2.5 in Reference A-6, ArcelorMittal used the PM to PM10/PM2.5 ratio from AP-42, Table 12.5-2, 1/95 both for pre-NESHAP baseline and post-NESHAP allowable emissions. Since the PM10 and PM2.5 were calculated using standard ratios of AP42 ArcelorMittal believes that specific lb/hr limits for filterable PM10 and filterable PM2.5 are unnecessary for purposes of enforceable creditable emissions reductions.

As such, ArcelorMittal requests that condition D.6.5(a) of the draft permit be **deleted** since the requirements under G.1.2 pertaining to NESHAP 40 CFR 63 Subpart FFFFF for BOF operation are sufficient (considering the PM emission limit a surrogate for PM10 and PM2.5) to ensure enforceability of emissions reductions. Alternatively, if IDEM decides to retain D.6.5(a), ArcelorMittal requests that the extraneous language describing the operations of No.50 and No.60 BOFs be deleted as follows:

D.6.5 PM10 and PM2.5 PSD and Nonattainment NSR Minor Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

(a) The PM10 and PM2.5 emissions from the No. 4 off-gas scrubber system, exhausting through stack 38, associated with the two (2) BOFs, identified as No. 50 and No. 60 ~~and operations including charging, blowing, tapping, flux and alloy additions, and slag skimming~~ shall be limited to 40.79 pounds hour and 39.57 pounds per hour, respectively. These limits are for filterable PM10 and **filterable** PM2.5 only.

(b) The No. 4 BOF Shop Mold Fume Exhaust baghouse shall be in operation at all times that the molds are in operation and the PM10 and PM2.5 emissions from this Baghouse shall be limited to 0.41 pound per hour for each pollutant. These

limits are for filterable PM10 and **filterable** PM2.5 only.

Response 7:

D.6.5 – IDEM disagrees. It is necessary to add PM10 and PM2.5 enforceable emission limits in the permit to make the emission reductions creditable for the No. 50 and No. 60 BOFs. Therefore, this condition will remain but has been clarified as follows:

D.6.5 PM10 and PM2.5 PSD and Nonattainment NSR Minor Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

(a) The PM10 and PM2.5 emissions from the No. 4 off-gas scrubber system, exhausting through stack 38, associated with the two (2) BOFs, identified as No. 50 and No. 60 ~~and operations including charging, blowing, tapping, flux and alloy additions, and slag skimming~~ shall be limited to 40.79 pounds hour and 39.57 pounds per hour, respectively. These limits are for filterable PM10 and **filterable** PM2.5 only.

(b) The No. 4 BOF Shop Mold Fume Exhaust baghouse shall be in operation at all times that the molds are in operation and the PM10 and PM2.5 emissions from this Baghouse shall be limited to 0.41 pound per hour for each pollutant. These limits are for filterable PM10 and **filterable** PM2.5 only.

Comment 8:

D.6.6 – In the permit application ArcelorMittal proposed creditable emissions decreases from No.50 and No.60 BOFs and No.4 BOF Caster Mold for inclusion in the net emission increase analysis for the 504 Boiler Project. These reductions were calculated and applied as the difference between pre-change baseline to post-change allowable emissions of filterable PM10 and filterable PM2.5 only. This fact is also confirmed by the draft permit conditions D.6.5(a) and (b) that include the text "these limits are for filterable PM10 and PM2.5 only." ArcelorMittal is requesting the following changes to condition D.6.6:

(1) Condition D.6.6(a) references condition D.6.4 for opacity. This reference should be corrected to condition D.6.2 that addresses the opacity requirements.

(2) As explained previously emission limits and also testing for filterable PM10 and filterable PM2.5 on the primary scrubber for the No.50 and No.60 BOF operations are unnecessary since ArcelorMittal used the AP-42 ratios to calculated creditable emissions decreases from this process. As such condition D.6.6(b) should be deleted from the permit.

(3) The No.50 and No.60 BOF operations are controlled by scrubbers that result in entrained moisture droplets in the exhaust stack. Since stack gases are 'wet,' EPA noted in the frequently asked questions for Reference Method 201A that this method cannot be used for measuring PM10 emissions as the water droplets may affect cut size for PM-10 sizing devices. A similar issue will also exist for the PM2.5 proposed reference test method.

(4) The No.4 BOF Caster Mold fume baghouse is a simple and small source of emissions with allowable emissions less than 0.41 lb/hour in condition D.6.5(b). Requirement to test this small unit will be unduly expensive, disruptive to the operations and unnecessary. Therefore, the testing requirement in condition D.6.6(c) should be deleted. Repeat testing of the Mold Fume Baghouse is costly and unnecessary and should be deleted even if IDEM retains the initial testing requirement for this unit.

(5) If IDEM decides to retain the above noted testing conditions, D.6.6(b) and (c) in the draft permit should be replaced with the bold text on page 32 of 46 of the TSD with changes

noted below. For the primary scrubber, this would also allow for testing to be synchronized with the existing testing requirements.

D.6.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.6.1 and D.6.~~4~~**2**, the Permittee shall perform TSP and opacity testing on the No. 4 BOF (stack 38) utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) ~~Within 180 days of issuance of Significant Permit Modification No. 089-28972-00316~~**Prior to startup of the 504 Boiler**, the Permittee shall perform filterable PM 2.5 and **filterable** PM10 testing on the No. 4 off-gas scrubber system, associated with the two (2) BOFs, identified as No. 50 and No. 60 to demonstrate compliance with Condition D.6.5(a). This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(c) ~~Within 180 days of issuance of Significant Permit Modification No. 089-28972-00316~~**Prior to startup of the 504 Boiler**, the Permittee shall perform **filterable** PM 2.5 and **filterable** PM10 testing on the baghouse associated with No. 4 BOF Caster Mold to demonstrate compliance with Condition D.6.5(b). This testing shall be conducted utilizing methods as approved by the Commissioner ~~at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration~~. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Response 8:

D.6.6-

(1) The typographical error in Condition D.6.6(a) has been corrected as follows:

D.6.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.6.1 and ~~D.6.4~~ **D.6.2,** the Permittee shall perform TSP and opacity testing on the No. 4 BOF (stack 38) utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

***

(2) and (3) IDEM disagrees. The PM10 and PM2.5 emission limits required in the permit are necessary to make the emission reductions claimed creditable and enforceable. Therefore, the limits in Condition D.6.5 shall remain. However, Condition D.6.6(b) has been revised since it is unnecessary to determine the filterable PM10 and filterable PM2.5 emissions from a wet scrubber using currently approved USEPA testing methods. D.6.6 has been revised as follows:

D.6.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

***

(b) ~~The PM 2.5 and PM10 testing on the No. 4 off-gas scrubber system, associated with the two (2) BOFs, identified as No. 50 and No. 60 to demonstrate compliance with Condition D.6.5(a) shall be performed not later than 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

Prior to startup of the No. 504 Boiler, the Permittee shall perform filterable PM testing on the No. 4 off-gas scrubber system, associated with the two (2) BOFs, identified as No.50 and No.60 to demonstrate compliance with D.6.5(a) for the filterable PM10 and filterable PM2.5 emission limits using the ratio of 67% for PM10 to PM (PM10/PM) and the ratio of 65% for PM2.5 to PM (PM2.5/PM). This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(4) Although the No. 4 BOF Caster Mold Fume baghouse has limits of 0.41 lb/hr for PM10 and PM2.5, respectively, it is not considered a small source of emissions because its uncontrolled PTE of 51.3 tons/year is greater than the PSD significant level of 15 tons per year for PM and greater than the nonattainment NSR significant level of 10 tons per year for PM2.5. Therefore, Condition D.6.6(c) shall remain including the stack testing frequency every 2.5 years. However, the condition has been revised to reflect your comment since the test required is for filterable particulate:

D.6.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

***

(c) ~~The PM 2.5 and PM10 testing on the baghouse associated with No. 4 BOF Caster Mold to demonstrate compliance with Condition D.6.5(b), shall be performed not later than 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid~~

~~compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

Prior to startup of the 504 Boiler, the Permittee shall perform filterable PM 2.5 **and filterable PM10 testing on the baghouse associated with No. 4 BOF Caster Mold to demonstrate compliance with Condition D.6.5(b). This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

Comment 9:

D.6.8 – This condition refers to D.6.6. The correct reference for this condition is D.6.4 as follows:

D.6.8 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.6.~~6~~**4**, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

Response 9:

The typographical error in Condition D.6.8 has been corrected as follows:

D.6.8 Sulfur Dioxide (SO2) Sampling and Analysis [326 IAC 7-4.1-11(b)]

In order to comply with condition D.6.~~6~~**4**, the Permittee shall comply with the sampling and analysis protocol, in accordance with 326 IAC 7-4.1-11(b)(1).

Comment 10:

D.6.9, D.6.10 and D.6.11 – These conditions establish monitoring requirements for the caster mold baghouse stack 214. However, as explained earlier, this is a small and simple unit that results in an insignificant amount of emissions. Also, since the No.4 BOF roof monitor is subject to 326 IAC 6.8-2-17, in accordance with 326 IAC 6.8-8, this facility is also subject to visible emission notations, baghouse monitoring, and broken bag response in the Continuous Compliance Plan (CCP) included by reference in Section C. ArcelorMittal requests that IDEM delete the monitoring requirements in condition D.6.9, D.6.10, and D.6.11 as follows and replace it with following requirement to update and comply with CCP:

~~D.6.9 Visible Emissions Notations~~

~~(a) Visible emission notations of the caster mold baghouse stack 214 shall be performed. These notations shall be taken 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, including trained personnel under contract with the source, is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~

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

~~D.6.10 Baghouse Monitoring~~

~~The Permittee shall record the pressure drop across the baghouse at least once per day when the associated No. 4 BOF Caster Mold is in operation. When for any one reading the pressure drop range is outside the normal range of 4.5 to 10 inches of water or the range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is below the above mentioned minimum, or pressure drop that is outside the range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~

~~The instruments used for determining the flow rate shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once semi-annually.~~

~~D.6.11 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). Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.~~

D.6.9 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8)]

Prior to startup of the 504 Boiler, the Permittee shall update and implement the revised continuous compliance plan as required in Section C of this permit for the No.4 BOF Caster Mold baghouse stack 214.

Response 10:

No. 4 BOF Caster Mold Fume baghouse is not a small source of emissions; please see related **Response 8(4).** Therefore, conditions D.6.9 Visible Emissions Notations, D.6.10 Baghouse Monitoring and D.6.11 Broken or Failed Bag Detection shall remain.

Comment 11:

D.6.12 – Recordkeeping requirements in this condition should be revised as follows to reflect the changes noted above (Note that if IDEM decides to retain the visible emissions notations for the caster mold baghouse stack 214, condition D.6.12(b) of the draft permit should be revised to reflect the text of D.6.12(b) on page 33 of 46 of TSD that does not include reference to the No.4

off-gas scrubber):

D.6.12 Record Keeping Requirements

(a) To document the compliance status with Conditions D.6.4 and D.6.8, 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.

~~(b) In order to document the compliance status with Condition D.6.9 the Permittee shall maintain records of once per day visible emission notations of the No. 4 off-gas scrubber (38) and caster mold baghouse (214) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).~~

~~(c) To document the compliance status with condition D.6.10, the Permittee shall maintain the records once per day of the pressure drop across the caster mold fume 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 a pressure drop reading (e.g. the process did not operate that day).~~

(~~d~~**b**) To document the compliance status with condition D.6.5(d), the Permittee shall maintain the records of the molten steel that Project X transferred from the No.4 SP to the LMF and Casters at No.2 SP using the rail link constructed in 2009.

(~~e~~**c**) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

Response 11:

Please see related **Responses 8 and 10**. Since Condition D.6.9 Visible Emissions Notations has not been deleted, its requirement for reporting in Condition D.6.13 Reporting Requirements likewise, has not been deleted. However, this condition has been revised to remove the reference to the No. 4 off-gas scrubber.

D.6.12 Record Keeping Requirements

(a) To document the compliance status with Conditions D.6.4 and D.6.8, 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.

(b) In order to document the compliance status with Condition D.6.9 the Permittee shall maintain records of once per day visible emission notations of the ~~No. 4 off-~~

~~gas scrubber and~~ caster mold baghouse (214) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document the compliance status with condition D.6.10, the Permittee shall maintain the records once per day of the pressure drop across the caster mold fume 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 a pressure drop reading (e.g. the process did not operate that day).

(d) To document the compliance status with condition D.6.5(d), the Permittee shall maintain the records of the molten steel that Project X transferred from the No.4 SP to the LMF and Casters at No.2 SP using the rail link constructed in 2009.

(e) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

Comment 12:

D.6.13 – Reporting requirements in this condition should be revised to correct the citation for the referenced condition related to SO_2 emissions as follows:

D .6.13 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 the limits in Condition D.6.4, in order to document compliance with Conditions D.6.4 and D.6.~~8 (d)~~**12(a)**. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The quarterly report shall be submitted no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).

Response 12:

Condition D.6.13 Reporting Requirements has been revised due to a typographical error as follows:

D .6.13 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 the limits in Condition D.6.4, in order to document compliance with Conditions D.6.4 and D.6.~~8 (d)~~**12(a)**. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The quarterly report shall be submitted no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).

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On August 25, 2010, the Office of Air Quality (OAQ) held a public meeting and a public hearing at the East Chicago Public Library, 2401 East Columbus Drive, East Chicago, Indiana. At the hearing there were no comments made regarding the proposed SSM No. 089-28917-00316 and SPM No. 089-28972-00316, except for one person, Ms. Kay Nelson of the Northwest Indiana Forum. Ms. Nelson spoke in support of the proposed No. 504 Boiler project. The following is a summary of the comment:

Comment:

Ms. Kay Nelson of the Northwest Indiana Forum stated that she came to the hearing to support the issuance of the proposed permits, SSM No. 089-28917-00316 and SPM No. 089-28972-00316 for Arcelor Mittal USA, Inc. that will allow the Northwest Indiana to be home to the exciting environmental and economic project. The Forum continually support the IDEM's decision to issue technically, scientifically and legally sound permits that are crucial to our nation's quality of life and global competitiveness. The Indiana Harbor Energy Recovery and Reuse No. 504 Boiler project is exciting in that it will be implemented in partnership with the Department of Energy. The permits will allow the construction of a technology that will result in significant environmental improvement, the creation of numerous design, construction and equipment manufacturing jobs, and increase the sustainability of 5,900 direct and 26,800 indirect jobs in Northwest Indiana at a time when our country is seeing limited capital improvement projects.

Response:

IDEM, OAQ thanks Ms. Kay Nelson for her comments and her support to the issuance of permits SSM No 089-28917-00316 and SPM No. 089-28972-00316 for the No. 504 Boiler project. No changes to the permit have been made as a result of this comment.

On September 29, 2010, the Permittee made the following comments to the proposed Significant Permit Modification No. 089-28972-00316:

Comment 1:

In the air permit application for the 504 Boiler Project, ArcelorMittal used the preliminary design / engineering information to establish boiler operating scenario and fuel usage requirements. ArcelorMittal has now received more detailed project design and used the following assumptions and design basis:

(a) Original boiler design was based on a 80% efficiency rating similar to the other existing boilers in No. 5 Boilerhouse.The current equipment specifications are based on efficiencies as high as 89.5%. Higher boiler efficiency means that less fuel will be required to generate steam at the design rate.

(b) The updated project design includes installation of a Reverse Osmosis (RO) system to treat the boiler feedwater. This change is also expected to reduce the amount of blowdown water heat loss and reduce the amount of fuel required to generate steam at the design rate.

(c) Preliminary design basis envisioned that 504 Boiler will be primarily base-loaded with the other boilers in No.5 Boilerhouse following the plant steam demand. However, future operating scenarios are expected to require balancing utilization of 504 Boiler with the other boilers at No. 5 Boilerhouse to minimize flaring of blast furnace gas. Therefore, a lower annual average firing rate factor is envisioned for 504 Boiler that will also reduce the amount of fuel projected to be used in the new boiler.

The above changes will result in a decrease in the minimum amount of blast furnace gas (BFG) fuel to be combusted at the new boiler. In addition, No. 7 Blast Furnace is the sole supplier of

BFG for the new Boiler. Periods of furnace downtime or temporary idle will also need to be discounted from the minimum BFG combustion requirement in D.13.5(b) to demonstrate compliance with the permit limit. Detailed net emissions increase calculations for the 504 Boiler Project are attached confirming no change to the minor modification status for the project. As such ArcelorMittal requests a revision to the minimum BFG usage from 4,126,091 to 3,288,088 million British thermal units (MMBtu) per twelve consecutive month period required in Condition D.13.5(b).

Response 1:

Condition D.13.5(b) has been revised as follows:

D.13.5 PM10, PM2.5, SO2, NOx and CO PSD and Emission Offset Credit Limits [326 IAC 2-2] [326 IAC 2-3]

(b) When No. 7 Blast Furnace is in operation during a twelve (12) consecutive month period, the minimum quantity of No. 7 Blast Furnace Gas (BFG) fuel usage at the No. 504 Boiler shall be greater than or equal to ~~4,126,091~~ **3,288,088** million British thermal units (MMBtu) per twelve consecutive month period, with compliance determined at the end of each month.

Comment 2*:*

In the air permit application for the 504 Boiler Project, ArcelorMittal noted that the steam generated in the new boiler will be utilized within the plant steam distribution system. However, with the current understanding of the final project design and equipment specification, the following changes to the steam system are expected:

(a) Up-rate the maximum electric generation capacity of No. 17 Steam Turbine Generator (owned by North Lake Energy LLC) from 80 MW to 90 MW. In addition, North Lake is evaluating the cooling system needs for the turbine upgrade. This evaluation is expected to be completed in about a two month period. If this evaluation concludes that a cooling tower upgrade is necessary, ArcelorMittal will notify IDEM regarding any changes to emissions calculations and permit updates.

(b) Use an existing steam line at the Indiana Harbor site and supply the excess steam to the existing steam turbine generators at the existing 4 AC station to produce electricity.

ArcelorMittal is providing this information to IDEM to describe all changes expected as a result of the proposed project. However, these changes will not affect the maximum fuel combustion or emission rates for the proposed 504 Boiler Project.

Response 2:

Since this comment is just for informational purposes, no change has been made to the permit as a result of this comment.

Comment 3:

Since the net emissions increase analyses for the proposed 504 Boiler Project included future decreases in emissions that will be contemporaneous, IDEM should add the clarifying text to indicate that requirement to make the decreases enforceable are only triggered prior to 'startup' of the 504 Boiler as follows:

"Prior to commencing operation of the 504 Boiler and thereafter:'
or, '…prior to the operation of No. 504 Boiler and thereafter to render the requirement of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler

permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, Inc.'"

This explanation is required for the following permit conditions:

(a) Condition D.6.5 contains emission limits for the operations at the 4 BOF Shop. Compliance with these emission limits or operating requirements should be required only prior to commencing operation of the 504 Boiler and thereafter.

(b) Conditions D.6.9, D.6.10, D.6.11, D.6.12(b)(c), pertain to monitoring, recordkeeping, and reporting requirements for the 4 BOF Caster Mold fume baghouse. In order to make the decreases in emissions enforceable, the requirements need only apply to this operation prior to commencing operation of 504 Boiler and thereafter.

(c) Conditions D.6.12(d), D.6.13(b) pertain to recordkeeping and reporting requirements for 4 BOF-2 BOF Project X. In order to make the increases in emissions enforceable, the requirements need only apply to these operations prior to commencing operation of the 504 Boiler and thereafter.

Response 3:

The following conditions have been revised to clarify the start of compliance of the enforceable conditions for the No. 4 BOF Shop.

D.6.5 PM10 and PM2.5 PSD and Nonattainment NSR Minor Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

Prior to the operation of the No. 504 Boiler and thereafter:

(a) The PM10 and PM2.5 emissions from the No. 4 off-gas scrubber system, exhausting through stack 38, associated with the two (2) BOFs, identified as No. 50 and No. 60 shall be limited to 40.79 pounds hour and 39.57 pounds per hour, respectively. These limits are for filterable PM10 and filterable PM2.5 only.

(b) The No. 4 BOF Shop Mold Fume Exhaust baghouse shall be in operation at all times that the molds are in operation and the PM10 and PM2.5 emissions from this Baghouse shall be limited to 0.41 pound per hour for each pollutant. These limits are for filterable PM10 and filterable PM2.5 only.

(c) The Permittee shall not utilize the bottom stirring process (installed during the vessel reline in 2008) at the No.60 BOF vessel in the No.4 Steel Production Shop (No.4 SP) in support of the No. 504 Boiler project.

(d) The total molten steel transferred from the No.4 SP to the LMF and Casters at No.2 Steel Production Shop (No.2 SP) using the rail link constructed in 2009 (designated as Project X) shall not exceed 3,522,720 tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with this Condition, including Condition D.13.5, Condition D.12.6 of this permit, Condition D.1.6, Condition D.7.5 in SPM 089-29300-00536 of ArcelorMittal Indiana Harbor, LLC (West Plant), Conditions D.1.3, D.3.1 and D.3.2 in SPM No. 089-29271-00356 of Beemsterboer Slag Corporation, and Condition D.1.3 in SPM No. 089 29316-00537 of Beemsterboer Slag Corporation shall result in total emission reduction of 87.12 tons of PM10 per year, 64.48 tons of PM2.5 per year, 173.52 ton of SO2 per year, 128.92 tons of NOx per year and 12.09 tons of CO per year and shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to the No. 504 Boiler permitted in SSM 089-28917-00316.

Compliance Determination Requirements

D.6.9 Visible Emissions Notations

Prior to the operation of the No. 504 Boiler and thereafter:

(a) Visible emission notations of the caster mold baghouse stack 214 shall be performed. These notations shall be taken 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.

(e) A trained employee, including trained personnel under contract with the source, 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 response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.6.10 Baghouse Monitoring

Prior to the operation of the No. 504 Boiler and thereafter, the Permittee shall record the pressure drop across the baghouse at least once per day when the associated No. 4 BOF Caster Mold is in operation. When for any one reading the pressure drop range is outside the normal range of 4.5 to 10 inches of water or the range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is below the above mentioned minimum, or pressure drop that is outside the range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instruments used for determining the flow rate shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once semi-annually.

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D.6.12 Record Keeping Requirements

(a) To document the compliance status with Conditions D.6.4 and D.6.8, 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.

(b) **Prior to the operation of the No. 504 Boiler and thereafter,** ~~In~~ **in** order to document the compliance status with Condition D.6.9 the Permittee shall maintain records of once per day visible emission notations of the caster mold baghouse (214) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) **Prior to the operation of the No. 504 Boiler and thereafter,** ~~To~~ **to** document the compliance status with condition D.6.10, the Permittee shall maintain the records once per day of the pressure drop across the caster mold fume 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 a pressure drop reading (e.g. the process did not operate that day).

(d) To document the compliance status with condition D.6.5(d), the Permittee shall maintain the records of the molten steel that Project X transferred from the No.4 SP to the LMF and Casters at No.2 SP using the rail link constructed in 2009.

(e) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

Comment 4:

Conditions D.13.9, D.13.11, D.13.12(b) and D.13.13(c) require use of NOx CEMs for the new boiler. However, as noted in our comments, the new boiler will also be subject to the CAIR requirements for NOx emissions. Therefore, the requirements to install CEMs noted in these conditions are duplicative and unnecessary and should be deleted from the permit.

Response 4:

IDEM disagrees that the NOx CEMS requirement in Conditions D.13.9, D.13.11, D.13.12(b) and D.13.13(c) are duplicative with the CAIR requirements in Conditions E.1. The NOx CEMS is used for two separate and distinct regulatory purposes; i.e., 326 IAC 2-2, PSD NOx minor limit and 40 CFR Part 97, Clean Air Interstate Rule (CAIR). The Permittee must fulfill the requirements of the state monitoring rule in 326 IAC 3 for 326 IAC 2-2, PSD minor NOx limit requirement and the quality assurance testing, monitoring and reporting requirements in the federal rule for 40 CFR 97, CAIR requirements. Therefore, these requirements are written in separate Sections, D.13 and E.1.

Comment 5:

Page 20 of 22 of the calculation spreadsheet for the No.4 BOF Caster Mold Baghouse installation contains an error in emissions calculations for the “Portion of Uncontrolled Emissions Following Installation of a Baghouse.” The calculation result is noted as PTE for PM10, PM10, PM2.5 as 27.6 tons per year. Using the 5% fugitive factor, this number should be revised as 2.8 tons per year. This will also change the PM, PM10, and PM2.5 decreases from this project from 22.0 tons per year to 46.8 tons per year.

Response 5:

The emissions calculation spreadsheet for the 4 SP Mold Fume Baghouse has been revised due to error.

REFERENCE A-5 --- Emissions Decrease Based on Installation of No. 4 SP Mold Fume Exhaust Baghouse at ArcelorMittal USA, Inc.				
	Emission Rates (ton/yr)			Source /
Project	PM	PM10	PM2.5	Comments
No. 4 BOF Mold Fume Exhaust Baghouse	~~-22~~ **-46.8**	~~-22~~ **-46.8**	~~-22~~ **-46.8**	Permit No. 089-23628-00316 does not require the baghouse to be operated.

The following table shows that particulate emissions would decrease following the No. 4 BOF Shop Mold Fume Exhaust Baghouse's installation. Lead emissions are expected to be negligible. The new baghouse would not affect emission rates of any other criteria pollutants.

Emission Unit	Uncontrolled Emission Factor		Building Capture Efficiency	Baghouse Capture Efficiency	Control Efficiency	Baseline Actual Operating Hours	Potential Operating Hours	PTE (tons/yr)	
Current No. 4 BOF Caster Mold Uncontrolled Emissions from Roof Monitor	12.6	lb PM, PM_{10}, $PM_{2.5}$ / hr		0.0%		8148	-	51.3	ton PM, PM_{10}, $PM_{2.5}$ / year (Uncontrolled)
No. 4 BOF Caster Mold Stack Portion of Uncontrolled Emissions Following Installation of a Baghouse	12.6	lb PM, PM_{10}, $PM_{2.5}$ / hr	5% fugitive (not captured by the baghouse)			-	8760	~~27.6~~ **2.8**	ton PM, PM_{10}, $PM_{2.5}$ / year (Uncontrolled Portion)
No. 4 BOF Caster Mold Stack Controlled Emissions Following Installation of a Baghouse	12.6	lb PM, PM_{10}, $PM_{2.5}$ / hr	-	95.0%	96.6%	-	8760	1.8	ton PM, PM_{10}, $PM_{2.5}$ / year (Controlled)
Emissions Reductions								~~-22.0~~ **-46.8**	ton PM, PM_{10}, $PM_{2.5}$ / year

Methodology:
No. 4 BOF Caster Mold Stack Portion of Uncontrolled Emissions = 12.6*0.5*8760/2000 = 2.7.6 tons/yr 12.6*0.05*8760/2000 = 2.8 tons/yr Following Installation of a Baghouse

Tables 1 and 2 on page 7 through 9 of 46 of the TSD have been revised to reflect the new BFG usage limit for the No. 504 Boiler and the corrected emissions decrease from the No. 4 BOF Caster Mold baghouse:

Table 1								
Limited Potential to Emit - New Boiler (tons/year)								
Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Lead
Boiler No. 504 combusting BFG PTE, tons/yr (4,126,091 **3,288,088** MMBtu/yr)	~~14.98~~ **11.94**	~~104.13~~ **82.98**	~~104.13~~ **82.98**	~~306.21~~ **244.02**	~~104.15~~ **83.0**	0.0	~~285.38~~ **227.42**	0.0
Boiler No. 504 Standby/Supplemental NG Fuel PTE, tons/yr (157,000 MMBtu/yr)	0.15	0.58	0.58	0.05	7.70	0.42	6.46	0.000756
Boiler No. 504 Pilot Light PTE, tons/yr	0.31	1.25	1.25	0.10	16.40	0.90	13.78	
Sub-Total (Emissions Increase from No. 504 Boiler)	~~**15.43**~~ **12.39**	~~**105.96**~~ **84.81**	~~**105.96**~~ **84.81**	~~**306.35**~~ **244.16**	~~**128.25**~~ **107.1**	**1.33**	~~**305.62**~~ **247.66**	**0.000756**
Whether Significant Increase and Whether Triggers Netting?	No	Yes	Yes	Yes	Yes	No	Yes	No
Netting Analysis **								
Contemporaneous Emissions Changes (Including Contractors)								
No. 7 Blast Furnace Flare (BFG) Decrease	-	~~-104.13~~ **-82.98**	~~-104.13~~ **-82.98**	~~-306.21~~ **-244.02**	~~-104.15~~ **-83.0**	-	~~-285.38~~ **-227.42**	-
Contemporaneous Increases	-	80.65	41.39	18.83	137.72	-	64.16	-
Other Contemporaneous Decreases	-	~~-87.12~~ **-111.92**	~~-64.48~~ **-89.28**	-173.52	-128.92	-	-12.09	-
Total Emissions Change (Increase) from the Project	**-**	~~**-4.64**~~ **-29.44**	~~**-21.26**~~ **-46.06**	**- 154.55**	**32.90**	**-**	**72.31**	**-**

Table 1								
Limited Potential to Emit - New Boiler (tons/year)								
Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Lead
PSD Significant Levels	25	15	-	40	40	40	100	0.6
Nonattainment NSR Significant Levels	-	-	10	40	-	-	-	-

Table 2 - Netting Analysis (tons/year)						
ArcelorMIttal East and West Plants Projects	Location	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
Contemporaneous Emissions Increases						
No. 2 Galvanizing Line Burner Replacements	West	0.7	0.7	0.06	19.72	7.8
Aluminizing Line	West	4.53	4.53	0.02	3.77	3.16
LMF Lime Silo	West	0.86	0.86	0.00	0.00	0.00
No. 2 CGL Trivalent Chrome Project	West	0.16	0.16	0.01	2.15	1.80
New Iron Ladle Burner (18 MMBtu/hr)	West	0.29	0.29	0.02	3.86	3.25
No. 4 SP New Heater	East	0.33	0.33	0.03	4.29	3.61
No. 2 SP Leaded Steel to EAF	East	0.00	0.00	0.00	0.00	0.00
No. 4 SP and No. 2 SP Consolidation (Project X)	East	3.55	3.55	14.04	29.76	23.58

Table 2 - Netting Analysis (tons/year)						
ArcelorMIttal East and West Plants Projects	Location	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
Emergency Generator at IT Bldg	East	0.03	0.03	0.00	3.52	5.76
Contemporaneous Emissions Increases		**10.46**	**10.46**	**14.18**	**67.07**	**48.96**
Indiana Harbor West - Boilerhouse Oil Restriction	West	(11.40)	(7.54)	(173.29)	(4.95)	0.00
No. 3 Galvanizing Line	East	(1.20)	(1.20)	(0.09)	(49.00)	(1.90)
No. 4 Aluminizing Line	East	(1.08)	(1.08)	(0.09)	(44.15)	(1.71)
No. 4 BOF Mold Fume Exhaust Baghouse	East	~~(22.00)~~ **(46.8)**	~~(22.00)~~ **(46.8)**	0.00	0.00	0.00
No.4 SP MACT Scrubber Compliance	East	(26.02)	(25.24)	0.00	0.00	0.00
Contemporaneous and Creditable Emissions Decreases		~~**(61.70)**~~ **(86.5)**	~~**(57.06)**~~ **(81.86)**	**(173.47)**	**(98.10)**	**(3.61)**

Comment 6:

General Construction Condition 4 in the cover letter notes the requirements of 326 IAC 2-2-8 regarding 'revocation of permits.' However, we would like to point out that this project is a 'minor modification' under PSD and not subject to the permit revocation condition cited here.

Response 6:

IDEM acknowledges that Condition No. 4 in the letter for SSM No. 089-28917-00316 is not applicable for the No. 504 Boiler project. IDEM has made no change to the permit as a result of this comment.

Comment 7:

ArcelorMittal Indiana Harbor, LLC – Comments / Revisions for SSM 089-29300-00318 (West)
Condition D.1.6 limits natural gas usage for the two new Iron Ladle Burners to be installed at the Indiana Harbor site. As noted in our letter dated August 23, 2010 these Iron Ladle Burners were listed under Section D.1 of Part 70 Permit No.089-7099-00318 for Indiana Harbor West facility only for administrative convenience. Since Indiana Harbor East and West are part of the same stationary source, these burners may be used at either side as necessitated by the operational needs at site. Therefore, we request that IDEM add the following clarifying text to this condition:

D.1.6 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The natural gas fuel usage to the two (2) Iron Ladle Burners **(that may be used at either Plt ID 089-00318 or Plt ID 089-00316)** shall not exceed 77 million cubic feet per twelve consecutive month period, with compliance at the end of each month. Compliance with this condition shall render the requirement of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, LLC (Plt ID 089-00316).

Response 7:

IDEM agrees to incorporate the changes to clarify that Ladle Burners located at ArcelorMittal Indiana Harbor, LLC – (West) can be moved to the East plant provided that the fuel usage limit is not exceeded. However, an application from ArcelorMIttal Indiana Harbor must be submitted prior to incorporating the changes.

Comment 8:

Beemsterboer Slag Corporation – Comments / Revisions for SPM 089-29271-00356
Conversion of No.1 Slag Plant and North End Processing to Line Power

(a) Condition D.1.3 requires Beemsterboer to shutdown the diesel-fired generator identified as GS043. As explained in our earlier comments, permanent shutdown of this unit is not necessary for enforceability of decreases in emissions for the 504 Boiler Project. Beemsterboer Slag Corporation will provide additional information / justification separately in support of their position that continued use of this generator is appropriate and necessary and will not affect the creditable emissions decreases from the No.1 Slag Plant by conversion to line power.

(b) Conditions D.3.1(e) and (f) requires Beemsterboer to shutdown the two diesel-fired

generator identified as GS038 and GS040. As explained in our earlier comments, permanent shutdown of this unit is not necessary for enforceability of decreases in emissions for the 504 Boiler Project. Beemsterboer Slag Corporation will provide additional information / justification separately in support of their position that continued use of this generator is appropriate and necessary and will not affect the creditable emissions decreases from the No.1 North End Processing Area by conversion to line power.

Additional details relating to fuel use restrictions for the existing generators will be provided in a separate submittal from Beemsterboer.

Response 8:

IDEM has not changed Conditions D.1.3 and D.3.1(e) and (f) of Beemsterboer SPM No. 089-29271-00356 until an application for this requested change is submitted by Beemsterboer.

Indiana Department of Environmental Management
Office of Air Quality

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

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.:	089-28917-00316
Significant Permit Modification No.:	089-28972-00316
Permit Reviewer:	Aida De Guzman

Source Definition

Operations at the ArcelorMittal Indiana Harbor site consist of two plants – Indiana Harbor East ("East") and Indiana Harbor West ("West"), separated by a canal. IDEM, OAQ has evaluated whether the East and West plants meet the criteria to be grouped together as a single 'stationary source' as defined in 326 IAC 2-2-1(zz) and 326 IAC 2-3-1(tt). The definition of "stationary source" relies on the term "building, structure, facility or installation", as defined in 326 IAC 2-2-1(j) and 326 IAC 2-3-1(g), to determine if emission units belong to the same stationary source. In order for the East and West plants to be considered one stationary source they must meet all three of the following requirements:

(1) the plants must be under common control;

(2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code; and,

(3) the plants must be located on contiguous or adjacent properties.

Both plants have had separate Title V operating permits. IDEM, OAQ has also evaluated whether the East and West plants are part of the same major source under the Title V rules. The term "major source" is defined at 326 IAC 2-7-1(22). In order for the two plants to be considered one major source they must meet all three of the following requirements:

(1) the plants must be under common ownership or common control;

(2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,

(3) the plants must be located on contiguous or adjacent properties.

The requirements under the major source definition are nearly identical to the elements used to determine if the plants are part of the same stationary source. If the plants are part of the same stationary source then they will also be part of the same major source.

Historically the two plants were under separate ownership. The West plant was owned by LTV Steel and subsequently by ISG Steel. The East plant was owned by Ispat Inland and later changed to Mittal Steel. In 2005, Mittal Steel acquired ISG but the two plants continued to operate independently with separate primary and finishing operations. Subsequently, as a result of an international merger the parent company was renamed as 'ArcelorMittal'. These mergers and acquisitions activities took several months to finalize, during which the operations at the two plants remained independent of each other. Starting in the 2007-2008 period, ArcelorMittal started reorganizing the East and West plants to facilitate common management structure and sharing of personnel. The common ownership of the two plants constitutes common control. The two plants are under common control, meeting the first requirement for a stationary source and for a major source.

The Standard Industrial Classification Code Manual sets out how to determine the proper SIC Code for each type of industry. The principal product of each plant determines the SIC Code. Both East and West plants are integrated iron and steel making operations belonging to SIC Code Major Group 33: Primary Metal Industries. The two plants have the same two-digit SIC code, meeting the second requirement for a stationary source and for a major source.

The East and West plants are located on adjacent properties (opposite banks of the Indiana Harbor and Ship Canal in East Chicago, Indiana). Therefore, the two plants meet all three requirements for a stationary source and for a major source. IDEM, OAQ finds that the two plants are part of the same stationary source and also part of the same major source.

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;

(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 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; and

(k) Phoenix Services LLC, dba Metal Services LLC (Plant ID 089-00536), the on-site contactor (a slag and kish processing operation) is located at 3236 Watling Street, East Chicago, Indiana 46312.

The source includes ArcelorMittal Indiana Harbor, LLC, an integrated steel mill with the following on-site contractors:

(a) ArcelorMittal Indiana Harbor, LLC (Plant ID 089-00318), the primary operation, is located at 3001 Dickey Road, East Chicago, Indiana;

(b) Oil Tech, Inc (Plant ID 089-00375), the on-site contractor (a used oil recycling facility), is located at 3001 Dickey Road, East Chicago, Indiana;

(c) International Mill Service (Plant ID 089-00353), the on-site contractor (a steel slab scarfer) is located at 3001 Dickey Road, East Chicago, Indiana;

(d) Edward Levy (Plant ID 089-00339), the on-site contractor (a slag processing facility), is located at 3001 Dickey Road, East Chicago, Indiana;

(e) Ironside Energy, LLC (Plant ID 089-00448), the on-site contractor (an industrial steam and electric power cogeneration plant), is located at 3001 Dickey Road, East Chicago, Indiana;

(f) Phoenix Services, LLC (Plant ID 089-00538), the on-site contractor (a slag and kish processing plant), is located at 3001 Dickey Road, East Chicago, Indiana;

(g) Beemsterboer Slag Corporation (Plant ID 089-00537), the on site contractor (a metallurgical coke screening plant), is located at 3001 Dickey Road, East Chicago, Indiana; and

(h) Mid-Continental Coal and Coke (Plant ID 089-00507, the on site contractor (metallurgical coke screening plant), is located at 3001 Dickey Road, East Chicago, Indiana.

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

Existing Approvals

The source was issued Part 70 Operating 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, issued on November 1, 2006.

(b) First Significant Permit Modification No. 089-23470-00316, issued on January 22, 2007.

(c) Second Significant Permit Modification No. 089-25725-00316, issued on July 9, 2008.

(d) Second Administrative Amendment No. 089-26796-00316, issued on August 20, 2008.

(e) Third Significant Permit Modification No. 089-22044-00316, issued on November 3, 2008.

(f) Fourth Significant Permit Modification No.: 089-18491-00316, issued on May 26, 2010.

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O_3	Attainment effective June 4, 2010. [1]
PM_{10}	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]The U. S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Lake County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3.

Basic nonattainment designation effective federally April 5, 2005, for PM2.5.

(a) Ozone Standards
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. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Lake County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Lake County has been classified as nonattainment for $PM_{2.5}$ in 70 FR 943 dated January 5, 2005. On May 8, 2008, U.S. EPA promulgated specific New Source Review rules for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. Therefore, direct $PM_{2.5}$ 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 and Nonattainment NSR applicability.

Source Status

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

Pollutant	Emissions (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 Nonattainment NSR stationary source because the potential to emit PM2.5 is each greater than 100 tons/yr.

(b) This existing source is a major PSD stationary source because the potential to emit PM, PM10, VOC, NOx, SO_2, and CO is each 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 the Third Significant Permit Modification No. 089-22044-00316, issued on November 3, 2008.

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 2008 OAQ emissions data.

Pollutant	Actual Emissions (tons/year)
PM	1,973
PM10	1,973
PM2.5	931
SO_2	2,905
VOC	1,220
CO	50,547
NO_x	4,244
Lead	4.98

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 January 26, 2010, the Permittee submitted an application for the following emission units:

(a) Addition of one (1) 561.6 million British thermal units per hour (MMBtu/hr) boiler, identified as Boiler No. 504 to existing No. 5 Boilerhouse fired using the No. 7 Blast Furnace Gas (BFG) generated during the iron making process that is currently being flared, and natural gas as supplemental fuel, including ancillary equipment (deaerator, feedwater pump, BFG supply line, boiler control equipment, etc.) necessary to operate the boiler.

The boiler will generate 350,000 pounds of steam per hour that will be sent to existing generators to generate 38.14 Megawatts of electricity all for in-plant use, resulting in less electrical power purchased by the plant.

On February 12, 2010, the Permittee submitted an application for the construction of the following control device:

(a) One (1) Wet Gas Scrubber to be installed at the Ladle Metallurgical Facility (LMF) Station located at the EAF Meltshop to control the SO_2 emissions from the LMF.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

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

Permit Level Determination – Part 70

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

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

Uncontrolled PTE	
Pollutant	**Potential To Emit** (ton/yr)
PM	19.51
PM_{10}	127.20
$PM_{2.5}$	127.20
SO_2	341.14
VOC	8.32
CO	444.13
NO_X	266.96

Uncontrolled PTE	
HAPs	**Potential To Emit** (ton/yr)
Formaldehyde	0.113
Hexane	2.72
Dichlorobenzene	0.00181
Cadmium	0.0017
Chromium	0.00212
Nickel	0.0032
Benzene	0.0032
Toluene	0.0051
Worst Single HAP (Hexane)	2.72
Total Combined HAPs	2.85

(a) This modification is subject to 326 IAC 2-7-10.5(f), Significant Source Modification because it has the potential to emit for at least one regulated pollutant greater than or equal to twenty-five (25) tons per year.

(b) This modification is subject to 326 IAC 2-7-12(d), Significant Permit Modification, since it involves incorporating federally enforceable emissions limits and new compliance determination and monitoring requirements that do not qualify as minor permit modification or as an administrative amendment.

Permit Level Determination - PSD and Emissions 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 modification and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Table 1								
Limited Potential to Emit - New Boiler (tons/year)								
Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Lead
Boiler No. 504 combusting BFG PTE, tons/yr (4,126,091 MMBtu/yr)	14.98	104.13	104.13	306.21	104.15	0.0	285.38	0.0
Boiler No. 504 Standby/Supplemental NG Fuel PTE, tons/yr (157,000 MMBtu/yr)	0.15	0.58	0.58	0.05	7.70	0.42	6.46	0.000756
Boiler No. 504 Pilot Light PTE, tons/yr	0.31	1.25	1.25	0.10	16.40	0.90	13.78	
Sub-Total (Emissions Increase from No. 504 Boiler)	**15.43**	**105.96**	**105.96**	**306.35**	**128.25**	**1.33**	**305.62**	**0.000756**
Whether Significant Increase and Whether Triggers Netting?	No	Yes	Yes	Yes	Yes	No	Yes	No
Netting Analysis **								
Contemporaneous Emissions Changes (Including Contractors)								
No. 7 Blast Furnace Flare (BFG) Decrease	-	-104.13	-104.13	-306.21	-104.15	-	-285.38	-
Contemporaneous Increases	-	80.65	41.39	18.83	137.72	-	64.16	-
Other Contemporaneous Decreases	-	-87.12	-64.48	-173.52	-128.92	-	-12.09	-

Table 1								
Limited Potential to Emit - New Boiler (tons/year)								
Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Lead
Total Emissions Change (Increase) from the Project	**-**	**-4.64**	**-21.26**	**- 154.55**	**32.90**	**-**	**72.31**	**-**
PSD Significant Levels	25	15	-	40	40	40	100	0.6
Nonattainment NSR Significant Levels	-	-	10	40	-	-	-	-

** - Details in Tables 2 and 3

Note: The proposed No. 504 Boiler will use BFG that is presently combusted at the flare as the primary fuel. Therefore, the amount of BFG that is flared will decrease by the corresponding amount that will be combusted by the No. 504 Boiler.

(a) Since PM10, PM2.5, SO2, NOx, and CO are emitted in significant levels from the proposed modification (No. 504 Boiler), netting is triggered for these pollutants. Summation of contemporaneous emissions increases and decreases for the last 5 years prior to the modification have been considered in the analysis. See detailed netting analysis on Pages 1 through 22 of the emissions calculations spreadsheet.

PM and Lead are not emitted at significant level from the proposed modification (No. 504 Boiler). Therefore, netting was not triggered for these pollutants.

(b) This modification to an existing major stationary source is not major because the emissions increase for PM, PM10, SO2, and CO are less than the PSD significant levels, after consideration of the emissions increases and decreases that are contemporaneous with the proposed modification. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

(c) This modification to an existing major stationary source is not major because the VOC emissions increase is not emitted at 40 tons per year or greater, PSD significant level. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

(d) This modification to an existing major stationary source is not major because the emissions increase for PM2.5 are less than 10 tons per year, the Nonattainment NSR significant level, after consideration of the emissions increases and decreases that are contemporaneous with the proposed modification. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment NSR requirements do not apply.

Table 2 - Netting Analysis (tons/year)						
ArcelorMIttal East and West Plants Projects	Location	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
Contemporaneous Emissions Increases						
No. 2 Galvanizing Line Burner Replacements	West	0.7	0.7	0.06	19.72	7.8
Aluminizing Line	West	4.53	4.53	0.02	3.77	3.16
LMF Lime Silo	West	0.86	0.86	0.00	0.00	0.00
No. 2 CGL Trivalent Chrome Project	West	0.16	0.16	0.01	2.15	1.80

Table 2 - Netting Analysis (tons/year)						
ArcelorMIttal East and West Plants Projects	Location	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
New Iron Ladle Burner (18 MMBtu/hr)	West	0.29	0.29	0.02	3.86	3.25
No. 4 SP New Heater	East	0.33	0.33	0.03	4.29	3.61
No. 2 SP Leaded Steel to EAF	East	0.00	0.00	0.00	0.00	0.00
No. 4 SP and No. 2 SP Consolidation (Project X)	East	3.55	3.55	14.04	29.76	23.58
Emergency Generator at IT Bldg	East	0.03	0.03	0.00	3.52	5.76
Contemporaneous Emissions Increases		**10.46**	**10.46**	**14.18**	**67.07**	**48.96**
Indiana Harbor West - Boilerhouse Oil Restriction	West	(11.40)	(7.54)	(173.29)	(4.95)	0.00
No. 3 Galvanizing Line	East	(1.20)	(1.20)	(0.09)	(49.00)	(1.90)
No. 4 Aluminizing Line	East	(1.08)	(1.08)	(0.09)	(44.15)	(1.71)
No. 4 BOF Mold Fume Exhaust Baghouse	East	(22.00)	(22.00)	0.00	0.00	0.00
No.4 SP MACT Scrubber Compliance	East	(26.02)	(25.24)	0.00	0.00	0.00
Contemporaneous and Creditable Emissions Decreases		**(61.70)**	**(57.06)**	**(173.47)**	**(98.10)**	**(3.61)**

Contractors Projects	Location	Table 3 - Netting Analysis (tons/year)				
		PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
Contemporaneous Emissions Increases						
Edward C. Levy Company-addt'l conveyors/stackers	West	5.78	2.05	0.00	0.00	0.00
Beemsterboer Slag-Blending Plant	West	6.62	0.93	0.00	0.00	0.00
Phoenix-replaced MultiServ (Netting)	West	14.96	4.05	0.00	0.00	0.00
Mid-Continent Coal and Coke-addt'l conveyor & generator	East	3.11	1.10	0.69	10.46	2.25
Fritz Enterprises-addt'l screen & generator	East	2.60	0.92	0.90	13.60	2.90
Beemsterboer Slag-unpermitted units permitted (2005-2006 units included here)	East	1.25	1.25	1.17	17.63	3.80

Contractors Projects	Location	Table 3 - Netting Analysis (tons/year)				
		PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO
Mid-Continent Coal and Coke-addt'l conveyors & generator	East	9.14	9.14	0.69	10.46	2.25
Tube City IMS-new-now Phoenix	East	19.58	6.27	1.20	18.50	4.00
Phoenix slag chip process	East	7.15	5.22	0.00	0.00	0.00
Contemporaneous Emissions Increases		**70.19**	**30.93**	**4.65**	**70.65**	**15.20**
MultiServ-shutdown (Netting)	West	(7.38)	(3.62)	0.00	0.00	0.00
Heckett Multiserv-shutdown	East	(13.00)	(2.55)	(0.00)	(0.51)	(0.43)
Heritage - Shutdown	East	(4.50)	(0.80)	0.00	0.00	0.00
Beemsterboer Slag No. 1 Slag Plant- Replace GS043 with powerline	East	(0.34)	(0.28)	(0.03)	(18.91)	(5.02)
Beemsterboer Slag North End Pellet Crushing Plant - Replace diesel generators with powerline	East	(0.20)	(0.17)	(0.02)	(11.40)	(3.03)
Contemporaneous and Creditable Emissions Decreases		**(25.42)**	**(7.42)**	**(0.05)**	**(30.82)**	**(8.48)**

Federal Rule Applicability

NSPS:

(a) 40 CFR Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)). The affected facility to which this NSPS applies is the following:

One (1) blast furnace gas and natural gas-fired 561.6 million British thermal units per hour (MMBtu/hr) Boiler, identified as 504 Boiler.

Nonapplicable portions of the NSPS will not be included in the permit. The above emission unit is subject to the following sections of Subpart Db:

40 CFR § 60.40b
40 CFR § 60.41b
40 CFR § 60.49b(a) and (d)

NESHAPs:

40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

On June 8, 2007, the United States Court of appeals for the District of Columbia Circuit (in NRDC v. EPA, no. 04-1386) vacated in its entirety the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD. Additionally, since the state rule, 326 IAC 20-95 incorporated the requirements of the NESHAP 40 CFR 63, Subpart DDDDD by reference, the requirements of 326 IAC 20-95 are no longer effective. Therefore, the requirements of 40 CFR 63, Subpart DDDDD and 326 IAC 20-95 are not included in the permit.

On June 4, 2010, EPA proposed a revised version of this NESHAP, Subpart DDDDD. The new No. 504 Boiler will be subject to this NESHAP once it is finalized.

(a) 112(g) of the Clean Air Act:

The one (1) blast furnace gas and natural gas-fired 561.6 million British thermal units per hour (MMBtu/hr) Boiler, identified as No. 504 Boiler does not have the potential to emit 10 tons per year or more of single HAP or 25 tons per year of combined HAPs. Therefore, case-by-case determinations of Maximum Achievable Control Technology are not required for the emissions of HAPs from the boiler pursuant to Section 112(g) of the Clean Air Act.

Compliance Assurance Monitoring (CAM):

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

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The No. 504 Boiler does not utilize a control device as defined in 40 CFR 64.1. Therefore, the requirements of 40 CFR 64 (CAM) are not applicable to this boiler.

The LMF which is controlled by the new SO2 scrubber is subject to CAM because its PTE before controls are equal to or greater than the major source threshold. However, it is not a large unit because its post control SO2 PTE are less than the major source threshold. Therefore, a CAM submittal for this emission unit is to be included with the renewal of the Part 70 Operating Permit.

Clean Air Interstate Rule (CAIR):

No. 504 Boiler is subject to the Clean Air Interstate Rule (CAIR) Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 40 CFR 97.

State Rule Applicability

This modification is subject to the following state rules:

(a) 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR)

VOC and PM -
The proposed modification is not major for VOC and PM because the total VOC emissions change/net emissions increase from the project is not emitted at 40 tons per year or greater and PM emissions change/net emissions increase is not emitted at 25 tons per year or greater, the PSD significant levels. Therefore, 326 IAC 2-2, PSD does not apply.

PM10, PM2.5, SO2, NOx, and CO -
The one (1) blast furnace gas and natural gas-fired 561.6 million British thermal units per hour (MMBtu/hr) Boiler, identified as No. 504 Boiler emissions increase for PM10, PM2.5, SO2, NOx, and CO are emitted at significant levels, except for PM and VOC. Therefore, netting is triggered for PM10, PM2.5, SO2, NOx, and CO where contemporaneous increases and decreases from the plant including contractors for the period beginning five (5) years before the date of construction is expected to commence on the proposed modification are considered in the analysis. In this case the 5 year period is from September 2005 to September 2010. Based on the netting calculations (See detailed netting calculations on Page 1 through 22 TSD Appendix A), the proposed modification netted out of PSD review under 326 IAC 2-2 and 326 IAC 2-1.1-5 (Nonattainment NSR).

In order to achieve creditable emissions decreases and rendering 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to this modification the following limitations and reductions made at the plant and at contractors' facilities will be made federally enforceable by incorporating them into the source's respective Part 70 Operating Permit:

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

(1) The total natural gas fuel usage at the No. 504 Boiler (pilot and supplemental fuel) shall be limited to 492 million cubic feet (MMCF) per twelve consecutive month period, with compliance at the end of each month.

(2) When No. 7 Blast Furnace is in operation during a twelve (12) consecutive month period, the minimum quantity of No. 7 Blast Furnace Gas (BFG) fuel usage for the No. 504 Boiler shall be greater than or equal to 4,126,091 million British thermal units (MMBtu) per twelve consecutive month period, with compliance at the end of each month.

(3) The No. 3 Galvanizing Line and No. 4 Aluminizing Line shall be permanently shutdown and removed from operation, prior to the operation of the No. 504 Boiler.

(4) The filterable PM10 and PM2.5 emissions from the four (4) off-gas scrubber system, exhausting through stack 38, associated with the two (2) BOFs, identified as No. 50 and No. 60 and operations including charging, blowing, tapping, flux and alloy additions, and slag skimming shall be limited 40.79 pounds hour and 39.57 pounds per hour, respectively.

(5) The PM10 and PM2.5 emissions from the Baghouse associated with the No. 4 BOF Caster Mold shall be limited to 0.41 pound per hour.

(6) The Permittee shall not utilize the bottom stirring process (installed during the vessel reline in 2008) at the No.60 BOF vessel in the No.4 Steel Production Shop (No.4 SP) in support of the No. 504 Boiler project.

(7) The total molten steel transferred from the No.4 SP to the LMF and Casters at No.2 Steel Production Shop (No.2 SP) using the rail link constructed in 2009 (designated as Project X) shall not exceed 3,522,720 tons per twelve consecutive month period, with compliance at the end of each month.

ArcelorMittal Indiana Harbor, LLC (West Plant ID 089-00318)

(1) The No.5, No.6, No.7 and No.8 Boilers owned and operated by ArcelorMittal Indiana Harbor, LLC (Plt ID 089-000318) shall permanently cease using No. 6 residual oil for fuel prior to the operation of No. 504 Boiler.

(2) The natural gas fuel usage to the two (2) Iron Ladle Burners shall not exceed 77 million cubic feet per twelve consecutive month period, with compliance at the end of each month.

The removal of these emission units from the ArcelorMittal USA, Inc. (East Plant) and the permanent cessation of using residual oil from boilers at ArcelorMittal Indiana Harbor, LLC (West Plant) shall result in a total creditable emission reduction of 61.7 tons of PM10 per year, 57.06 tons of PM2.5 per year, 173.47 tons of SO2 per year, 98.10 tons of NOx per year and 3.61 tons of CO per year.

Note: The Part 70 Operating Permit No. 089-7099-00318, has been modified through Significant Permit Modification No. 089-29300-00318 to make this operational change to Boilers No. 5 through No. 8 federally enforceable.

(3) Contractors:

(A) Three (3) diesel-fueled generators, (GS043 with a capacity of 1,000 KW (3.43 MMBtu/hr), each GS038 and GS040 with a capacity of 600 KW), located at Beemsterboer Slag Corporation (Plant ID 089-00356) shall be permanently removed from operation prior to the operation of No. 504 Boiler.

Note: The change has been made in Significant Permit Modification No. 089-29271-00356 to make the permanent shutdown and removal of the generators federally enforceable.

(B) The ferrous recovery plants (BOF#2 and BOF#4) and the portable ferrous recovery plant located at MultiServ (Plant ID 089-00367) shall be permanently shutdown and removed from operation.

Note: This is already reflected in Phoenix Services, LLC SSM No. 089-28058-00536, Condition D.1.3(b)).

(C) Heritage Slag Products, LLC production plant (Plant ID 089- 00481) shall be shutdown permanently.

Note: The plant was permanently shutdown in March 9, 2010.

(D) The combined diesel fuel usage to generators, identified as GS045 and GS046 located at Beemsterboer Slag Corporation Plant (ID 089-00356) shall be limited to 58,113 gallons per twelve consecutive month period, with compliance at the end of each month. Note: GS045 is currently limited to 131,528 gallons/year and GS046 has the potential usage of 120,044 gallons/year.

Note: The change has been permitted in Significant Permit Modification No. 089-29271-00356 to make the reduction in the fuel usage limit for the generators federally enforceable.

(E) One diesel-fueled generator, with a capacity of 180 KW, identified as GS-024, located at Beemsterboer Slag Blending Plant (ID 089-00537) has been constructed, however, it has not been operated. Therefore, no pollutant has been emitted from this unit. This unit shall be permanently removed from operation prior to the operation of No. 504 Boiler.

Note: The change has been permitted in Significant Permit Modification No. 089-29316-00537.

(F) The MultiServ Slag Operations, CM-13 Processing Plan, Kish Processing Plant and the associated equipment located at MultiServ Plant (ID 089-00341) shall be shutdown permanently. Note: MultiServ Plant ID 089-00341 TV has been revoked.

Note: The permanent shutdown is reflected in Phoenix Services, LLC TV 089-27217-00538.

The removal of these emission units from the contractors' facilities shall result in a total creditable emission reduction of 25.42 tons of PM10 per year, 7.42 tons of PM2.5 per year, 0.05 ton of SO2 per year, 30.82 tons of NOx per year and 8.48 tons of CO per year.

Compliance with the fuel limits and removal of these facilities shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler.

(b) 326 IAC 2-4.1-1 (Major Sources of Hazardous Air Pollutants (HAP))
The one (1) blast furnace gas and natural gas-fired 561.6 million British thermal units per hour (MMBtu/hr) Boiler, identified as No. 504 Boiler does not have the potential to emit 10 tons per year or more of single HAP or 25 tons per year of combined HAPs. Therefore, it is not subject to this rule. 326 IAC 2-4.1-1 is intended to implement Section 112(g)(2)(B) of the Clean Air Act (CAA). Therefore, 112(g) likewise is not applicable (see similar determination under **Federal Rule Applicability** section of this TSD).

(c) 326 IAC 6.8-1-2 (Particulate Matter Limitations)
Pursuant to 326 IAC 6.8-1-1, the source (ArcellorMittal) or a facility (proposed boiler) with potential to emit 100 tons per year or more or has actual emissions of 10 tons per year located in Lake County shall comply with the limit of 0.01 grain per dry standard cubic foot (gr/dscf) in 326 IAC 6.8-1-2(b)(3).

(d) 326 IAC 7-4.1-11 (ArcelorMittal Sulfur Dioxide Emissions Limitations)
326 IAC 7-4.1-11 limits the SO2 emissions from the existing boilers (501 through 503) in the No. 5 Boilerhouse to 0.198 pound/MMBtu and a combined limit of 265.2 lbs/hour. ArcelorMittal requested no additional SO2 limit for the new 504 boiler, instead the combined limit of 265.2 lbs/hr be applied to all boilers including the new 504 Boiler.

(e) 326 IAC 9 (Carbon Monoxide Emission Rules)
This rule applies to all stationary sources of carbon monoxide (CO) emissions commencing operation after March 12, 1972, and for which an emission limit has been established in Section 2 of this rule (326 IAC 9).

The No. 504 Boiler, is not subject to 326 IAC 9 because it is not limited in Section 2 of 326 IAC 9.

(f) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
Pursuant to 326 IAC 10-3-1(a)(3), blast furnace gas fired boiler with a heat input greater than 250 MMBtu/hr that is not subject to 326 IAC 10-4 or 326 IAC 24-3 is subject to 326 IAC 10-3. This rule is not applicable to No. 504 Boiler because it is subject to 326 IAC 24.

(g) 326 IAC 10-4 (Nitrogen Oxides Budget Trading Program)
The Nitrogen Oxide budget trading program is no longer applicable to any control period in 2009 or thereafter. Therefore, pursuant to 326 IAC 10-4-16(a), IDEM, OAQ, has removed Section E -Nitrogen Oxides Budget Trading Program in its entirety from the permit.

(h) 326 IAC 24 (Clean Air Interstate Rule Nitrogen Oxides (NOx) Annual Trading Program)
The proposed No. 504 Boiler is subject to the Clean Air Interstate Rule (CAIR) Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-3-1(a).

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 and Monitoring Requirements applicable to this modification and in support of the netting done for the proposed No. 504 Boiler are as follows:

(a) The Permittee shall perform CO testing of No. 504 Boiler not later than 60 days of achieving maximum production rate, but no later than 180 days after initial start up to demonstrate that performance of the boiler is within design constraints guaranteed by the manufacturer and consistent with the emission factor used for the Blast Furnace Gas (BFG) combustion emissions estimates. This test does not require a repeat testing.

(b) The Permittee shall perform PM10 and PM2.5 testing using Blast Furnace Gas (BFG) on the No. 504 Boiler not later than 180 days of promulgation of new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or not later than 180 days of achieving normal operation of the No. 504 Boiler, whichever comes later. This testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C-Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. This test does not require a repeat testing.

(c) The Permittee shall perform PM10 and PM2.5 testing on the four (4) off-gas scrubber system used in conjunction with the two (2) BOFs, identified as No. 50 and No. 60 and operations including charging, blowing, tapping, flux and alloy additions to establish the presure drop range and the scrubbing liquid flow rate that comply with PM10 and PM2.5 emissions limits not later than 180 days of promulgation of new or revised condensable

PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008. Subsequent testing should be performed at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration, and may be used to reestablish scrubber operating limits for pressure drop, and liquid flow rate. This testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C- Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(d) The Permittee shall perform sampling and analysis of the fuel sulfur content from the No. 504 Boiler in accordance with 326 IAC 7-4.1-11(b)(1).

(e) To demonstrate the compliance status with the NOx emissions for the No. 504 Boiler, the Permittee shall install a continuous emissions monitoring system as allowed under the Clean Air Act and 326 IAC 3-5-1(d).

The Permittee shall install, calibrate, certify, operate and maintain a continuous emissions monitoring system to monitor NOx emissions, in accordance with 326 IAC 3-5-2 through 326 IAC 3-5-7.

(1) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after the monitor installation, a complete written continuous monitoring standard operating procedure (SOP), in accordance with the requirements of 326 IAC 3-5-4.

(2) Relative accuracy tests and routine quarterly audits shall be performed in accordance with the contents of the standard operating procedures pursuant to 326 IAC 3-5-5.

(3) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

(f) Recording and quarterly reporting of the amount of Blast Furnace Gas and natural gas combusted at the No. 504 Boiler.

(g) The four-off gas scrubber used in conjunction with the two (2) BOFs, identified as No. 50 and No. 60 parametric monitoring required under Part 70 purposes shall follow the monitoring requirements in 40 CFR Part 63, Subpart FFFFF, as follows:

§ 63.7833 How do I demonstrate continuous compliance with the emission limitations that apply to me?

(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.

(g) If the hourly average pressure drop or water flow rate for a venturi scrubber or hourly average opacity for an electrostatic precipitator 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).

(h) The visible emissions notations (Method 9) required in 40 CFR Part 63, Subpart FFFFF for the four-off gas scrubber used in conjunction with the two (2) BOFs, identified as No. 50 and No. 60 has been determined to be sufficient for Part 70 purposes.

(i) The Permittee shall record the pressure drop, scrubbing liquid flow rate and pH of the Wet Gas Scrubber associated with the Ladle Metallurgical Facility (LMF) Station located at the EAF Meltshop at least once per day when the process is in operation.

Proposed Changes to ArcelorMittal USA, LLC (East Plant ID 089-00316)

The following changes have been made to the Part 70 Operating Permit Renewal No.: T089-6577-00316, issued on September 12, 2006. New language is in **bold** and language shown in ~~strikeout~~ has been deleted.

SECTION A.3 and SECTION D.8 have been revised to incorporate the addition of a Wet Gas Scrubber at the Ladle Metallurgical Station for SO2 control. Testing and Parametric Monitoring Requirements were added since the scrubber will be used to demonstrate compliance with the LMF's SO2 limits.

In addition, IDEM has clarified some existing conditions in Section D.8:

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:

***

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

(4) One (1) ladle metallurgical facility (LMF) station constructed in 1989 with a maximum annual capacity of 975,900 tons with **particulate** emissions controlled by a baghouse having a flow rate of 40,000 acfm **and a Wet Gas Scrubber for Sulfur Dioxide (SO2) emissions control** exhausting through stack 143.

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SECTION D.8

Compliance Determination Requirements

D.8.10 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) **In order to demonstrate compliance with Conditions D.8.3 and D.8.4, the Permittee shall perform SO2 and opacity testing on the electric arc furnace baghouse (stack 141) utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

~~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.8.3 and D.8.4, 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) **In order to demonstrate compliance with Condition D.8.9, the Permittee shall perform lead (Pb) emissions testing on stacks 136, 137, and 138 for the No. 1 Electric Arc Furnace Shop utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

~~Pursuant to Significant Source Modification 089-25598-00316, 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.~~

(c) In order to demonstrate compliance with Conditions D.8.4(c) and D.8.6, the Permittee shall perform SO2 emissions testing on the Ladle Metallurgical Facility Wet Gas Scrubber (stack 143) utilizing methods as approved by the Commissioner not later than 180 days after the issuance of this SPM No. 089-28972-00316. Subsequent testing shall be conducted once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.8.11 Particulate **and Sulfur Dioxide (SO2)** Controls [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 **and the wet gas scrubber for SO2 control** shall be in operation at all times that the ladle metallurgical station is ~~in operation~~ **processing steel**.

(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) In the event that a scrubber failure has been observed, failed units and the associated process will be shut down upon completion of processing of the steel in process at the Electric Arc Furnace and until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). The Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.8.13 **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 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 an extended range established by an IDEM approved compliance 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.~~ **Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

(b) The 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 an extended range established by an IDEM approved compliance 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.~~ **Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

(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 an extended range established by an IDEM approved compliance 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.~~ **Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated **(**in accordance with the manufacturer's instructions**) or replaced** but not less frequently than once per year.

D.8.14 Wet Gas Scrubber Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall monitor and record the recirculation water flow rate and pH of the scrubbing liquid and pressure drop across the wet gas scrubber associated with the LMF Station at least once per day. When for any one reading, the pressure drop range across the scrubber is outside the range of 2.0 to 10.0 inches or the range established during the latest stack test, and when the flow rate is below the minimum of 460 gallons per minute or the minimum established during the latest stack test, and when the pH of the scrubbing liquid drops below 7.0 or the level established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop reading that is outside the above mentioned range, scrubbing flow rate reading that is below the above mentioned minimum and scrubbing liquid pH that drops below the level mentioned above are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The instruments used for determining the pressure drop of the control device and scrubbing liquid flow rate and pH shall be subject to approval by IDEM, OAQ, and shall be calibrated (in accordance with the manufacturer's instructions) or replaced but not less frequently than once per year.

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

D.8.~~15~~16 Record Keeping Requirements

(a) To document **the** compliance **status** with Conditions ~~D.8.6~~ **D.8.5** and ~~D.8.14~~ **D.8.15**, 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 **the** compliance **status** 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 **the** compliance **status** with Condition D.8.12, 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 **the** compliance **status** with condition D.8.13, 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) In order to document the compliance status with condition D.8.14, the Permittee shall maintain the once per day records of the pressure drop across the wet gas scrubber, its water recirculation flow rate and pH during normal operation. The Permittee shall include in its daily record when a pressure drop reading, recirculation water flow and pH are not taken and the reason for the lack of pressure drop reading, recirculation water flow rate and pH (e.g. the process did not operate that day).

~~(e)~~ **(f)** 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)~~ **(g)** 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)~~ **(h)** ~~All records shall be maintained in accordance with~~ Section C - General Record Keeping Requirements ~~of this permit~~ **contains the Permittee's obligations with regard to the records required by this condition.**

D.8.~~16~~ **17** 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 **status** with Conditions D. 8.6 and ~~D.8.15(a).~~ **D.8.16(a)**. **Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.** The quarterly report shall be submitted ~~to the address listed in Section C - General Reporting Requirements, of this permit within~~ no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does

require ~~the~~ **a** certification ~~by the "responsible official" as defined by 326 IAC 2-7-1(34).~~ **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ **a** "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,~~ no later than **thirty (30) days after the end of the quarter being reported**. **Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.** ~~using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported~~. **The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).**

SECTIONs A.3, D.13, D.12 and D.6 have been revised to incorporate the new No. 504 Boiler:

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:

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

***

(2) No. 5 Boilerhouse **consisting of** ~~installed in 1976, including~~ Boilers 501-503 **installed in 1976** ~~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 **and No. 504 Boiler approved in 2010 for construction with an estimated maximum heat input of 561.6 MMBtu/hr exhausting through stack 134a. The boilers are fired by blast furnace gas from No. 7 Blast Furnace and natural gas**, ~~The boilers~~ **to** produce steam, which is used in three turbo blowers to produce blast air, at generators to produce electrical power, and for general plant use.

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SECTION D.13 FACILITY OPERATION CONDITIONS

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

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D.13.2 Particulate Emission Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2, the particulate emissions from the No. 504 Boiler shall not exceed 0.01 gr/dscf.

D.13.~~2~~**3** 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~~ **504**, shall not exceed 0.198 lbs/MMBtu and 265.2 lbs/hour.

Pursuant to 326 IAC 10-4-16, 326 IAC 10-4-1 through 326 IAC 10-4-15, Nitrogen Oxide Budget Trading Program is no longer applicable to any control period in 2009 or thereafter. IDEM, OAQ, has removed the following Condition D.13.4

~~D.13.4 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.13.5 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

(a) The total natural gas fuel usage at the No. 504 Boiler (pilot light and supplemental fuel) shall be limited to 492 million cubic feet (MMCF) per twelve consecutive month period, with compliance determined at the end of each month.

(b) When No. 7 Blast Furnace is in operation during a twelve (12) consecutive month period, the minimum quantity of No. 7 Blast Furnace Gas (BFG) fuel usage at the No. 504 Boiler shall be greater than or equal to 4,126,091 million British thermal units (MMBtu) per twelve consecutive month period, with compliance at the end of each month.

(c) The PM10 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).

(d) The PM2.5 emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).

(e) The NOx emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.05 pound per MMBtu (lb/MMBtu).

(f) The CO emissions from the No. 504 Boiler when combusting Blast Furnace Gas shall be limited to 0.138 pound per MMBtu (lb/MMBtu).

(g) The shutdown in March 9, 2010 **of Heritage Slag Products, LLC production plant (Plant ID 089- 00481) shall be permanent.**

Compliance with this Condition, including Conditions D.6.5 and D.12.6 of this permit, Condition D.1.6, Condition D.7.5 in SPM 089-29300-00536 of ArcelorMittal Indiana Harbor, LLC (West Plant), Conditions D.1.3, D.3.1 and D.3.2 in SPM No. 089-29271-00356 of Beemsterboer Slag Corporation, and Condition D.1.3 in SPM No. 089 29316-00537 of Beemsterboer Slag Corporation shall result in total emission reduction of 87.12 tons of PM10 per year, 64.48 tons of PM2.5 per year, 173.52 ton of SO2 per year, 128.92 tons of NOx per year and 12.09 tons of CO per year and shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to the No. 504 Boiler permitted in SSM 089-28917-00316.

D.13.~~5~~ **6** 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 **(Boilers 211-213).**

Compliance Determination Requirements

D.13.~~7~~**8** 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.13.1 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.~~

(a) Not later than sixty (60) days of achieving maximum production rate, but no later than one hundred eighty (180) days after the startup of No. 504 Boiler, the Permittee shall perform CO emissions testing when the boiler is burning BFG, utilizing methods as approved by the Commissioner to demonstrate compliance with the CO emission factor or Condition D.13.5(f) used in the PTE calculations of the No. 504 Boiler. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. This test does not require a repeat testing.

(b) The PM 2.5 and PM10 testing on the No. 504 Boiler to show compliance with emission factors or Condition D.13.5(c) and (d) used in the PTE calculations of the No. 504 Boiler shall be performed not later than 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or not later than 180 days of achieving normal operation of the No. 504 Boiler, whichever comes later.

This testing shall be conducted utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. This test does not require a repeat testing.

Note: IDEM has deleted the testing requirement in (a) for CO since the No. 5 Boilerhouse is uncontrolled and already conducted the initial test. Likewise, the testing requirement for the No. 504 Boiler will be only one time testing.

D.13.9 NO_x Continuous Emission Rate Monitoring Requirement [326 IAC 3-5]

To demonstrate the compliance status with the NOx emissions limit in D.13.5(e) for the No. 504 Boiler, the Permittee shall install a continuous emissions monitoring system as allowed under the Clean Air Act and 326 IAC 3-5-1(d).

The Permittee shall install, calibrate, certify, operate and maintain a continuous emissions monitoring system to monitor NOx emissions, in accordance with 326 IAC 3-5-2 through 326 IAC 3-5-7.

(1) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after the monitor installation, a complete written continuous monitoring standard operating procedure (SOP), in accordance with the requirements of 326 IAC 3-5-4.

(2) Relative accuracy tests and routine quarterly audits shall be performed in accordance with the contents of the standard operating procedures pursuant to 326 IAC 3-5-5.

(3) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

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

D.13.~~8~~ **10**Sulfur Dioxide (SO2) Sampling and Analysis ~~[~~326 IAC 7-4.1-11(b)]

In order to comply with condition D.13.~~2~~ 3, **for No.2 AC Station Boilers 211-213 and No. 5 Boilerhouse 501-504,** the Permittee shall comply with the sampling and analysis protocol in accordance with 326 IAC 7-4.1-11(b)(1).

D.13.11 Maintenance of NOx CEMS [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the NOx continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(b) The continuous emissions monitoring system (CEMS) shall be operated at all times the emissions unit or process is operating except for reasonable periods of monitor system downtime due to necessary calibration or maintenance activities or malfunctions. Calibration and maintenance activities shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a).

(c) Except as otherwise provided by a rule or provided specifically in this permit, whenever a continuous emission monitor system (CEMS) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, the Permittee shall perform supplemental monitoring by using calibrated handheld monitors to measure the NOx emissions on a once per shift basis, unless the CEMS operation is restored prior to the end of the shift.

The handheld monitors shall be approved by the IDEM, OAQ.

(d) The Permittee shall keep records in accordance with 326 IAC 3-5-6(b) that includes the following:

(1) All documentation relating to:

(A) design, installation, and testing of all elements of the monitoring system; and

(B) required corrective action or compliance plan activities.

(2) All maintenance logs, calibration checks, and other required quality assurance activities.

(3) All records of corrective and preventive action.

(4) A log of plant operations, including the following:

(A) Date of facility downtime.

(B) Time of commencement and completion of each downtime.

(C) Reason for each downtime.

(e) The Permittee shall keep records that describe the supplemental monitoring implemented during the downtime to assure compliance with applicable emission limitations.

(f) In accordance with 326 IAC 3-5-7(5), the Permittee shall submit reports of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately.

The reports shall include the following:

(1) Date of downtime.

(2) Time of commencement.

(3) Duration of each downtime.

(4) Reasons for each downtime.

(5) Nature of system repairs and adjustments.

(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.

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

D.13.~~9~~**12**Record Keeping Requirements

(a) To document **the** compliance **status** with Conditions ~~D.13.2~~ **D.13.3, D.13.5** and ~~D.13.8~~ **D.13.10**, 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.2 AC Station Boilers 211-213 and No. 5 Boilerhouse 501-~~503~~.**504**.

(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 the compliance status with Conditions D.13.9 and D.13.11, the Permittee shall maintain records of the continuous emission monitoring data in accordance with 326 IAC 3-5.

~~(b) To document compliance with D.13.4 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~~ **contains the Permittee's obligations with regard to the records required by this condition.**

D.13.13 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.13.~~2~~ **3** and D.13.~~9~~ **12**(a). **Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.** The quarterly report shall be submitted ~~to the address listed in Section C - General Reporting Requirements, of this permit within~~ no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require ~~the~~ **a** certification ~~by the "responsible official" as defined by 326 IAC 2-7-1(34).~~ **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ **a** "responsible official," as defined by 326 IAC 2-7-1 (34).

(b) A quarterly report to document the compliance status with Condition D.13.5(a) and (b) shall be submitted for the natural gas and Blast Furnace Gas (BFG) fuel usage at the No. 504 Boiler no later than **thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).**

(c) Records of excess NOx emissions (defined in 326 IAC 3-5-7) from the continuous emissions monitoring system. These reports shall be submitted no later than thirty (30) calendar days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(d) A quarterly summary of the CEMs data used to document compliance with Condition D.13.5(e) shall be submitted no later than thirty (30) calendar days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

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

PART 70 QUARTERLY REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Permit No.: T089-6577-00316
Facility: No. 504 Boiler
Parameter: Natural Gas Fuel (NG) Usage and Blast Furnace Gas (BFG) Usage
NG Limit: less than 492 Million cubic feet (MMCF) per 12 consecutive month period
BFG Limit: greater than 4,126,091 Million British thermal units (MMBtu) per 12 consecutive month period

QUARTER:_____ YEAR:_____

Month	COLUMN 1 FUEL USAGE THIS MONTH		COLUMN 2 FUEL USAGE 11 MONTHS		COLUMN 1+2 FUEL USAGE 12 MONTH TOTAL	
	BLAST FURNACE GAS	NATURAL GAS	BLAST FURNACE GAS	NATURAL GAS	BLAST FURNACE GAS	NATURAL GAS
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: _____

SECTION D.12 has been revised to incorporate the emissions reduction from the removal of the galvanizing and aluminizing line located at the ArcelorMittal USA, Inc. (East Plant ID 089-00316):

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)~~ **(1)** 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)~~ **(2)** 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.

***

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

D.12.1 Particulate Matter [326 IAC 6.8-6]

Pursuant to326 IAC 6.8-6-17(c), the following combustion sources shall fire natural gas only:

~~(a) No.3 Galvanizing Line (81)~~

~~(b)~~ **(a)** No. 5 Galvanizing Line (182)

~~(c)~~ **(b)** No. 1 Normalizing Line (184)

~~(d)~~ **(c)** No. 3 Continuous Anneal Line (173)

~~(e)~~ **(d)** No. 5 and No. 6 Batch Anneals (112 and 113)

D.12.2 Nonattainment Area Particulate Limitations [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (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 annealing furnace (174) shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

~~D.12.3 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.12.4 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.~~6~~ 4Nitrogen 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)~~ **(b)** 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)~~ **(c)** 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.12.7 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.12.6 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The No. 3 Galvanizing Line and No. 4 Aluminizing Line shall be permanently shutdown and removed from operation, prior to the operation of the No. 504 Boiler.

Compliance with this Condition, including Conditions D.6.5 and D.13.5 of this permit, Condition D.1.6, Condition D.7.5 in SPM 089-29300-00536 of ArcelorMittal Indiana Harbor, LLC (West Plant), Conditions D.1.3, D.3.1 and D.3.2 in SPM No. 089-29271-00356 of Beemsterboer Slag Corporation, and Condition D.1.3 in SPM No. 089 29316-00537 of Beemsterboer Slag Corporation shall result in total emission reduction of 87.12 tons of PM10 per year, 64.48 tons of PM2.5 per year, 173.52 ton of SO2 per year, 128.92 tons of

NOx per year and 12.09 tons of CO per year and shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to the No. 504 Boiler permitted in SSM 089-28917-00316.

~~***~~

SECTION D.6 has been revised to incorporate the emission reduction from the caster mold baghouse. Currently this baghouse was used for housekeeping purposes only:

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:

***

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

(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.

****

D.6.5 PM10 and PM2.5 PSD and Nonattainment NSR Minor Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

(a) The PM10 and PM2.5 emissions from the No. 4 off-gas scrubber system, exhausting through stack 38, associated with the two (2) BOFs, identified as No. 50 and No. 60 and operations including charging, blowing, tapping, flux and alloy additions, and slag skimming shall be limited to 40.79 pounds hour and 39.57 pounds per hour, respectively. These limits are for filterable PM10 and PM2.5 only.

(b) The No. 4 BOF Shop Mold Fume Exhaust baghouse shall be in operation at all times that the molds are in operation and the PM10 and PM2.5 emissions from this Baghouse shall be limited to 0.41 pound per hour for each pollutant. These limits are for filterable PM10 and PM2.5 only.

(c) The Permittee shall not utilize the bottom stirring process (installed during the vessel reline in 2008) at the No.60 BOF vessel in the No.4 Steel Production Shop (No.4 SP) in support of the No. 504 Boiler project.

(d) The total molten steel transferred from the No.4 SP to the LMF and Casters at No.2 Steel Production Shop (No.2 SP) using the rail link constructed in 2009 (designated as Project X) shall not exceed 3,522,720 tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with this Condition, including Condition D.13.5, Condition D.12.6 of this permit, Condition D.1.6, Condition D.7.5 in SPM 089-29300-00536 of ArcelorMittal Indiana Harbor, LLC (West Plant), Conditions D.1.3, D.3.1 and D.3.2 in SPM No. 089-29271-00356 of Beemsterboer Slag Corporation, and Condition D.1.3 in SPM No. 089 29316-00537 of Beemsterboer Slag Corporation shall result in total emission reduction of 87.12 tons of PM10 per year, 64.48 tons of PM2.5 per year, 173.52 ton of SO2 per year, 128.92 tons of NOx per year and 12.09 tons of CO per year and shall render 326 IAC 2-2, PSD and 326 IAC 2-1.1-5, Nonattainment NSR not applicable to the No. 504 Boiler permitted in SSM 089-28917-00316.

D.6.~~8~~**6** Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.6.1 and D.6.4, the Permittee shall perform TSP and opacity testing on the No. 4 BOF (stack 38) utilizing methods

as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

~~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 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.~~

(b) Within 180 days of issuance of Significant Permit Modification No. 089-28972-00316, t**he Permittee shall perform filterable PM 2.5 and PM10 testing on the No. 4 off-gas scrubber system, associated with the two (2) BOFs, identified as No. 50 and No. 60 to demonstrate compliance with Condition D.6.5(a). This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

(c) Within 180 days of issuance of Significant Permit Modification No. 089-28972-00316, t**he Permittee shall perform PM 2.5 and PM10 testing on the baghouse associated with No. 4 BOF Caster Mold to demonstrate compliance with Condition D.6.5(b). This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two and one half (2.5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

D.6.9 Visible Emissions Notations

(a) Visible emission notations of the caster mold baghouse stack 214 shall be performed. These notations shall be taken 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, including trained personnel under contract with the source, is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.6.10 Baghouse Monitoring

The Permittee shall record the pressure drop across the baghouse at least once per day when the associated No. 4 BOF Caster Mold is in operation. When for any one reading the pressure drop range is outside the normal range of 4.5 to 10 inches of water or the range established during the latest stack test, the Permittee shall take reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure drop that is outside the range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instruments used for determining the pressure drop shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once semi-annually.

D.6.11 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). Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.6.~~8~~**14** Record Keeping Requirements

(a) To document **the** compliance **status** with Conditions D.6.4 and D.6.~~7~~**8**, 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.

(b) In order to document the compliance status with Condition D.6.9 the Permittee shall maintain records of once per day visible emission notations of the caster mold baghouse (214) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) To document the compliance status with condition D.6.10, the Permittee shall maintain the records once per day of the pressure drop across the caster mold fume 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 a pressure drop reading (e.g. the process did not operate that day).

(d) To document the compliance status with condition D.6.5(d), the Permittee shall maintain the records of the molten steel that Project X transferred from the No.4 SP to the LMF and Casters at No.2 SP using the rail link constructed in 2009.

~~(b)~~ **(e)** ~~All records shall be maintained in accordance with~~ Section C - General Record Keeping Requirements ~~of this permit~~ **contains the Permittee's obligations with regard to the records required by this condition.**

D.6.~~9~~ **15** 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 the limits in Condition D.6.4, in order to document compliance with Conditions D.6.4 and D.6.8 (d). **Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.** The quarterly report shall be submitted ~~to the address listed in Section C - General Reporting Requirements, of this permit within~~ no later than thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require ~~the~~ **a** certification ~~by the "responsible official" as defined by 326 IAC 2-7-1(34).~~ **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ a "responsible official," as defined by 326 IAC 2-7-1 (34).

(b) A quarterly report to document the compliance status with Condition D.6.5(d) shall be submitted for the molten steel that Project X transferred from the No.4 SP to the LMF and Casters at No.2 SP using the rail link constructed in 2009. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The quarterly report shall be submitted no later than **thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).**

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

PART 70 QUARTERLY REPORT

Source Name: ArcelorMittal USA, Inc.
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Permit No.: T089-6577-00316
Facility: Project X
Parameter: Molten Steel
Limit: Molten steel transferred from the No.4 SP to the LMF and casters at No.2 SP using the rail link constructed in 2009 shall be limited to 3,522,720 tons per 12 consecutive month period.

QUARTER:_____ YEAR:_____

Month	COLUMN 1 MOLTEN STEEL TRANSFERRED THIS MONTH	COLUMN 2 MOLTEN STEEL TRANSFERRED 11 MONTHS	COLUMN 1+2 MOLTEN STEEL TRANSFERRED 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: _____

Pursuant to 326 IAC 10-4-16, 326 IAC 10-4-1 through 326 IAC 10-4-15 do not apply to any control period in 2009 or thereafter. The 2009 NOx allowances allocated under 326 IAC 10-4-9 will remain in effect for purposes of the Clean Air Interstate Rule (CAIR) NOx ozone season trading program in 326 IAC 24-3. Since the Nitrogen Oxide Budget Trading Program is no longer applicable to any control period in 2009 or thereafter, IDEM, OAQ, has removed the following Section E - Nitrogen Oxides Budget Trading Program in its entirety from the permit.

~~SECTION E Nitrogen Oxides Budget Trading Program - NO_x Budget Permit for NO_x Budget Units 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(c)]~~

~~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 E.1 Clean Air Interstate Rule (CAIR) Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-3-1(a)

ORIS Code: 10474

CAIR Permit for CAIR Units Under 326 IAC 24-3-1(a)

(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.

(2) No. 5 Boilerhouse **consisting of** ~~installed in 1976, including~~ Boilers 501-503 **installed in 1976** ~~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 **and No. 504 Boiler approved in 2010 for construction with an estimated maximum heat input of 561.6 MMBtu/hr exhausting through stack 134a. The boilers are fired by blast furnace gas from No. 7 Blast Furnace and natural gas**, ~~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.)

E.1.1 Automatic Incorporation of Definitions [326 IAC 24-3-7(e)] [40 CFR 97.323(b)]

This CAIR permit is deemed to incorporate automatically the definitions of terms under 326 IAC 24-3-2.

E.1.2 Standard Permit Requirements [326 IAC 24-3-4(a)] [40 CFR 97.306(a)]

(a) The owners and operators of each CAIR NO_X ozone season source and CAIR NO_X ozone season unit shall operate each source and unit in compliance with this CAIR permit.

(b) The CAIR NO_X ozone season units subject to this CAIR permit are Boilers 211-213 in No. 2 AC Station and Boilers 501-504 in No. 5 Boilerhouse.

E.1.3 Monitoring, Reporting, and Record Keeping Requirements [326 IAC 24-3-4(b)] [40 CFR 97.306(b)]

(a) The owners and operators, and the CAIR designated representative, of each CAIR NO_X ozone season source and CAIR NO_X ozone season unit at the source shall comply with the applicable monitoring, reporting, and record keeping requirements of 326 IAC 24-3-11.

(b) The emissions measurements recorded and reported in accordance with 326 IAC 24-3-11 shall be used to determine compliance by each CAIR NO_X ozone season source with the CAIR NO_X ozone season emissions limitation under 326 IAC 24-3-4(c).

E.1.4 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]

(a) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X ozone season source and each CAIR NO_X ozone season unit at the source shall hold, in the source's compliance account, CAIR NO_X ozone season allowances available for compliance deductions for the control period under 326 IAC 24-3-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_X ozone season units at the source, as determined in accordance with 326 IAC 24-3-11.

(b) A CAIR NO_X ozone season unit shall be subject to the requirements under 326 IAC 24-3-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-3-4(c)(2), and for each control period thereafter.

(c) A CAIR NO_X ozone season allowance shall not be deducted for compliance with the requirements under 326 IAC 24-3-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO_X ozone season allowance was allocated.

(d) CAIR NO_X ozone season allowances shall be held in, deducted from, or transferred into or among CAIR NO_X ozone season allowance tracking system accounts in accordance with 326 IAC 24-3-9, 326 IAC 24-3-10, and 326 IAC 24-3-12.

(e) A CAIR NO_X ozone season allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO_X ozone season trading program. No provision of the CAIR NO_X ozone season trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-3-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.

(f) A CAIR NO_X ozone season allowance does not constitute a property right.

(g) Upon recordation by the U.S. EPA under 326 IAC 24-3-8, 326 IAC 24-3-9, 326 IAC 24-3-10, or 326 IAC 24-3-12, every allocation, transfer, or deduction of a CAIR NO_X ozone season allowance to or from a CAIR NO_X ozone season source's compliance account is incorporated automatically in this CAIR permit.

E.1.5 Excess Emissions Requirements [326 IAC 24-3-4(d)] [40 CFR 97.306(d)]

The owners and operators of a CAIR NO_X ozone season source and each CAIR NO_X ozone season unit that emits nitrogen oxides during any control period in excess of the CAIR NO_X ozone season emissions limitation shall do the following:

(a) Surrender the CAIR NO_X ozone season allowances required for deduction under 326 IAC 24-3-9(j)(4).

(b) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-3-4, the Clean Air Act (CAA), and applicable state law.

E.1.6 Record Keeping Requirements [326 IAC 24-3-4(e)] [326 IAC 2-7-5(3)] [40 CFR 97.306(e)]

Unless otherwise provided, the owners and operators of the CAIR NO_X ozone season source and each CAIR NO_X ozone season unit at the source shall keep 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 from the date the document was created:

(a) The certificate of representation under 326 IAC 24-3-6(h) for the CAIR designated representative for the source and each CAIR NO_X ozone season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation. The certificate and documents shall be retained on site at the source or at a central location within Indiana for those owners or operators with unattended sources beyond such five (5) year period until such documents are superseded because of the submission of a new account certificate of representation under 326 IAC 24-3-6(h) changing the CAIR designated representative.

(b) All emissions monitoring information, in accordance with 326 IAC 24-3-11, provided that to the extent that 326 IAC 24-3-11 provides 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 CAIR NO_X ozone season trading program.

(d) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_X ozone season trading program or to demonstrate compliance with the requirements of the CAIR NO_X ozone season trading program.

This period may be extended for cause, at any time before the end of five (5) years, in writing by IDEM, OAQ or the U.S. EPA. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

E.1.7 Reporting Requirements [326 IAC 24-3-4(e)] [40 CFR 97.306(e)]

(a) The CAIR designated representative of the CAIR NO_X ozone season source and each CAIR NO_X ozone season unit at the source shall submit the reports required under the CAIR NO_X ozone season trading program, including those under 326 IAC 24-3-11.

(b) Pursuant to 326 IAC 24-3-4(e) and 326 IAC 24-3-6(e)(1), each submission under the CAIR NO_X ozone season trading program shall include the following certification statement by the CAIR designated representative: "I am authorized to make this submission on behalf of the owners and operators of the source or 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."

(c) Where 326 IAC 24-3 requires a submission to IDEM, OAQ, the information shall be submitted to:

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

(d) Where 326 IAC 24-3 requires a submission to U.S. EPA, the information shall be submitted to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue, NW
Mail Code 6204N
Washington, DC 20460

E.1.8 Liability [326 IAC 24-3-4(f)] [40 CFR 97.306(f)]

The owners and operators of each CAIR NO_X ozone season source and each CAIR NO_X ozone season unit shall be liable as follows:

(a) Each CAIR NO_X ozone season source and each CAIR NO_X ozone season unit shall meet the requirements of the CAIR NO_X ozone season trading program.

(b) Any provision of the C CAIR NO_X ozone season trading program that applies to a CAIR NO_X ozone season source or the CAIR designated representative of a CAIR NO_X ozone season source shall also apply to the owners and operators of such source and of the CAIR NO_X ozone season units at the source.

(c) Any provision of the CAIR NO_X ozone season trading program that applies to a CAIR NO_X ozone season unit or the CAIR designated representative of a CAIR NO_X ozone season unit shall also apply to the owners and operators of such unit.

E.1.9 Effect on Other Authorities [326 IAC 24-3-4(g)] [40 CFR 97.306(g)]

No provision of the CAIR NO_X ozone season trading program, a CAIR permit application, a CAIR permit, or an exemption under 326 IAC 24-3-3 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X ozone season source or CAIR NO_X ozone season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act (CAA).

E.1.10 CAIR Designated Representative and Alternate CAIR Designated Representative [326 IAC 24-3-6] [40 CFR 97, Subpart BBBB]

Pursuant to 326 IAC 24-3-6:

(a) Except as specified in 326 IAC 24-3-6(f)(3), each CAIR NO_X ozone season source, including all CAIR NO_X ozone season units at the source, shall have one (1) and only one (1) CAIR designated representative, with regard to all matters under the CAIR NO_X ozone season trading program concerning the source or any CAIR NO_X ozone season unit at the source.

(b) The provisions of 326 IAC 24-3-6(f) shall apply where the owners or operators of a CAIR NO_X ozone season source choose to designate an alternate CAIR designated representative.

Except as specified in 326 IAC 24-3-6(f)(3), whenever the term "CAIR designated representative" is used, the term shall be construed to include the CAIR designated representative or any alternate CAIR designated representative.

SECTION E.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

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

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

(2) One (1) blast furnace gas and natural gas-fired 561.6 million British thermal units per hour (MMBtu/hr) Boiler, identified as 504 Boiler.

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

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1-1] [40 CFR Part 60, Subpart A]

The Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A– General Provisions, which are incorporated by reference as 326 IAC 12-1-1, for this boiler, in accordance with schedule in 40 CFR Part 60, Subpart A.

E.2.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Db]

Pursuant to 40 CFR Part 60, Subpart Db, this boiler shall comply with the following provisions:

40 CFR § 60.40b
40 CFR § 60.41b
40 CFR § 60.49b(a) and (d)

Proposed Changes to ArcelorMittal Indiana Harbor, LLC (West Plant) and Contractors Permits

In support of the ArcelorMittal USA, Inc. 504 Boiler project, the following modification have been made to ArcelorMittal Indiana Harbor, LLC (West Plant) and Contractors permits to obtain creditable emission reduction to make the proposed No. 504 Boiler project not major under 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR):

Changes to ArcelorMittal Indiana Harbor, LLC (West Plant - Plt ID 089-00318) -

D.1.6 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The natural gas fuel usage to the two (2) Iron Ladle Burners shall not exceed 77 million cubic feet per twelve consecutive month period, with compliance at the end of each month. **Compliance with this condition shall render the requirement of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, LLC (Plt ID 089-00316).**

D.7.5 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The No.5, No.6, No.7 and No.8 Boilers shall permanently cease using No. 6 residual oil for fuel prior to the operation of No. 504 Boiler to render the requirement of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, LLC (Plt ID 089-00316).

Changes to Beemsterboer Slag Corporation (Plt ID 089-00356) -

SECTION D.1

D.1.3 PM10, PM2.5, SO2, NOx and CO PSD and Emission Offset Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The one (1) diesel-fired generator with a capacity of 1,000 KW (3.43 MMBtu/hr),identified as GS043 owned and operated by Beemsterboer Slag Corporation (Plt ID 089-000356) shall be permanently shutdown and removed from ArcelorMittal USA, Inc. (Plt ID 089-00316) and from ArcelorMittal Indiana Harbor, LLC (Plt ID 089-00318) prior to the operation of No. 504 Boiler to render the requirement of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, Inc.

SECTION D.3

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

D.3.1 PSD and Emission Offset Minor Limit [326 IAC 2-2] [326 IAC 2-3]

Pursuant to 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset):

***

(g) The diesel fuel input to the diesel generator, ~~installed in 2005~~, identified as GS045 **and and GS046**, shall be less than ~~131,528~~ **58,113** gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limitations will ensure that the potential to emit from these modifications are less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM_{10} per year, less than ten (10) tons of $PM_{2.5}$ per year, and less than forty (40) tons of NO_x per year. Therefore, the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) are rendered not applicable for Significant Source Modification No. 089-24137-00356.

Compliance with Condition D.3.1(i) shall likewise render the requirement of 326 IAC 2-2 (PSD) and and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, LLC.

D.3.2 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The two (2) diesel-fired generators, each with a capacity of 600 KW, identified as GS038 and GS040 owned and operated by Beemsterboer Slag Corporation (Plt ID 089-000356) shall be permanently shutdown and removed from ArcelorMittal USA, Inc. (Plt ID 089-00316) and from ArcelorMittal Indiana Harbor, LLC (Plt ID 089-00318) prior to the operation of No. 504 Boiler to render the requirement of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, Inc.

Changes to Beemsterboer Slag Corporation (Plt ID 089-00537) -

The one diesel generator, approved for construction in 2009, identified as GS-024, with a maximum capacity of 180 kW has been constructed, however, it has not been operated. Therefore, Section A.2 and Section D.1 of the Part 70 Operating Permit No. 089-26983-00537 have been modified as follows:

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

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

***

(e) One conveyor shuttle, approved for construction in 2009, identified as CS-035, with a maximum capacity of 375 tons per hour~~; and~~

(f) One diesel generator, approved for construction in 2009, identified as GS-024, with a maximum capacity of 180 kW. **Note: This generator shall be shutdown and removed prior to the operation of the No. 504 Boiler.**

D.1.2 Particulate Matter Less Than 10 Microns in Diameter (PM_{10}) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), the following emission units shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf) of particulate matter less than ten (10) microns in diameter (PM_{10}):

Storage Piles, Truck Loading & Unloading, Transporting (Road Emissions), Conveyor Feeder (CF-008), Conveyor Shuttle (CS-021), Conveyor Stacker (CS-046), Screen (SP-027), **and** Conveyor Shuttle (CS-035), ~~and Generator (GS-024)~~.

D.1.3 PM10, PM2.5, SO2, NOx and CO PSD and Nonattainment NSR Credit Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

The Generator GS-024 with a capacity of 180 kW owned and operated by Beemsterboer Slag Corporation (Plt ID 089-00537) shall be permanently shutdown and removed from ArcelorMittal USA, Inc. (Plt ID 089-00316) and from ArcelorMittal Indiana Harbor, LLC (Plt ID 089-00318) prior to the operation of the No. 504 Boiler in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the No. 504 Boiler permitted in SSM No. 089-28917-00316 for ArcelorMittal USA, Inc.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No.089-28917-00316 and the operation of this proposed modification shall be subject to the conditions of the attached Significant Permit Modification No. 089-28972-00316. The staff recommends to the Commissioner that this Part 70 Significant Source Modification and Significant Permit Modification be approved.

Company Name: ArcelorMittal USA, LLC
Address City IN Zip: 3210 Watling St., East Chicago, IN 46312
SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00316
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

MMBtu/hr		Potential Throughput			
561.6	Total Heat Input (BFG + NG)				
38.2	Pilot Heat Input Rate (NG) >>>>>	334,632	MMBtu/year >>>>>>>	328.07	MMCF/year
523.35	Max. Heat Input Rate (BFGas) >>>	4,584,546	MMBtu/year >>>>>>	4,494.65	MMCF/year
314	Standby/Supplemental Fuel (NG) >>>	157,000	MMBtu/year @ 500 hrs/yr >>>>	153.92	MMCF/yr @ 500 hrs/yr
352.2		2,750,640	MMBtu/year @ 8760 hrs/yr	2,696.71	MMCF @ 8760 hrs/yr
	Total heat input pilot + standby fuel (NG)	3,085,272	Total heat input pilot + standby fuel (NG) @ 8760 hrs/yr	3,024.78	Total NG usage (pilot + standby fuel) @ 8760 hrs/yr
				482	Total NG usage (pilot + standby fuel) @ 500 hrs/yr for supplemental NG

New Boiler, ID 504

Unlimited Potential To Emit	Pollutant					
	PM*	PM10*-PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu for NG Combustion	0.0019	0.007	0.001	0.098 **see below	0.005	0.082
Pilot Light PTE, tons/yr **(334,632 MMBtu/yr)**	**0.31**	**1.25**	**0.10**	**16.40**	**0.90**	**13.78**
Emission Factor in lb/MMBtu for BFG Combustion	0.007	0.050	0.148	0.050	0.000	0.138
Boiler 504 combusting BFG PTE, tons/yr **(4,584,546 MMBtu/yr)**	**16.6**	**115.7**	**340.2**	**115.7**	**0.0**	**317.1**
Boiler Standby/Supplemental NG Fuel PTE, tons/yr **(2,750,640 MMBtu/yr)**	**2.56**	**10.25**	**0.81**	**134.84**	**7.42**	**113.26**
Boiler 504 Total PTE, tons/year	**19.51**	**127.20**	**341.14**	**266.96**	**8.32**	**444.13**

Limited Potential To Emit	Pollutant					
	PM*	PM10*-PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu fo NG Combustion	0.0019	0.007	0.001	0.098 **see below	0.005	0.082
Pilot Light PTE, tons/yr **(334,632 MMBtu/yr)**	**0.31**	**1.25**	**0.10**	**16.40**	**0.90**	**13.78**
Emission Factor in lb/MMBtu for BFG Combustion	0.007	0.050	0.148	0.050	0.000	0.138
Boiler 504 combusting BFG PTE, tons/yr **(4,584,546 MMBtu/yr)**	**16.6**	**115.7**	**340.2**	**115.7**	**0.0**	**317.1**
Boiler Standby/Supplemental NG Fuel PTE, tons/yr **(157,000 MMBtu/yr)**	**0.15**	**0.58**	**0.05**	**7.70**	**0.42**	**6.46**
Boiler 504 Total PTE, tons/year	**17.10**	**117.53**	**340.37**	**139.82**	**1.33**	**337.33**

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factor is condensable and filterable emissions

**NG Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

Methodology

BFG Heating value = 99.04 Btu/CF

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
NG Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
(AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
= Throughput (MMBtu/yr x EF (lb/MMBtu) x ton/2000 lb

Blast Furnace Gas EF = CO (WEBFIRE), NOx (vendor), PM, PM10/PM2.5 & SO2 (Arcelor's Eng'g estimate to be verified through stack testing)

Company Name: ArcelorMittal USA, LLC
Address City IN Zip: 3210 Watling St., East Chicago, IN 46312
SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00316
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

Heat Input Capacity
MMBtu/hr

561.6	Total Heat Input (BFG + NG)	Potential Throughput				
38.2	Pilot Heat Input Rate (NG)	334,632	MMBtu/year		328.07	MMCF/year (NG) pilot
523.35	Max. Heat Input Rate (BFGas)	4,584,546	MMBtu/year		4,494.65	MMCF/year
314	Standby/Supplemental Fuel (NG)	157,000	MMBtu/year @ 500 hrs/yr		153.92	MMCF/yr @ 500 hrs/yr NG supplemental
561.6	Total Maximum Heat Input + pilot (NG)	2,750,640	MMBtu/year @ 8760 hrs/yr		2,696.71	MMCF @ 8760 hrs/yr NG supplemental
			@ 500 hrs >>>	157.00 MMCF	3,024.78	Total NG Pilot + supplemental (Unlimited)
					485	Total NG Pilot + supplemental (Limited)

	NATURAL GAS HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	3.18E-03	1.81E-03	1.13E-01	2.72E+00	5.14E-03

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	7.56E-04	1.66E-03	2.12E-03	5.75E-04	3.18E-03

Worst Single HAP (hexane) Unlimited Fuel	2.72E+00
Combined HAPs Unlimited Fuel	2.85E+00
Worst Single HAP (hexane) Limited Fuel	4.37E-01
Combined HAPs Limited Fuel	4.58E-01

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Note: No HAP PTE calculation was done for this boiler using the Blast Furnace Gas, since Blast Furnace Gas has virtually no organic HAP, as discussed by EPA in 69 Federal Register 55230, September 13, 2004.

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MMBtu/hr		Potential Throughput		Throughput Limits	
561.6	Total Heat Input (BFG + NG)				
38.2	Pilot Heat Input Rate (NG) >>>>>	334,632.00	MMBtu/year >>>>>>>	334,632.00	MMBtu/year Pilot NG
523.35	Max. Heat Input Rate (BFGas) >>>	4,584,546.00	MMBtu/year >>>>>>	3,288,087.74	71.7% utilization rate (BFG)
314	Standby/Supplemental Fuel (NG) >>>	157,000.00	MMBtu/year @ 500 hrs/yr >>>>	157,000.00	MMBtu/year @ 500 hrs/yr (supplemental NG)
352.2		2,750,640.00	MMBtu/year @ 8760 hrs/yr		
	Total heat input pilot + standby fuel (NG)	3,085,272.00	Total heat input pilot + standby fuel (NG) @ 8760 hrs/yr		

New Boiler, ID 504

Limited Potential To Emit	Pollutant						
	PM*	PM10	PM2.5	SO2	NOx	VOC	CO
NG Emission Factor in lb/MMBtu	0.0019	0.007	0.007	0.001	0.098 **see below	0.005	0.082
Pilot Light PTE, tons/yr **(334,632 MMBtu/yr)**	**0.31**	**1.25**	**1.25**	**0.10**	**16.40**	**0.90**	**13.78**
BFG Emission Factor in lb/MMBtu	0.007	0.050	0.050	0.148	0.050	0.000	0.138
Boiler 504 combusting BFG PTE, tons/yr **(3,288,088 MMBtu/yr)**	**11.94**	**82.98**	**82.98**	**244.02**	**83.00**	**---**	**227.42**
Boiler Standby/Supplemental NG Fuel PTE, tons/yr **(157,000 MMBtu/yr)**	**0.15**	**0.58**	**0.58**	**0.05**	**7.70**	**0.42**	**6.46**
Boiler 504 Total Limited PTE, tons/year	**12.39**	**84.81**	**84.81**	**244.16**	**107.10**	**1.33**	**247.66**
PSD and Nonattainment NSR Signifcant Levels	25.0	15.0	10.0	40.0	40.0	40.0	100.0
Significant Increase?	No	Yes	Yes	Yes	Yes	No	Yes
Since PM10, PM2.5, SO2, NOx, and CO are emitted in significant levels from the proposed modification netting is triggered for these pollutants. (summation of contemporaneous e							

0

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factor is condensable and filterable emissions.

**NG Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
NG Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
(AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
= Throughput (MMBtu/yr) x EF (lb/MMBtu) x ton/2000 lb

Blast Furnace Gas EF = CO (WEBFIRE), NOx (vendor), PM, PM10/PM2.5 & SO2 (Arcelor's Eng'g estimate to be verified through stack testing)

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Heat Input Capacity
MMBtu/hr

561.6	Total Heat Input (BFG + NG)	Potential Throughput				
38.2	Pilot Heat Input Rate (NG)	334,632.00	MMBtu/year		328.07	MMCF/year (NG) pilot
523.35	Max. Heat Input Rate (BFGas)	4,584,546.00	MMBtu/year		4,494.65	MMCF/year
314	Standby/Supplemental Fuel (NG)	157,000.00	MMBtu/year @ 500 hrs/yr		153.92	MMCF/yr @ 500 hrs/yr NG supplemental
		2,750,640.00	MMBtu/year @ 8760 hrs/yr		2,696.71	
561.6	Total Maximum Heat Input + pilot (NG)		@ 500 hrs >>>	157.00 MMCF		MMCF @ 8760 hrs/yr NG supplemental
					3,024.78	Total NG Pilot + supplemental (Unlimited)
					485	Total NG Pilot + supplemental (Limited)

	NATURAL GAS HAPs - Organics					
	Benzene		Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03		1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	3.18E-03		1.81E-03	1.13E-01	2.72E+00	5.14E-03

	HAPs - Metals					
	Lead		Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04		1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	7.56E-04		1.66E-03	2.12E-03	5.75E-04	3.18E-03

Worst Single HAP (hexane) Unlimited Fuel	2.72E+00
Combined HAPs Unlimited Fuel	2.85E+00
Worst Single HAP (hexane) Limited Fuel	4.37E-01
Combined HAPs Limited Fuel	4.58E-01

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Note: No HAP PTE calculation was done for this boiler using the Blast Furnace Gas, since Blast Furnace Gas has virtually no organic HAP, as discussed by EPA in 69 Federal Register 55230, September 13, 2004.

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Baseline Actual Emissions (BAE)		
Baseline actual BFG Combustion at the No. 7 Blast Furnace Flare (2006-2007)	4,680,706.0	MMBtu/year

	Pollutant					
	PM	PM10/PM2.5	SO2	NOx	VOC	CO
BFG Emission Factor in lb/MMBtu	0.007	0.050	0.148	0.232	0.000	0.138
Basis of Emission Factor	Stack Test 12/99	Stack Test 12/99	Vendor	WebFire	*	WebFire
Actual Emissions in tons/yr	16.99	118.13	347.37	543.50	0.00	323.74

Note: The Blast Furnace Gas (BFG) that will be combusted by the 504 Boiler corresponds to the amount of BFG being combusted by the existing Flare, thus will result in the reduction of the BFG being combusted by the Flare.

Actual Emission (tons/yr) = Actual Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
= Actual Throughput (MMBtu/yr x EF (lb/MMBtu) x ton/2000 lb

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Annual Calculation of No. 7 Blast Furnace Gas Generated

Year	BFG MMcf				Heating Value (BTU/CF)	#7 BF Operating Hrs	NG
	#5 Boiler House	#7 BF Stoves	#7 BF Bled & #5 BH Bled	#7 BF Total BFG			#5 BH
2000	103,902	45,212	29,283	178,397	89.13		477
2001	100,288	42,863	19,489	162,639	87.02		483
2002	92,790	40,498	19,493	152,780	87.6		490
2003	71,244	33,902	13,963	119,109	85.1		420
2004	103,105	50,380	33,870	187,356	95.46		520
2005	101,374	49,118	30,767	181,259	95.41		924
2006	98,824	66,139	47,737	212,700	100.65	8,501	1221
2007	99,238	69,805	46,782	215,825	97.44	8,593	865
2008	99,371	60,946	43,375	203,692	96.55	8,390	1086
Avg 2004-5	102,240						
Avg 2006-7	99,031		47,260	214,262	99.04		**1,043**
Avg 2007-8	99,305		45,079	209,759	96.99		**976**

Period	BFG MMcf			
	#5 Boiler House	#7 BF Stoves	#7 BF Bled & #5 BH Bled	#7 BF Total Gas
2004-5	102,240	49,749	32,319	184,307
2006-7	99,031	67,972	47,260	214,262
2007-8	99,305	65,375	45,079	209,759
BAE 2006-7	99,031		47,260	214,262

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504 Boiler Limited PTE

BFG Limit to the No. 504 Boiler	3,288,088.0	MMBtu/year

	Pollutant					
	PM	PM10/PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.007	0.050	0.148	0.050	0.000	0.138
Basis of Emission Factor	Stack Test 12/99	Stack Test 12/99	Vendor	WebFire	--	WebFire
Limited PTE in tons/yr	11.94	82.98	244.02	83.00	0.00	227.42

Limited PTE (tons/yr) = Throughput limit (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
= Throughput limit (MMBtu/yr x EF (lb/MMBtu) x

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Includes creditable and contemporaneous emissions increases and decreases from on-site contractors.
504 Boiler and No.7 Blast Furnace Flare

Applicability Test: Hybrid Test - Federally Enforceable Emission Limits

(a) Baseline Actual Emissions (BAE)

Permit Issuance / Project commence construction: Sep-2010
5 Year contemporaneous look back period from Aug-2010 to Sep-2005
Contemporaneous Changes
Baseline BFG combustion at the No.7 Blast Furnace Flare (BAE Period 2006-2007): 4,680,706 MMBtu/year

	Baseline Actual Emissions (tons/yr)						
Emissions Units	PM	PM10	PM2.5	SO2	VOC	NOx	CO
- No.7 Blast Furnace Flare (BFG)	16.99	118.13	118.13	347.37	0.00	543.50	323.74

(b) Operating Limits (Potential to Emit (PTE))

504 Boiler (BFG) (based on PTE at 8,760 hours per year):	4,584,546	MMBtu/year
Total 504 Boiler Natural Gas Combustion Limit:	491,637	MMBtu/year
504 Boiler (NG) Backup (at 314.01 MMBtu/hr 500 hrs/year)	157,005	MMBtu/year
504 Boiler pilots (NG) (38.2 MMBtu/hour):	334,632	MMBtu/year
Proposed annual BFG minimum capacity factor:	90%	Projection
Proposed annual BFG firing rate factor:	79.7%	Target Performance
Proposed annual BFG minimum capacity factor:	71.7%	
Future BFG combustion at No.7 Blast Furnace Flare:	1,392,618	MMBtu/year*
Future BFG combustion at the 504 Boiler corresponding to utilization rate of 90% Limit is for 504 Boiler BFG Combustion:	3,288,088	MMBtu/year

*Additional BFG that is not combusted at the stoves/boilers may be flared in future. Typically this occurs during process upsets, stove relines / maintenance, malfunctions, emergency conditions, boiler maintenance/ outages or consistent with the safe operational practices

Limited Potential To Emit	Pollutant						
	PM*	PM10	PM2.5	SO2	NOx	VOC	CO
NG Emission Factor in lb/MMBtu	0.0019	0.007	0.007	0.001	0.098 **see below	0.005	0.082
Pilot Light Limited PTE, tons/yr **(334,632 MMBtu/yr)**	**0.31**	**1.25**	**1.25**	**0.10**	**16.40**	**0.90**	**13.78**
BFG Emission Factor in lb/MMBtu	0.007	0.050	0.050	0.148	0.050	0.000	0.138
Boiler 504 combusting BFG Limited PTE, tons/yr **(4,126,091 MMBtu/yr)**	**11.94**	**82.98**	**82.98**	**244.02**	**83.00**	**0.00**	**227.42**
Boiler Standby/Supplemental NG Fuel Limited PTE, tons/yr **(157,000 MMBtu/yr)**	**0.15**	**0.58**	**0.58**	**0.05**	**7.70**	**0.42**	**6.46**
No. 7 Blast Furnace Flare (BFG)	**5.05**	**35.15**	**35.15**	**103.35**	**161.54**	**0.00**	**96.32**
Boiler 504 Total Limited PTE, tons/year	**12.39**	**84.81**	**84.81**	**244.16**	**107.10**	**1.33**	**247.66**

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(c) Project Emissions Increase (PEI) = (PTE-BAE) + Contemporaneous Emissions Changes

Projected date of permit issuance / construction commencement:			Sep-10
Projected date of start up of 504 Boiler:			Mar-12
Contemporaneous Period:	Sep-05	to	Mar-12

Project Emissions Increase (tons/yr)							
Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO
Boiler 504 combusting BFG Limited PTE, tons/yr	11.94	82.98	82.98	244.02	83.00	0.00	227.42
Boiler Standby/Supplemental NG Fuel Limited PTE, tons/	0.15	0.58	0.58	0.05	7.70	0.42	6.46
Pilot Light Limited PTE, tons/yr	0.31	1.25	1.25	0.10	16.40	0.90	13.78
Sub-Total (Emissions Increase from the Boiler)	**12.39**	**84.81**	**84.81**	**244.16**	**107.10**	**1.33**	**247.66**
Whether Significant Increase?	No	Yes	Yes	Yes	Yes	No	Yes
Contemporaneous Emissions Changes (With Contractors)							
No. 7 Blast Furnace Flare (BFG) Decrease	-11.94	-82.98	-82.98	-244.02	-83.00	0.00	-227.42
- Contemporaneous Increases		80.65	41.39	18.83	137.72	0.0	64.16
- Other Contemporaneous Decreases		-111.92	-89.28	-173.52	-128.92	0.0	-12.09
Net Project Emissions Change	**12.39**	**-29.44**	**-46.06**	**-154.55**	**32.90**	**1.33**	**72.31**
Significant Emission Levels	25	15	10	40	40	40	100
Major Modification?	No	No	No	No	No	No	No

NOx emission factor for the 504 Boiler is significantly lower than the Flare. However in this analysis NOx emissions reductions for the flare are shown up to the level of increase from the Boiler. ArcelorMittal did not show additional NOx decrease from Flare BFG combustion.

The proposed No. 504 Boiler will use BFG that is presently combusted at the flare as the primary fuel.
Therefore, the amount of BFG that is flared will decrease by the corresponding amount that will be combusted by the No. 504 Boiler.

Netting for PM - Netting was not triggered for PM since it is not major or emitted at PSD significant level.

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Contemporaneus Increases and Decreases at Indiana Harbor

Projected date of permit issuance / construction commencement: Sep-10
Projected date of operation of 504 Boiler will commence: Mar-12

Contemporaneous Period: Sep-05 to Mar-12

Project	Location	Date Change Occurred	Permit No	Regulated NSR Pollutants Emission (tons/yr)								Source/Comments
				PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	NO_X	CO	Pb	
Contemporaneous Increases												
No. 2 Galvanizing Line Burner Replacements	West	Oct-05	089-20921-00318	0.7	0.7	0.7	0.06	0.51	19.72	7.8	0.00004	Permit's TSD
Aluminizing Line	West	Sep-06	089-23361-00318	4.53	4.53	4.53	0.02	0.20	3.77	3.16	1.88E-05	SO_2, VOC, NOx, CO and Pb emissions from Permit's TSD. PM/PM10 and PM2.5 based on allowable emissions limit of 0.03 gr/dscf
LMF Lime Silo	West	May-09	089-24076-00318	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.0000	Permit's TSD
No. 2 CGL Trivalent Chrome Project	West	Future - TBD	None	0.04	0.16	0.16	0.01	0.12	2.15	1.80	0.0000	5 MMBtu/hr, NG
New Iron Ladle Burner (18 MMBtu/hr)	West	Proposed	Proposed MSM 089-29339-00318	0.07	0.29	0.29	0.02	0.21	3.86	3.25	---	See Reference A-4, Emissions increase reflects acceptance of a 77 MMcf/yr operating restriction.
No. 4 SP New Heater	East	Jun-08	PTE	0.33	0.33	0.33	0.03	0.24	4.29	3.61	0.0000	PTE for the new 10 MMBtu/hr heater (insignificant activity)
No. 2 SP Leaded Steel to EAF	East	Apr-09	089-25598-00316	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5990	Permit's TSD
No. 4 SP and No. 2 SP Consolidation (Project X)	East	Jun-09	Baseline to PTE Allowable	3.55	3.55	3.55	14.04	0.00	29.76	23.58	0.0022	Baseline to PTE Allowable. See Page 15 of 22 of this spreadsheet for detailed calculations.
Emergency Generator at IT Bldg	East	Jan-10	Insignificant - No Permit	0.01	0.03	0.03	0.00	0.05	3.52	5.76	0.0000	Based on maximum 500 hours/year
Contemporaneous and Creditable Emissions Increases				**10.10**	**10.46**	**10.46**	**14.18**	**1.32**	**67.07**	**48.96**	**0.60**	
Contemporaneous Decreases												
Indiana Harbor West - Boilerhouse Oil Restriction	West	Upon issuance of the 504 Boiler Project Permit	Cessation of Residual Oil Usage in this Permitting Action	(13.92)	(11.40)	(7.54)	(173.29)	---	(4.95)	---	---	See Reference A-7, Enforceable permit condition prohibiting combustion of fuel oil at the IH West Boilers.
No. 3 Galvanizing Line	East	Dec-06	Shutdown	(1.20)	(1.20)	(1.20)	(0.09)	(8.69)	(49.00)	(1.90)	(0.00)	
No. 4 Aluminizing Line	East	Dec-06	Shutdown	(1.08)	(1.08)	(1.08)	(0.09)	(6.20)	(44.15)	(1.71)	(0.00)	
No. 4 BOF Mold Fume Exhaust Baghouse	East	Future - Prior to the date 504 Boiler operation	Existing controls on process	(46.80)	(46.80)	(46.80)	---	---	---	---	---	See Reference A-5, Enforceable emission limitations in the permit.
No.4 SP MACT Scrubber Compliance	East	Future - Prior to the date 504 Boiler operation	Existing controls on process	(38.83)	(26.02)	(25.24)	---	---	---	---	---	See Reference A-6
Contemporaneous and Creditable Emissions Decreases				**(101.83)**	**(86.50)**	**(81.86)**	**(173.47)**	**(14.88)**	**(98.10)**	**(3.61)**	**(0.00)**	

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SSM No.: 089-28917
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Plant No.: 089-00316
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

Contemporaneus Increases and Decreases at Contractors Plants

Projected date of permit issuance / construction commencement: Sep-10
Projected date of operation of 504 Boiler will commence: Mar-12

Contemporaneous Period:	*Sep-05*	*to*	*Mar-12*
De-minimis Period:	*Apr-07*	*to*	*Mar-12*

Project	Location	Date Change Occurred	Permit No	Regulated NSR Pollutants Emission (tons/yr)								Source/Comments
				PM	PM_{10}	$PM_{2.5}$	SO_2	VOC	NO_X	CO	Pb	
Contemporaneous Increases												
Edward C. Levy Company-addt'l conveyors/stackers	West	Aug-06	089-23078-00339	15.77	5.78	2.05	0.00	0.00	0.00	0.00	---	Permit TSD
Beemsterboer Slag-Blending Plant	West	Mar-09, future generators replace with powerline	Modification to 089-26983-00537	22.56	6.62	0.93	0.00	0.00	0.00	0.00	---	See Reference A-1, Replace generators with line power.
Phoenix-replaced MultiServ	West	Jun-09	089-27217-00538	45.20	14.96	4.05	0.00	0.00	0.00	0.00	---	Permit TSD
Mid-Continent Coal and Coke-addt'l conveyor & generator	East	Aug-07	089-25009-00371	4.29	3.11	1.10	0.69	0.83	10.46	2.25	---	Permit TSD
Fritz Enterprises-addt'l screen & generator	East	Mar-08	089-25603-00465	2.60	2.60	0.92	0.90	1.10	13.60	2.90	---	Permit TSD
Beemsterboer Slag-unpermitted units permitted (2005-2006 units included here)	East	Mar-09, future fuel usage restriction	Modification to 089-24225-00356	1.25	1.25	1.25	1.17	1.43	17.63	3.80	---	See Reference A-3, Future fuel usage restriction of 58,113 gallons per year for GS045, GS046.
Mid-Continent Coal and Coke-addt'l conveyors & generator	East	Mar-09	089-27364-00371	9.74	9.14	9.14	0.69	0.85	10.46	2.25	---	Permit TSD
Tube City IMS-new-now Phoenix	East	Apr-09	089-28058-00536	58.65	19.58	6.27	1.20	1.50	18.50	4.00	---	Permit TSD
Phoenix slag chip process	East	Mar-10	089-28902-00536	11.36	7.15	5.22	0.00	0.00	0.00	0.00	---	Permit TSD
Contemporaneous and Creditable Emissions Increases				**171.42**	**70.19**	**30.93**	**4.65**	**5.71**	**70.65**	**15.20**	---	
Contemporaneous Decreases												
MultiServ-shutdown	West	Jun-09	089-27217-00538	(21.71)	(7.38)	(3.62)	0.00	0.00	0.00	0.00	---	Permit TSD
Heckett Multiserv-shutdown	East	Apr-09	089-28058-00536	(34.96)	(13.00)	(2.55)	(0.00)	(0.03)	(0.51)	(0.43)	---	Tube City Permit TSD (for PM & PM10 emissions) and IDEM Emissions Inventory Database (for actual reported combustion emissions)
Heritage - Shutdown	East	Mar-10	089-29020-00481	(4.50)	(4.50)	(0.80)	0.00	0.00	0.00	0.00	---	IDEM's Emissions Inventory Database, 2005-2006
Beemsterboer Slag No. 1 Slag Plant-Replace GS043 with powerline	East	Future generator replacement with line power	Modification to 089-24225-00356	(0.34)	(0.34)	(0.28)	(0.03)	(0.53)	(18.91)	(5.02)	---	See Reference A-2, Replace generator with line power.
Beemsterboer Slag North End Pellet Crushing Plant - Replace diesel generators with powerline	East	Future generators replacement with line power	Modificationn to 089-24225-00365	(0.20)	(0.20)	(0.17)	(0.02)	(0.32)	(11.40)	(3.03)	---	See Reference A-2, Replace two generators with line power.
Contemporaneous and Creditable Emissions Decreases				**(61.71)**	**(25.42)**	**(7.42)**	**(0.05)**	**(0.88)**	**(30.82)**	**(8.48)**	---	

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CREDITS (ArcelorMittal East Plant)
Emission Unit Name: No.3 Galvanizing Line
Source No.: Stack 81
Shutdown Date: December 2006

Production	Natural Gas	Steel
	(mmcf)	(tons)
2003	319.22	218391
2004	310.6	228,415

CPM

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		5.70	lb/ton	0.00%	5.70	0.91	0.2077	AP-42
	No.3 Galvanizing Line - Natural Gas	2004	310.60		5.70	lb/ton	0.00%	5.70	0.89	0.2021	AP-42

FPM

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		1.90	lb/ton	0.00%	1.90	0.30	0.0692	AP-42
	No.3 Galvanizing Line - Natural Gas	2004	310.60		1.90	lb/ton	0.00%	1.90	0.30	0.0674	AP-42

FPM-10

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		1.90	lb/ton	0.00%	1.90	0.30	0.0692	AP-42
	No.3 Galvanizing Line - Natural Gas	2004	310.60		1.90	lb/ton	0.00%	1.90	0.30	0.0674	AP-42

CO

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		12.05	lb/ton	0.00%	12.05	1.92	0.4391	Test of Stack 84
	No.3 Galvanizing Line - Natural Gas	2004	310.60		12.05	lb/ton	0.00%	12.05	1.87	0.4273	Test of Stack 84

NOx

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		311.20	lb/ton	0.00%	311.20	49.67	11.3403	AP-42
	No.3 Galvanizing Line - Natural Gas	2004	310.60		311.20	lb/ton	0.00%	311.20	48.33	11.0341	AP-42

VOC

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		5.50	lb/ton	0.00%	5.50	0.88	0.2004	AP-42
	No.3 Galvanizing Line - Natural Gas	2004	310.60		5.50	lb/ton	0.00%	5.50	0.85	0.1950	AP-42
	No.3 Galv. Line - Chemical Coating Section	2003	218,391		0.07	lb/ton	0.00%	0.07	7.64	1.7451	Web Fire
	No.3 Galv. Line - Chemical Coating Section	2004	228,415		0.07	lb/ton	0.00%	0.07	7.99	1.8252	Web Fire

CPM-10

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		5.70	lb/ton	0.00%	5.70	0.91	0.2077	AP-42
	No.3 Galvanizing Line - Natural Gas	2004	310.60		5.70	lb/ton	0.00%	5.70	0.89	0.2021	AP-42

SO2

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.3 Galvanizing Line	No.3 Galvanizing Line - Natural Gas	2003	319.22		0.60	lb/ton	0.00%	0.60	0.10	0.0219	AP-42
	No.3 Galvanizing Line - Natural Gas	2004	310.60		0.60	lb/ton	0.00%	0.60	0.093	0.0213	AP-42

Year	Emissions (ton/year)							
	CPM	FPM	CPM-10	FPM-10	CO	NOx	SO2	VOC
2003	0.91	0.30	0.91	0.30	1.92	49.67	0.10	8.52
2004	0.89	0.30	0.89	0.30	1.87	48.33	0.09	8.85
Average	0.90	0.30	0.90	0.30	1.90	49.00	0.09	8.69
Decrease	-0.90	-0.30	-0.90	-0.30	-1.90	-49.00	-0.09	-8.69

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CREDITS (ArcelorMittal East Plant)
Emission Unit Name: No.4 Aluminizing Line
Source No.: Stack 84
Shutdown Date: December 2006

Production	Natural Gas	Steel
	(mmcf)	(tons)
2004	340.8	188,081
2005	226.7	121,359

CPM

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					5.70	lb/ton	0.00%	5.70			AP-42
	No.4 Aluminizing Line - Natural Gas	2004	340.80		5.70	lb/ton	0.00%	5.70	0.97	0.2218	AP-42
	No.4 Aluminizing Line - Natural Gas	2005	226.70		5.70	lb/ton	0.00%	5.70	0.65	0.1475	AP-42

FPM

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					1.90	lb/ton	0.00%	1.90			AP-42
	No.4 Aluminizing Line - Natural Gas	2004	340.80		1.90	lb/ton	0.00%	1.90	0.32	0.0739	AP-42
	No.4 Aluminizing Line - Natural Gas	2005	226.70		1.90	lb/ton	0.00%	1.90	0.22	0.0492	AP-42

FPM-10

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					1.90	lb/ton	0.00%	1.90			AP-42
	No.4 Aluminizing Line - Natural Gas	2004	340.80		1.90	lb/ton	0.00%	1.90	0.32	0.0739	AP-42
	No.4 Aluminizing Line - Natural Gas	2005	226.70		1.90	lb/ton	0.00%	1.90	0.22	0.0492	AP-42

CO

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					12.05	lb/ton	0.00%	12.05			Stack Test
	No.4 Aluminizing Line - Natural Gas	2004	340.80		12.05	lb/ton	0.00%	12.05	2.05	0.4688	Stack Test
	No.4 Aluminizing Line - Natural Gas	2005	226.70		12.05	lb/ton	0.00%	12.05	1.37	0.3118	Stack Test

NOx

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					311.20	lb/ton	0.00%	311.20			Stack test
	No.4 Aluminizing Line - Natural Gas	2004	340.80		311.20	lb/ton	0.00%	311.20	53.03	12.1070	Stack test
	No.4 Aluminizing Line - Natural Gas	2005	226.70		311.20	lb/ton	0.00%	311.20	35.27	8.0535	Stack test

VOC

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					5.50	lb/ton	0.00%	5.50			AP-42
					0.07	lb/ton	0.00%	0.07			Web Fire
	No.4 Aluminizing Line - Natural Gas	2004	340.80		5.50	lb/ton	0.00%	5.50	0.94	0.2140	AP-42
	No.4 Alum. Line - Chemical Coating Sectio	2004	188,081		0.07	lb/ton	0.00%	0.07	6.58	1.5029	Web Fire
	No.4 Aluminizing Line - Natural Gas	2005	226.70		5.50	lb/ton	0.00%	5.50	0.62	0.1423	AP-42
	No.4 Alum. Line - Chemical Coating Sectio	2005	121,359		0.07	lb/ton	0.00%	0.07	4.25	0.9698	Web Fire

CPM-10

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					5.70	lb/ton	0.00%	5.70			AP-42
	No.4 Aluminizing Line - Natural Gas	2004	340.80		5.70	lb/ton	0.00%	5.70	0.97	0.2218	AP-42
	No.4 Aluminizing Line - Natural Gas	2005	226.70		5.70	lb/ton	0.00%	5.70	0.65	0.1475	AP-42

SO2

Emission Unit	Emission Location	Year	Annual Production Thruput	Units (tons)	Emission Factor	Units	Control Efficiency	Controlled Emission Factor	Annual Change in Emission (tons/yr)	Annual Change in Emission (lbs/hr)	Source of Emission Factor
No.4 Aluminizing Line					0.60	lb/ton	0.00%	0.60			AP-42
	No.4 Aluminizing Line - Natural Gas	2004	340.80		0.60	lb/ton	0.00%	0.60	0.102	0.0233	AP-42
	No.4 Aluminizing Line - Natural Gas	2005	226.70		0.60	lb/ton	0.00%	0.60	0.068	0.0155	AP-42

Year	Emissions (ton/year)							
	CPM	FPM	CPM10	FPM10	CO	NOx	SO_2	VOC
2004	0.97	0.32	0.97	0.32	2.05	53.03	0.10	7.52
2005	0.65	0.22	0.65	0.22	1.37	35.27	0.07	4.87
Average	0.81	0.27	0.81	0.27	1.71	44.15	0.09	6.20
Decrease	-0.81	-0.27	-0.81	-0.27	-1.71	-44.15	-0.09	-6.20

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Heat Input Capacity Kw		Throughput
	IT Bldg.	3.03 MMCF/yr @ 500 hrs/yr
500.0	Emergency Generator 4-stroke Lean Burn	3,091 MMBtu/yr @ 500 hrs/yr

	Pollutant					
	PM	PM10/PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	9.50E-03	1.94E-02	5.88E-04	2.27E+00	2.96E-02	3.72E+00
Emission Factor in lb/MMCF	9.69E+00	1.98E+01	6.00E-01	2.32E+03	3.02E+01	3.79E+03
PTE, tons/yr	0.01	0.03	0.00	3.51	0.05	5.75

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Natural Gas Heating Value = 1020 MMBtu/1 MMCF

Emission Factors are from AP 42, Chapter 3.2, Table 3.2-2
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Emission (tons/yr) = Throughput (MMBtu/yr) x Emission Factor (lb/MMBtu)/2,000 lb/ton

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(A) Description of Project X

The proposed project involves an alternate operating scenario during which some of the steel produced at the No.4SP's BOFs can be cast at the No. 2SP Casters to make the full range of products when the No. 2SP BOFs are not operating due to depressed market conditions. Under the current operating scenario No. 4SP BOF steel is cast at No. 4SP casters, which can consume the full production capacity of the No. 4SP BOFs to make the straight products used primarily by automotive customers. Similarly, the No. 2SP BOF steel is cast at the No. 2SP casters to make curved products (structural, pipe, etc.). It is difficult, but not impossible, to transfer steel from No. 4SP BOF to the No. 2SP meltshop for LMF processing and casting. When demand for steel is low, as it has been recently, ArcelorMittal needs to be able to idle the No. 2SP BOFs without losing the ability to make curved product. The proposed project constructs a rail line to be used to efficiently transfer steel from No. 4SP Meltshop to No. 2SP LMF & Casters to accommodate this low-production alternate operating scenario.

The original operating scenario will not change and will continue to be primary. Under that scenario, all of the steel produced at the No. 4SP BOFs feed the straight product casters and all of the steel produced at No. 2SP BOFs feed the curved product casters. In the alternate operating scenario, up to 3,522,720 tons of steel from the No. 4SP BOFs will be transferred to the No. 2SP LMF and Casters resulting in a corresponding increase in emissions at the No.2SP LMF and Caster. The increase in emissions associated with this operating scenario is limited by the amount of steel transferred from No. 4SP Meltshop to No. 2SP LMF & Casters.

By accepting an enforceable limit on the amount of steel transferred, the emission increases associated with the project are also capped. Over any rolling 12-month period during which a transfer of steel has occurred, the permittee will keep records to demonstrate that the amount of steel transferred from the No. 4SP BOFs to the No. 2SP LMF and Casters does not exceed 3,522,720 tons. The following changes are proposed to non-emitting equipment as part of the steelmaking optimization project:

(1) Rail transfer cars for molten steel ladles
(2) Improved, dedicated, steel transfer line(s)
(3) Review and modify lifting equipment and transfer cars in 4 SP to handle 2 SP ladles

Upon completion of the proposed changes, the optimized steelmaking production process in the alternative operating scenario will consist of the the following:

(1) Two BOF Vessels at the No. 4 SP (No.50 and No.60)
(2) RHOB facility at the No. 4 SP
(3) Argon stirring station and continuous caster at the No.4 SP (straight)
(4) LMF operations and continuous caster at the No. 2 SP (curved)

This project was implemented in October 2009. ArcelorMittal's enforceable steel transfer limit is based on the annualized maximum monthly throughput rate from the transfer of molten steel from 4SP to 2SP. The emissions analysis for the Project uses that steel throughput to calculate the increase in emissions on the units affected by the project's transfer of steel to No. 2SP (LMF, Casters at 2SP). 4SP units including BOFs and RHOB were excluded from the analysis because they will operate the same amount in each operation configuration and are, therefore, not affected by the project.

The project involves installation of a new rail track and other ancilliary equipment for transfer of molten steel from 4SP to 2SP. It does not involve any physical or operational changes at any emissions units. In addition, the No. 4 BOF vessels can currently send all of their capacity to the No. 4 casters, so this project does not remove a bottleneck in the capacity of the No. 4 Meltshop. The project merely improves operational flexibility during low-demand conditions in the market for steel product. The normal operation of the two steel producing shops will remain unaffected by the proposed changes and can be reinstated in response to future market conditions and product demand.

Therefore, only the 2SP LMF and Caster are considered affected units for the project outlined below.

(B) Identification of Affected Emission Units

Existing units that will be affected by this project are identified below:

Shop	Unit
No. 2 SP Caster Shop	LMF
	Caster Roof Monitor
	No.2 BOF Continuous Caster Steam Vent #1
	No.2 BOF Continuous Caster Steam Vent #2

The No.2 and No.4 SP Shops include several pieces of equipment that will operate the same under both operating scenarios. These units are not included in this analysis because they are unaffected by the Project. The units specifically affected are the LMF and the No. 2 Caster, which can receive more steel to process under the new operating configuration.

For purposes of this alternative operating scenario analysis for the No. 2SP, emissions from select units in the No. 2SP (LMF and Casters) were considered in calculating increases for PSD/NNSR applicability.

Note: In this analysis PM10 includes both filterable and condensable components and is considered as surrogate for PM2.5 emissions.

(C) Description of Applicability Test

Applicability Test:	An Actual-to-Projected-Actual Test was used for the original applicability determination in June 2009 concluding that PSD/NSR did not apply. By adding an enforceable metal transfer limit, the potential to emit during this alternative operating scenario is also limited.

(i) Baseline Actual Emissions (BAE)

BAE Time Period:	**Oct-1999**	**to**	**Sep-2001**		Project start date:	**Oct-2009**
BAE Production at the 2SP LMF/Casters:	**2,399,688**	**tons of steel/year**				
	Baseline Actual Emissions (tons/year)					
Pollutant	PM10	SO2	CO	NOx	VOC	Pb
No. 2 SP						
LMF	5.16	30.00	50.39	3.60	0.00	0.0048
Caster Roof Monitor	2.43	0.00	0.00	59.99	2.40	0.0000
No.2 BOF Continuous Caster Steam Vent #1					19.80	
No.2 BOF Continuous Caster Steam Vent #2					19.80	

(ii) Allowable Emissions

Maximum steel from 4 SP Shop that will be cast at 2 SP Shop:	3,522,720	tons of steel/year
Steel cast at 4 SP casters (used zero as worst case scenario):	0	tons of steel/year
Steel cast at 2 SP casters (maximized):	3,522,720	tons of steel/year

No.2 Steel Producing Shop - Will accept an enforceable permit limit on the amount of metal transferred from No. 4SP BOFs to No. 2SP LMF & Casters under the alternate operating scenario. Monitoring for five year period is required for the ATPA applicability analysis because the project will not increase the design capacity or PTE of the unit. ArcelorMittal will agree to monitor production for the life of the project as an additional measure to ensure that this limit is enforceable as a PTE limit for the project.

Period for projection:		**Dec-2009**	**to**	**Nov-2014**	**5 Year Period**	
	Project allowable emissions with enforceable metal transfer limit (tons/year)					
Pollutant	PM10	SO2	CO	NOx	VOC	Pb
LMF	7.58	44.03	73.98	5.28	0	0.0070
Caster Roof Monitor	3.57	0.00	0.00	88.07	3.52	0.0000
No.2 BOF Continuous Caster Steam Vent #1					29.06	
No.2 BOF Continuous Caster Steam Vent #2					29.06	

(iii) Excludable Emissions (EE)

None included in this analysis

(iv) Project Emissions Increase (PEI) = Allowable - BAE

	Project Emissions Increase (PEI) (tons/year)					
Pollutant	PM10	SO2	CO	NOx	VOC	Pb
No. 2 SP						
LMF	2.42	14.04	23.58	1.68	0.00	0.00
Caster Roof Monitor	1.14	0.00	0.00	28.08	1.12	0.00
No.2 BOF Continuous Caster Steam Vent #1					9.27	
No.2 BOF Continuous Caster Steam Vent #2					9.27	
Total	**3.55**	**14.04**	**23.58**	**29.76**	**19.65**	**0.00**
PSD/NNSR Significant Rate	15	40	100	40	40	0.6
Major Modification	No	No	No	No	No	No

*PM analysis is not included here since PM10 represent more conservative calculation of emissions increase.
PM10 emissions include both filterable and condensable emissions.
PM10 emissions are considered surrogate for PM2.5 emissions.

Conclusion:
Based on the above analysis, the proposed optimization project for No. 4SP and No.2SP Shops is a minor modification for PSD and Non-attainment Major NSR requirements. ArcelorMittal will accept an enforceable limit on metal transfers as indicated above and monitor and record the amount of steel produced at the No.4SP Shop that is cast at the No.2SP LMF and Caster on a monthly basis for the life of this project as a permit condition. ArcelorMittal will also monitor and record annual emissions from the units affected by the project - See Environmental Compliance Addendum.

Company Name: ArcelorMittal USA, Inc.
Address City IN Zip: 3210 Watling St., East Chicago, IN 46312
SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00316
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

REFERENCE A-1--- Emissions Decrease from Generator GS-024 Replaced by Powerline at Beemsterboar Slag Corporation (Plt ID 089-00537)

Process	Emission Rates (tons/yr)							Comments
	PM	PM10	PM2.5	SO2	VOC	NOx	CO	
Blending Plant with Generator GS-024	24.89	8.95	3.26	2.17	2.66	32.77	7.06	Emission rates provided in Permit No. 089-26983-00537, TSD Page 5 of 14.
Blending Plant without Generator GS-024	22.56	6.62	0.93	0	0	0	0	

Note:This facility has been constructed but has not yet operated. No actual operating data available.
Blending plant was permitted with a generator. This generator will be replaced by powerline.

Company Name: ArcelorMittal USA, Inc.
Address City IN Zip: 3210 Watling St., East Chicago, IN 46312
SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00316
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

REFERENCE A-2 --- Emissions Decrease from Generator Replaced by Powerline at Beemsterboar No. 1 Slag Plant & LaFarge (PLT ID 089-00365)

Plant	24- Month Period		Annualized Maximum Fuel Usage Rate*	Emission Rates (tons/yr)**						
	Begin	End	(gallons)	PM	PM10	PM2.5	SO2	VOC	NOx	CO
No.1 Slag Plant (replace GS043)	07/2005	06/2007	86,258	-0.34	-0.34	-0.28	-0.03	-0.53	-18.91	-5.02
North End Processing Area (GS038, GS040)	01/2006	12/2007	52,006	-0.20	-0.20	-0.17	-0.02	-0.32	-11.40	-3.03

*Based on the monthly fuel consumption information in gallons for GS043, GS040 and GS038
**Emission Rate (tons/year) = Fuel usage rate (gallons) / 1000 gallons x Emission Factor (lb/1000 gallon) / (2000 lb/ton)

Emission Factors for Generators Greater Than 600 Hp

Type of Generator	Emission Factor Units	PM	PM10	PM2.5	SO2	VOC	NOx	CO	Source
≥600 Hp	(lb/mmbtu)	0.0573	0.0573	0.0479	0.005	0.09	3.2	0.85	AP-42, Tables 3.4-1 and 2, EFs for
≥600 Hp	(lb/1000 gal)	7.85	7.85	6.56	0.692	12.33	438.50	116.48	Generators Greater than 600 Hp

All emission factors are revised to match EMITS rounded EFs online. Assume PM is equal to PM10.

19,300 BTU/lb, heating value for diesel fuel (per AP-42, 3.4)
7.1 lb/gallon density (per AP-42, 3.4)
0.50% sulfur content of diesel (No. 2 high sulfur fuel @ 5000 ppm)

Company Name: ArcelorMittal USA, Inc.
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SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00316
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

REFERENCE A-3 --- Emissions Decrease for Reducing Current Diesel F.O. Limit to GS-045 & GS-046 at Beemsterboar Slag Corporation (Plt ID 089-00356)

Generator ID	Emission Rates (tons/yr)							Comments
	PM	PM10	PM2.5	SO2	VOC	NOx	CO	
Generator GS-045	2.83	2.83	2.83	2.64	3.24	39.90	8.60	Emission rates provided in Permit No. 089-24137-00356, TSD Pages 48 to 50. Diesel fuel limit of 131,528 gallons per 12 consecutive month period for Generator GS-045. Generator GS-046 has the potential diesel fuel usage of 120,044 gallons/yr
Generator GS-046	2.58	2.58	2.58	2.41	2.96	36.42	7.85	
GS-045 and GS-046 Totals	5.41	5.41	5.41	5.05	6.20	76.32	16.45	
GS-045 and GS-046 Diesel Fuel Reduction*	1.25	1.25	1.25	1.17	1.43	17.63	3.80	Emissions based on reducing diesel fuel limit to 58,113 gallons per 12 consecutive month period.
Totals	-4.16	-4.16	-4.16	-3.88	-4.77	-58.69	-12.65	

* Emission rate based on ratio of new fuel limit of 58,113 and total diesel fuel usage rate for GS-045 and GS-046 of 251,572 gallons (131,528 gal + 120,044 gal).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: ArcelorMittal USA, Inc.
Address City IN Zip: 3210 Watling St., East Chicago, IN 46312
SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00318
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

REFERENCE A-4 --- Emissions Increase from New Two (2) Ladle Burners at ArcelorMittal Indiana Harbor, LLC

Heat Input Capacity MMBtu/hr		Unrestricted Potential Throughput MMCF/yr	Limited Throughput MMCF/yr
36.0	2 Ladle Burners each at 18 MMBtu./hr	309.2	77.0

	Pollutant					
	PM*	PM10*/PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Unlimited PTE in tons/yr	0.29	1.17	0.09	15.46	0.85	12.99
Limited PTE in tons/yr	0.07	0.29	0.02	3.85	0.21	3.23

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Company Name: ArcelorMittal USA, Inc.
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SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00318
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

REFERENCE A-5 --- Emissions Decrease Based on Installation of No. 4 SP Mold Fume Exhaust Baghouse at ArcelorMIttal USA, Inc.

Project	Emission Rates (ton/yr)			Source / Comments
	PM	PM10	PM2.5	
No. 4 BOF Mold Fume Exhaust Baghouse	-46.8	-46.8	-46.8	Permit No. 089-23628-00316 does not require the baghouse to be operated.

The following table shows that particulate emissions would decrease following the No. 4 BOF Shop Mold Fume Exhaust Baghouse's installation. Lead emissions are expected to be negligible. The new baghouse would not affect emission rates of any other criteria pollutants.

Emission Unit	Uncontrolled Emission Factor		Building Capture Efficiency	Baghouse Capture Efficiency	Control Efficiency	Baseline Actual Operating Hours	Potential Operating Hours	PTE (tons/yr)
Current No. 4 BOF Caster Mold Uncontrolled Emissions from Roof Monitor	12.6	lb PM, PM_{10}, $PM_{2.5}$ / hr		0.0%		8148	-	51.3 ton PM, PM_{10}, $PM_{2.5}$ / year (Uncontrolled)
No. 4 BOF Caster Mold Stack Portion of Uncontrolled Emissions Following Installation of a Baghouse	12.6	lb PM, PM_{10}, $PM_{2.5}$ / hr	5% fugitive (not captured by the baghouse)			-	8760	2.8 ton PM, PM_{10}, $PM_{2.5}$ / year (Uncontrolled Portion)
No. 4 BOF Caster Mold Stack Controlled Emissions Following Installation of a Baghouse	12.6	lb PM, PM_{10}, $PM_{2.5}$ / hr	-	95.0%	96.6%	-	8760	1.8 ton PM, PM_{10}, $PM_{2.5}$ / year (Controlled)
Emissions Reductions								-46.8 ton PM, PM_{10}, $PM_{2.5}$ / year

12.6 lbs/hr was based on the worst assumption that all mold powder injection rate is all emitted.

Note: Baseline actual operating hours are calculated by averaging 2004 and 2005 total operating hours together.

Company Name: ArcelorMittal USA, Inc.
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SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00318
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

REFERENCE A-6 --- Emissions Decrease at ArcelorMittal USA, Inc. Through the Upgrade of 4 SP MACT Scrubber

Pre-NESHAP Estimated Emission Rates

Stack Tests Results

Date	Average Concentrations (lb/ton)			Comments
	PM	PM10	PM2.5	
08/24-08/25/2004	0.107	0.072	0.070	PM results based on stack tests. PM10/PM2.5
12/07/12/08/2004	0.128	0.086	0.083	Ratio based on AP-42, Table 12.5-2, 1/95
Average	0.118	0.079	0.076	PM10(67%), PM2.5(65%)

Pre-NESHAP MACT 24-Month Baseline Production Rate, August 2000 to July 2002 (tons/yr)	2,930,307

Description	Filterable Emission Rates (tons/yr)		
	PM	PM10	PM2.5
Pre-NESHAP Emission Rates	172.16	115.34	111.90

Post-NESHAP Estimated Emission Rates

Stack Tests Results

Date	Run No.	Flow Rate (dscfm)	NESHAP PM Emission Limit* (gr/dscf)	Filterable PM Emission Rate (lb/hr)	Annual Primary Uptime (%)	Post-NESHAP PM Emission Rates (tons/yr)
08/23/2007	1	400,092	0.02	68.59	50%	150.21
	2	401,081		68.76		150.58
	3	397,942		68.22		149.40
08/27/2007	1	315,555		54.10		118.47
	2	299,501		51.34		112.44
	3	316,564		54.27		118.85
	Average	355,123		60.88		133.32

*Pursuant to 40 CFR Part 63 Subpart FFFFF and D.6.2 of the Part 70 Permit 089-22044-00316, the 4 SP Scrubber exhaust is already subject to this limit.
PM10 and PM2.5 pounds per hour limits were added in this permitting action. (SSM No. 089-28917-00316).

Description	Filterable Emission Rates (tons/yr)			Comments
	PM	PM10	PM2.5	PM10/PM2.5 Ratio based on AP-42, Table 12.5-2, 1/95
Post-NESHAP Emission Rates	133.32	89.33	86.66	PM10(67%), PM2.5(65%)

Contemporaneous Emissions Decrease

Description	Filterable Emission Rates		
	PM (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)
Pre-NESHAP Emission Rates	172.16	115.34	111.90
Post-NESHAP Emission Rates	133.32	89.33	86.66
Emissions Decrease	-38.83	-26.02	-25.24
Limits (lbs/hour)		40.79	39.57

Existing Scrubber was physically modified to make it more efficient to comply with the NESHAP requirements.
The BOF operates by batch process, the test was based on 3 hour continuous runs and it did not account for the operation when there is no "Heat or Charged" to the furnace. Therefore, 50% uptime was assumed to account for this operation.

Company Name: ArcelorMittal USA, Inc.
Address City IN Zip: 3210 Watling St., East Chicago, IN 46312
SSM No.: 089-28917
SPM No.: 089-28972
Plant No.: 089-00318
Reviewer: Aida De Guzman
Date Application Received: Jan. 26, 2010

REFERENCE A-7 --- Emissions Decrease Through the Elimination of the Residual Oil No. 6 Usage as Fuel for Boiler No. 6 through Boiler No. 8 Located at ArcelorMittal Indiana Harbor, LLC

Baseline Oil Usage for the Boilers	1699	Kgal/year	254850	MMBtu/year	(see monthly usage below)

Based on 24-Month Annual Average for Oct 2000 to Sep 2002 period.

Process Emissions	PM	PM10	PM2.5	SOx	NOx	Unit	Source
Fuel Oil Emission Factors	16.67	14.54	9.99	204.10	47	lb/kgal	AP-42 Chapter 1.3, 9/98, S=1.3
	0.11	0.10	0.07	1.36	0.31	lb/MMBtu	150 MMBtu/Kgal
Natural Gas Emission Factors	1.90	7.60	7.60	0.60	280	lb/MMscf	AP-42 Chapter 1.4, 9/98, Boilers are Pre-NSPS
	0.0019	0.0075	0.0075	0.0006	0.2745	lb/MMBtu	1020 MMBtu/MMscf
Reduction in Emission Factors	0.11	0.09	0.06	1.36	0.04	lb/MMBtu	Change in EF as a result of fuel oil elimination
EMISSIONS REDUCTIONS	**13.92**	**11.41**	**7.54**	**173.31**	**4.95**	**tons/year**	

Note: The existing Boilers Nos. 5, 6, 7 and 8 use blast furnace gas (BFG) as primary fuel. Natural gas and residual oil no. 6 are used to supplement the BFG fuel especially during the Blast Furnace startups to achieve the maximum heat input.
The boilers produce steam that is used for the turbo blowers to provide wind to the blast furnaces and other plant uses.
The heat input for the residual oil will be supplied by the natural gas, which is a much cleaner fuel than residual oil. Therefore, this results in emissions reduction.

Actual Residual Fuel Oil Usage (Gallons)* - Boilers No. 6 through No. 8

	No. 6 Boiler	No. 7 Boiler	No. 8 Boiler	Total (gal)
Oct-00				343,707
Nov-00				
Dec-00				570,312
Jan-01				
Feb-01				
Mar-01	94,317	92,029	402,044	588,390
Apr-01	86,199	60,250	362,265	508,714
May-01	64,648	85,064	440,035	589,747
Jun-01	75,421	53,130	386,216	514,766
Jul-01	25,141	14,990	59,901	100,032
Aug-01				83,026
Sep-01				98,870
Oct-01				
Nov-01				
Dec-01				
Jan-02				
Feb-02				
Mar-02				
Apr-02				
May-02				
Jun-02				
Jul-02				
Aug-02				
Sep-02				
				1,699 kgals/yr (Average)

Methodology:

$$\text{Emissions Reduction, ton/yr} = \frac{\text{EF Reduction, lb/MMBtu} * \text{oil usage, MMBtu/yr}}{\text{2000 lb/ton}}$$

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

November 4, 2010

TO: East Chicago Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: **ArcelorMittal USA, Inc.**
Permit Number: **089-28972-00316**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Brian Wolters
ArcelorMittal USA, Inc.
3001 Dickey Rd, Station 001
East Chicago, IN 46312

DATE: November 4, 2010

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

SUBJECT: Final Decision
Title V SPM
089-28972-00316

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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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 4, 2010

RE: ArcelorMittal USA, Inc./ 089-28972-00316

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

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

If you would like to request a paper copy of the permit document, please contact IDEM's central file room at:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 11/14/08

Mail Code 61-53

IDEM Staff	CDENNY 11/4/2010 ArcelorMittal USA, Inc. 089-28972-00316 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Brian Wolters ArcelorMittal USA, Inc. 3001 Dickey Rd, Station 001 East Chicago IN 46312 (Source CAATS)									
2		Mark D Whalen VP and GM ArcellorMittal ArcelorMittal USA, Inc. 3210 Watling Street MC8-124 East Chicago IN 46312 *(RO CAATS)*									
3		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
4		Indiana State Representative 2nd District 4114 Butternut St East Chicago IN 46312 *(Legislator)*									
5		East Chicago Public Library 2401 E Columbus Dr East Chicago IN 46312-2998 *(Library)*									
6		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 *(Affected Party)*									
7		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
8		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
9		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 *(Affected Party)*									
10		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 *(Affected Party)*									
11		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 *(Affected Party)*									
12		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 *(Affected Party)*									
13		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)									
14		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
15		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 *(Local Official)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Anthony 2006 E. 140th Street East Chicago IN 46312 (Affected Party)									
2		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 *(Affected Party)*									
3		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									
4		Fritz Enterprises 1650 West Jefferson Trenton MI 48183 *(Affected Party)*									
5		Beemsterboer Slag 3411 Shieldfiled Ave. Hammond IN 46327 *(Affected Party)*									
6		East Chicago Recovery 5222 Indianapolis Blvd. E. Chicago IN 46312 *(Affected Party)*									
7		Heckett Multiserv P.O. Box 3550 E. Chicago IN 46312 *(Affected Party)*									
8		Oil Technology 1203 Sheffield Ave. Dyer IN 46311 *(Affected Party)*									
9		Mid Continent Coal and Coke 915 West 175th St. Homewood IL 60430 *(Affected Party)*									
10		Indiana Harbor Coke 3210 Watling St. E. Chicago IN 46312 *(Affected Party)*									
11		Coke Energy 2000 York Road Suite 129 Oak Brook IL 60523 *(Affected Party)*									
12		LaFarge North America 3210 Watling St. E. Chicago IN 46312 *(Affected Party)*									
13		Heritage Slag Products 5400 West 86th St. Indianapolis IN 46268 (Affected Party)									
14		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									
15		Calumet Township Trustee 31 E 5th Avenue Gary IN 46402 *(Affected Party)*									

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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Joseph 11723 S Oakridge Drive St. John IN 46373 (Affected Party)									
2		Kay Nelson Northwest Indiana Forum 6100 Southport Rd Portage IN 46368 *(Affected Party)*									
3		Gurinder Saini RTP Environmental Associates, Inc. 304A West Millbrook Road Raleigh NC 27609 *(Consultant)*									
4		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									
5		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
6		Gitte Laasby Post Tribune 1433 E. 83rd Ave Merrillville IN 46410 *(Affected Party)*									
7		John Edwards 1701 Senator Dr East Chicago IN 46321 *(Affected Party)*									
8		Susan Severtson City of Gary Law Dept. 401 Broadway 4th Floor Gary IN 46402 *(Local Official)*									
9											
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