**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: January 9, 2013

RE: Steel Dynamics, Inc / 183-27483-00030

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

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Bill Bougher
Steel Dynamics, Inc. - Structural and Rail Division
26011 County Road 700 East
Columbia City, Indiana 46725

January 9, 2013

Re: 183-27483-00030
Significant Permit Modification to:
Part 70 Permit (TV 183-17160-00030)

Dear Mr. Bougher:

Steel Dynamics, Inc. - Structural and Rail Division was issued Part 70 Operating Permit 183-17160-00030 on July 3, 2007 for a steel beam mini mill. An application for the following changes to the Part 70 Operating Permit was received on November 13, 2008. Pursuant to the provisions of 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 involves incorporating the source modification permitted in PSD/SSM No.183-27145-00030 for the following emission units:

(a) Seven (7) Cooling Towers:

| Facility ID | Flow Rate (gallon/minute) |
|---|---|
| Rolling Mill (contact) | 4,000 |
| Rolling Mill (non-contact) | 81,250 |
| #1 Cast (contact) | 5,000 |
| Rolling mill/Caster (non-contact) | 18,000 |
| Caster Sprays (contact) | 3,500 |
| Rolling Mill (contact) | 8,000 |
| LVD Boiler (contact) | 2,500 |

(b) Three (3) Material Storage Bins/Silos (ID#12a - ID#12c).

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original 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 call (800) 451-6027, and ask for Aida De Guzman or extension (3-4972), or dial (317) 233-4972.

Sincerely,

Chrystal Wagner, Section Chief
Permits Branch
Office of Air Quality

Attachments
APD
cc: Whitley County
Whitley County Health Department
Compliance and Enforcement Branch
Permits Administration Support Section

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# PART 70 OPERATING PERMIT
# OFFICE OF AIR QUALITY

## Steel Dynamics, Inc. - Structural and Rail Division
## 2601 County Road 700 East
## Columbia City, Indiana 46725

(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.

Except as otherwise stated in 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. Except as otherwise stated in this permit, 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.11, Emergency Provisions.

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

| Operation Permit No.: T183-17160-00030 | |
|---|---|
| Issued by: Original Signed By:<br>Nisha Sizemore, Chief<br>Office of Air Quality | Issuance Date: July 3, 2007<br><br>Expiration Date: July 3, 2012 |

First Significant Permit Modification No.: 183-24522-00030, issued on April 15, 2008; and
First Administrative Amendment No. 183-27131-00030, issued on February 16, 2009

| Second Significant Permit Modification No.: 183-27483-00030 | |
|---|---|
| Issued by:<br><br>Chrystal Wagner, Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: January 9, 2013 |

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Attachment B - (NESHAP, Subpart YYYYY) - National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities
Attachment C - (NSPS, Subpart Dc) - New Source Performance Standards forSmall Industrial-Commercial-Institutional Steam Generating Units

## 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 through A.3 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(14)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary steel beam mini mill.

| | |
|---|---|
| Source Address: | 2601 County Road 700 East, Columbia City, Indiana 46725 |
| General Source Phone Number: | (260) 625-8100 |
| SIC Code: | 3312 |
| NAICS: | 331111 |
| County Location: | Whitley |
| Source Location Status | Attainment for all criteria pollutants |
| Source Status: | 1 of 28 Listed Source Categories<br>Major source, under PSD Program<br>Major source, under Part 70 Program<br>Minor Source, CAA Section 112 |

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] 326 IAC 2-7-5(14)]

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

(a) Electric Arc Furnaces (EAFs) - Stack 1

Two (2) single shell electric arc furnaces (EAFs), identified as EAF-1a and EAF-1b, permitted for construction in 2001. These furnaces operate at a nominal combined rate of 300 tons of molten steel per hour and utilize a direct-shell evacuation control (DEC) system ("fourth hole" duct), an overhead roof exhaust system consisting of a capture system with a segmented canopy hood, scavenger duct, and cross-draft partitions.

These furnaces utilize the following emission control technologies:

(i) A DEC for carbon monoxide (CO) and volatile organic compounds (VOC) emissions;

(ii) Low $NO_x$/oxyfuel burners (combustion control) for nitrogen oxide ($NO_x$) emissions; and

(iii) A baghouse (identified as EAFs Baghouse, ID#1) for filterable particulate emissions.

The particulate and lead emissions escaping the DEC system are collected by the overhead roof exhaust system and exhaust through a stack identified as the EAFs Baghouse stack (Stack 1).

There are no roof monitors in the meltshop.

(b) Ladle Metallurgy Station (LMS) - - Stack 43

One (1) ladle metallurgy refining station (LMS) (ID#3a) with a nominal rate of 300 tons of steel per hour.

The LMS particulate emissions are collected by the overhead roof exhaust system, controlled by the LMS Baghouse and exhaust through the LMS Baghouse stack (Stack 43).

(c) Continuous Casters (CCs) - - Stack 43
The two (2) continuous casters are limited to a nominal combined casting capacity of 300 tons of steel per hour.

(1) One (1) continuous caster (CC) (ID#3k) with a nominal casting rate of 200 tons of steel per hour.

(2) One (1) continuous caster, identified as (ID#42a), with a nominal casting rate of 200 tons of steel per hour.

The particulate emissions from the continuous casters are collected by the overhead roof exhaust system, controlled by the LMS Baghouse and exhaust through the LMS Baghouse stack (Stack 43).

(d) Preheaters
(1) Four (4) natural gas-fired low $NO_x$ ladle preheaters (ID#s3b through 3e), permitted for construction in 2001, each with a nominal heat input rate of 10 million British thermal units per hour (MMBtu/hr).

(2) One (1) natural gas-fired low $NO_x$ tundish nozzle preheater (ID#3g), permitted for construction in 2001, with a nominal heat input rate of 10 MMBtu/hr.

(3) Two (2) natural gas-fired low $NO_x$ tundish preheaters (ID#s3h and 3i), permitted for construction in 2001 and permitted for modification in 2008, each with a nominal heat input rate of 15 MMBtu/hr.

(4) One (1) natural gas-fired Tundish Nozzle Preheater, identified as (ID#3m), permitted for construction in 2005, nominally rated at 10 MMBtu/hr.

(5) One (1) natural gas-fired Tundish Preheater, identified as (ID#3n), permitted for construction in 2001 and permitted for modification 2008, nominally rated at 15 MMBtu/hr.

(6) One (1) natural gas-fired low NOx tundish preheater (ID#3p), permitted for construction in 2008, with a nominal heat input rate of 15 MMBtu/hr.

(7) Four (4) natural gas-fired low NOx horizontal ladle preheaters (ID#3q, 3r, 3s and 3t), permitted for construction in 2008, with a nominal heat input rate of 10 MMBtu/hr, each.

(8) Two (2) natural gas-fired low NOx vertical ladle preheaters (ID#3u and 3v), permitted for construction in 2008, with a nominal heat input rate of 10 MMBtu/hr, each.

Combustion emissions from the preheaters exhaust inside the building, and are collected by the overhead roof exhaust system and ducted to the EAF Baghouse stack (stack 1) and/or LMS Baghouse stack (stack 43).

(e) Dryers
(1) Two (2) natural gas-fired low $NO_x$ ladle dryers (ID#3f), permitted for construction in 2001 and (ID#3l), permitted for construction in 2005 each with a nominal heat input rate of 10 MMBtu/hr.

(2) One (1) natural gas-fired low $NO_x$ tundish dryer (ID#3j), permitted for construction in 2001 with a nominal heat input rate of 5 MMBtu/hr.

(3) One (1) natural gas-fired Tundish Dryer (ID# 3o), permitted for construction in 2005 nominally rated at 5 MMBtu/hr.

(4) Two (2) natural gas-fired low NOx tundish dryers, (ID#3w and 3x), permitted for construction in 2008, with a nominal heat input rate of 5 MMBtu/hr, each.

Combustion emissions from the dryers exhaust inside the building, and are collected by the overhead roof exhaust system and ducted to the EAF Baghouse stack (stack 1) and/or LMS Baghouse stack (stack 43).

(f) Reheat Furnaces - - Stack 2 and Stack 41

(1) One (1) natural gas-fired low $NO_x$ reheat furnace (RH) (ID#2), permitted for construction in 2001 and approved for modification in 2009 to increase its nominal heat input rate from 260 MMBtu/hr to 320 MMBtu/hr.

Combustion and process emissions from the RH (ID#2) exhaust through a stack identified as Stack 2.

(2) One (1) natural gas-fired low $NO_x$ reheat furnace, identified as (ID#42), permitted for construction in 2005, with a nominal heat input rate of 260 MMBtu/hr.

Combustion and process emissions from this reheat furnace (ID#42) exhaust through a stack, identified as Stack 41.

(g) Ladle Vacuum Degasser (LVD) and LVD Boiler - - Stack 40

One (1) ladle vacuum degasser (LVD) (ID#40), permitted for construction in 2002 and permitted for modification in 2005, with a nominal capacity of 300 tons per hour of steel and one (1) boiler permitted for construction in 2002**,** to power the LVD. The LVD Boiler (ID#41) has a nominal heat input capacity of 41.8 MMBtu/hr, and uses natural gas as the primary fuel, with propane as an emergency back up fuel.

Gases from the LVD are directed to the boiler for combustion in the boiler. Emissions from the boiler exhausts through a stack identified as Stack 40.

(h) One (1) EAF dust storage silo (ID#4), permitted for construction in 2001 equipped with a bin vent filter for particulate control.

(i) Eight (8) raw material storage silos (ID#5 through ID#12) and the associated raw material receiving station, permitted for construction in 2001.

Existing three (3) raw material storage silos (ID#12a through ID#12c), permitted in 2012.

Each raw material silo is equipped with a bin vent filter for particulate control.

(j) A slag handling and processing area (ID#14), permitted for construction in 2001, operated by an independent contractor, with a nominal rated capacity of 250 tons per hour.

This processing area consists of slag pot dumping, deskulling, slag cooling, digging of slag pits by a front-end loader, loading of grizzly feeder by a front-end loader, crushing, screening, conveyor transfer points, loading of materials into piles, storage piles, load out of materials from piles, and vehicle movement around piles.

(k) Transporting on paved roadways and parking lots, unpaved roadways, and unpaved areas around slag storage piles and steel scrap piles.

(l) One (1) cooling tower (ID#13), permitted for construction in 2001, with a nominal water flow of 15,000 gallons per minute.

(m) Existing seven (7) cooling towers, permitted in 2012:

(1) Two (2) contact cooling tower for the rolling mill (ID#15a and ID#15b), one (1) with a nominal flow rate of 4,000 gallons per minute and one (1) with a nominal flow rate of 8,000 gallons per minute.

(2) One (1) non-contact cooling tower for the rolling mill (ID#15c), with a nominal flow rate of 81,250 gallons per minute.

(3) One (1) contact cooling tower for #1 cast (ID#15d), with a nominal flow rate of 5,000 gallons per minute.

(4) One (1) non-contact cooling tower for the rolling mill/caster (ID#15e), with a nominal flow rate of 18,000 gallons per minute.

(5) One (1) contact cooling tower for the caster sprays (ID#15f), with a nominal flow rate of 3,500 gallons per minute.

(6) One (1) contact cooling tower for the LVD Boiler (ID#15g), with a nominal flow rate of 2,500 gallons per minute.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

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

(a) 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 three one-hundredths (0.03) grains per dry standard cubic foot and a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying and woodworking operations.

(b) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6.

(c) Cleaners and solvents characterized as:

(1) having a vapor pressure equal to or less than two (2.0) kilo Pascals fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or

(2) having a vapor pressure equal to or less than seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit); the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months.

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

(e) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment.

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

(g) Equipment used exclusively for the following:

(1) Packaging lubricants and greases.

(2) Filling drums, pails, or other packaging containers with lubricating oils, waxes and greases.

(h) Production related activities, including the application of: oils; greases, lubricants; and nonvolatile material; as temporary protective coatings.

(i) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing, cutting torches, soldering, welding

(j) Closed loop heating and cooling systems.

(k) Solvent recycling systems with batch capacity less than or equal to one hundred (100) gallons.

(l) Water based activities, including activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.

(m) Quenching operations used with heat treating processes.

(n) Repair activities, including the replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

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

(p) Conveyors as follows:
(1) Covered conveyors for coal or coke conveying of less than or equal to three hundred sixty (360) tons per day.
(2) Covered conveyors for solid raw material, including limestone conveying of less than or equal to seven thousand two hundred (7,200) tons per day for sources other than mineral processing plants constructed after August 31, 1983.

(q) Blowdown for the following: Sight glass; Boiler; Cooling tower; Compressors; and Pumps.

## A.4 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) except as provided by 326 IAC 2-7-3, 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)][IC13-15-3-6(a)]

(a) This permit, T183-17160-00030, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

(a) the condition is modified in a subsequent permit action pursuant to the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

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

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

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

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. 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

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

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

and

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

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

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

(a) A Preventive Maintenance Plan (PMP) meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

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

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

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

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions for that unit. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(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, except as otherwise provided in 326 IAC 2-7-16.

(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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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)(8) be revised in response to an emergency.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Except for the respective construction authorizations in these permits, all terms and conditions of the following permits:

| PSD Permit Number | Issuance Dates |
|---|---|
| 183-10097-00030 | July 7, 1999 |
| 183-12692-00030 | January 10, 2001 |
| 183-15170-00030 | May 31, 2002 |
| 183-18658-00030 | May 5, 2004 |
| 183-18426-00030 | November 21, 2005 |
| 183-23905-00030 | February 25, 2008 |

issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. Except for the construction authorizations in Permit Nos. 183-10097-00030, 183-12692-00030, 183-15170-00030, 183-18658-00030, 183-18426-00030 and 183-23905-00030 these prior permits and all of their terms and conditions are hereby superseded.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

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

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the reasonable deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

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

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

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) 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) 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);

(3) The Permittee notifies the:

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

and

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

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

(4) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b) or (c). 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) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of

326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

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

(3) Any change in emissions; and

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

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) 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.3 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.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 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.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted to IDEM and maintained on site. The provisions of 326 IAC 6-5 are not federally enforceable.

C.7 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.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140 when conducting any asbestos abatement project covered by those rules.

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

C.9 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

**Compliance Requirements [326 IAC 2-1.1-11]**

C.10 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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.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 maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

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

C.14 Risk Management Plan [326 IAC 2-7-5(11)] [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]

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

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

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not necessarily limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

**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]

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 purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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. Support information includes the following:

(1) All calibration and maintenance records.
(2) All original strip chart recordings for continuous monitoring instrumentation.
(3) Copies of all reports required by the Part 70 permit.
Records of required monitoring information include the following:
(4) The date, place, as defined in this permit, and time of sampling or measurements.
(5) The dates analyses were performed.
(6) The company or entity that performed the analyses.
(7) The analytical techniques or methods used.
(8) The results of such analyses.
(9) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) 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(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee

elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.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. Proper notice submittal under Section B- Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) 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 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

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

(f) The report for a project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

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

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

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

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

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

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

**Stratospheric Ozone Protection**

C.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 applicable standards for recycling and emissions reduction.

**SECTION D.1 FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(14)]**

(a) Electric Arc Furnaces (EAFs) - Stack 1
Two (2) single shell electric arc furnaces (EAFs), identified as EAF-1a and EAF-1b, permitted for construction in 2001. These furnaces operate at a nominal combined rate of 300 tons of molten steel per hour and utilize a direct-shell evacuation control (DEC) system ("fourth hole" duct), an overhead roof exhaust system consisting of a capture system with a segmented canopy hood, scavenger duct, and cross-draft partitions.

These furnaces utilize the following emission control technologies:

(i) A DEC for carbon monoxide (CO) and volatile organic compounds (VOC) emissions;

(ii) Low $NO_x$/oxyfuel burners (combustion control) for nitrogen oxide ($NO_x$) emissions; and

(iii) A baghouse (identified as EAFs Baghouse, ID#1) for filterable particulate emissions.

The particulate and lead emissions escaping the DEC system are collected by the overhead roof exhaust system and exhaust through a stack identified as the EAFs Baghouse stack (Stack 1).

There are no roof monitors in the meltshop.

(b) Ladle Metallurgy Station (LMS) - - Stack 43
One (1) ladle metallurgy refining station (LMS) (ID#3a) with a nominal rate of 300 tons of steel per hour.

The LMS particulate emissions are collected by the overhead roof exhaust system, controlled by the LMS Baghouse and exhaust through the LMS Baghouse stack (Stack 43).

(c) Continuous Casters (CCs) - - Stack 43
The two (2) continuous casters are limited to a nominal combined casting capacity of 300 tons of steel per hour.

(1) One (1) continuous caster (CC) (ID#3k) with a nominal casting rate of 200 tons of steel per hour.

(2) One (1) continuous caster, identified as (ID#42a), with a nominal casting rate of 200 tons of steel per hour.

The particulate emissions from the continuous casters are collected by the overhead roof exhaust system, controlled by the LMS Baghouse and exhaust through the LMS Baghouse stack (Stack 43).

(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 EAFs Operation Limitation [326 IAC 2-1.1-5] [326 IAC 2-2]

Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005, 326 IAC 2-1.1-5 (Air Quality Requirements) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the Permittee shall operate EAF-1a and EAF-1b at a maximum combined rate of:

(a) 300 tons of molten steel per hour, and

(b) 2,628,000 tons of molten steel per 12-consecutive month period, with compliance determined at the end of each month.

D.1.2 Nitrogen Oxides ($NO_x$) - PSD Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, amended by SSM 183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the EAF-1a and EAF-1b auxiliary burners shall be equipped with Low $NO_x$/oxyfuel burners.

(b) Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the total $NO_x$ emissions from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) shall not exceed 0.35 pounds per ton of steel produced and 105 pounds of $NO_x$ per hour, based on a three (3) hour block average.

D.1.3 Particulate Matter ($PM/PM_{10}$) - PSD Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, PSD SSM 183-23905-00030 and 326 IAC 2-2 (PSD – Control Technology Review Requirements):

(a) Filterable Particulate Matter (PM) emissions from the EAFs Baghouse shall not exceed 0.0018 grains per dry standard cubic feet and 14.4 pounds per hour based on a 3-hour block average.

(b) The total filterable and condensable $PM_{10}$ emissions from the EAFs Baghouse shall not exceed 0.0052 grains per dry standard cubic feet and 41.6 pounds per hour based on a 3-hour block average.

D.1.4 Sulfur Dioxide ($SO_2$) - PSD Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to PSD SSM 183-18426-00030**,** issued November 18, 2005 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the total $SO_2$ emissions from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) shall not exceed 0.25 pounds per ton of steel and 75 pounds of $SO_2$ per hour based on a three (3) hour block average.

(b) Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, amended by PSD SSM 183-12692-00030, issued January 10, 2001**,** and amended by 183-18658-00030, issued May 5, 2004**,** and 326 IAC 2-1.1-11:

(1) The sulfur content of the direct reduced iron (DRI), charge carbon, and injection carbon added into the EAFs shall not exceed the following:

| Raw Material | Sulfur Content (%) |
|---|---|
| direct reduced iron (DRI) | 0.20 |
| charge carbon | 0.6 |
| injection carbon | 2.5 |

(2) The Permittee may utilize the following alternative mixture of sulfur content of the charge carbon and injection carbon added into the EAFs:

| Raw Material | Sulfur Content (%) |
|---|---|
| charge carbon | 2.0 |
| injection carbon | 4.0 |

The Permittee shall not use DRI when charging this alternative mixture to the EAFs.

(3) The Permittee shall obtain vendor certifications and/or analyses to verify that shipments of DRI, charge carbon, and injection carbon do not exceed the thresholds stated in Conditions D.1.4(b)(1) and D.1.4(b)(2).

D.1.5 Carbon Monoxide (CO) - PSD Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, amended by PSD SSM 183-12692-00030, issued January 10, 2001, and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the CO emissions from EAF-1a and EAF-1b shall be controlled by thermal oxidation and by maintaining a negative pressure at the direct-shell evacuation control (DEC) system air gap.

(b) Pursuant to PSD SSM183-18426-00030, issued November 18, 2005 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the total CO emissions from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) shall not exceed 2.0 pounds per ton of steel produced and 600 pounds of CO per hour, based on a three (3) hour block average.

D.1.6 Particulate Matter Control

(a) In order to comply with Condition D.1.3(a) and (b) – Particulate Matter PSD BACT, D.1.8 – Lead PSD BACT, D.1.9 – Mercury PSD BACT, and D.1.10(b) – Fluorides PSD BACT control technology (326 IAC 2-2-3):

(1) The EAF Baghouse for particulate control shall be in operation and control filterable particulate emissions at all times that EAF-1a or EAF-1b is in operation.

(b) In order to comply with Condition D.1.15 – Ladle Metallurgy Station (LMS) and Continuous Casters (CC) – PSD BACT:

(1) The LMS Baghouse for particulate control shall be in operation and control filterable particulate emissions at all times that the Ladle Metallurgical Station (ID# 3a) or Continuous Casters (ID# 3k and ID# 42a) is in operation.

(c) There shall be no roof monitors in the melt shop.

(d) The meltshop shall be located in a total enclosure subject to general ventilation that maintains the meltshop at a lower than ambient pressure to ensure in-draft through any doorway opening.

Ventilation air from the total enclosure shall be conveyed to the EAFs Baghouse.

(e) A segmented canopy hood shall be maintained above EAF-1a and EAF-1b. The canopy shall be divided into separate sections and the dampers operated in a manner that will promote good capture efficiency for the EAFs Baghouse.

D.1.7 Volatile Organic Compounds (VOC) - PSD Best Available Control Technology [326 IAC 2-2-3

(a) Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the total VOC emissions from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) shall not exceed 0.09 pounds per ton of steel and 27 pounds of VOC per hour, based on a three (3) hour block average.

(b) These VOC limits are as defined in 326 IAC 1-2-90.

D.1.8 Lead - PSD Best Available Control Technology [326 IAC 2-2-3]

Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the total lead emissions from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) shall not exceed 0.00048 pounds per ton of steel and 0.144 pounds of lead per hour, based on a three (3) hour block average.

D.1.9 Mercury - PSD Best Available Control Technology [326 IAC 2-2-3]

Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the total mercury emissions from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) shall not exceed 5.21 $x10^{-4}$ pounds per ton of steel and 0.1563 pounds of mercury per hour, based on a three (3) hour block average.

D.1.10 Fluorides- PSD Best Available Control Technology [326 IAC 2-2-3]

(a) Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005, and 326 IAC 2-2 (PSD - Control Technology Review~~,~~ Requirements), the fluoride emissions from EAF-1a and EAF-1b shall be controlled by using either a granular type of Fluorspar or using intact bags of Fluorspar.

(b) Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the total fluoride emissions from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) shall not exceed 0.01 pounds per ton of steel and 2.09 pounds of Fluorides per hour based on a three (3) hour block average.

D.1.11 Hazardous Air Pollutant (HAP) Limitations [326 IAC 2-1.1-4] [326 IAC 2-2] [326 IAC 2-4.1-1]

Pursuant to PSD SSM 183-18426-00030**,** issued November 18, 2005 and 326 IAC 2-1.1-4, the Permittee shall not allow:

(a) Beryllium to be emitted from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) in a total quantity equal to or greater than 8.6 x $10^{-5}$ pounds per hour.

(b) Manganese compounds to be emitted from the EAFs Baghouse stack (stack 1) and LMS Baghouse stack (stack 43) in a total quantity equal to or greater than 2.28 pounds per hour.

Compliance with these limitations will assure that the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) do not apply for beryllium and that the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) do not apply to the source.

D.1.12 Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) Control

Pursuant to PSD BACT Control Technology (326 IAC 2-2-3), the CO and VOC emissions from EAF-1a and EAF1b shall be controlled by thermal oxidation and by maintaining a negative pressure at the direct shell evacuation control (DEC) system air gap.

D.1.13 Scrap Management Plan (SMP) [326 IAC 2-2]

(a) Pursuant to PSD Best Available Control Technology (326 IAC 2-2-3), VOC, lead, and mercury emissions from EAF-1a and EAF-1b shall be controlled by a Scrap Management Plan (SMP).

(b) The Permittee shall implement the SMP, which shall be in writing and available for inspection.

(c) In order to control VOC emissions, the SMP shall provide that:

(1) All grades of scrap charged to the furnaces shall not contain excessive non-metallics.

(2) All grades of scrap shall not contain excessive oil and grease.

(3) Heavily oiled scrap shall not be used.

D.1.14 Visible Emission Limitations - PSD Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, PSD SSM 183-23905-00030 and 326 IAC 2-2 (PSD – Control Technology Review Requirements):

(a) Visible emissions of the stack exhaust from the EAFs Baghouse (Stack 1) shall not exceed three percent (3%) opacity based on a six (6) minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(b) Visible emissions of the stack exhaust from the LMS Baghouse (Stack 43) shall not exceed three percent (3%) opacity, based on a six (6) minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(c) Visible emissions from any building opening shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

Compliance with the above opacity limitations shall also satisfy the requirements of 326 IAC 5-1-2 (Opacity Limitations) under Condition C.2 - Opacity.

D.1.15 Ladle Metallurgy Station (LMS) and Continuous Casters (CC) - PSD Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, PSD SSM 183-23905-00030 and 326 IAC 2-2-3 (PSD - BACT):

(a) The PM/PM10 emissions from the following facilities are limited as indicated in the table below:

| Stack #: Process/facility Description (ID) | Filterable PM Emissions | | Filterable Plus Condensable PM10 Emissions | |
|---|---|---|---|---|
| | (gr/dscf) | (lb/hr) | (gr/dscf) | (lb/hr) |
| Stack 43: Ladle Metallurgical Station (ID# 3a) and Continuous Casters (ID#3k and ID#42a) | 0.0018 | 3.9 | 0.0052 | 11.2 |

D.1.16 Preventive Maintenance Plan (PMP) [326 IAC 1-6-3] [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan (PMP) is required for EAF-1a, EAF-1b, LMS and their associated control devices. Section B - Preventive Maintenance Plan (PMP) contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

D.1.17 Baghouse Operation [326 IAC 2-2] [326 IAC 2-7-6(6)]

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

D.1.18 Testing Requirements [326 IAC 2-1.1-11]

(a) No later than 2.5 years after the date of the most recent valid compliance demonstration, the Permittee shall perform NOx testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purpose of determining compliance with Condition D.1.2, 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 NOx test shall be repeated thereafter at least once every 2.5 years from the date of the most recent valid compliance demonstration.

(b) No later than 5 years after the date of the most recent valid compliance demonstration, the Permittee shall perform PM/$PM_{10}$ testing on the stack emissions from the EAF Baghouse (stack 1). for the purpose of determining compliance with Condition D.1.3, 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. PM includes filterable particulate matter only. $PM_{10}$ includes filterable and condensable PM.

These tests shall be repeated thereafter at least once every 5 years from the date of the most recent valid compliance demonstration.

(c) No later than 5 years after the date of the most recent valid compliance demonstration, the Permittee shall perform PM, $PM_{10}$ and opacity testing on the LMS Baghouse (stack 43), for the purpose of determining compliance with the PM and PM10 limits in Condition D.1.15, and opacity limit in Condition D.1.14(b), 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. PM includes filterable particulate matter only. $PM_{10}$ includes filterable and condensable PM.

These tests shall be repeated thereafter at least once every 5 years from the date of the most recent valid compliance demonstration.

(d) No later than 1 year after the date of the most recent valid compliance demonstration, the Permittee shall perform Lead testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purpose of determining compliance with Condition D.1.8 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 Lead test shall be repeated thereafter at least once every year from the date of the most recent valid compliance demonstration.

(e) No later than 2.5 years after the date of the most recent valid compliance demonstration, the Permittee shall perform $SO_2$ testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purpose of determining compliance with Condition D.1.4, 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 $SO_2$ test shall be repeated thereafter at least once every 2.5 years from the date of the most recent valid compliance demonstration.

(f) No later than 1 year after the date of the most recent valid compliance demonstration, the Permittee shall perform Mercury testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purpose of determining compliance with Condition D.1.9, 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 Mercury test shall be repeated thereafter at least once every year from the date of the most recent valid compliance demonstration.

(g) No later than 5 years after the date of the most recent valid compliance demonstration, the Permittee shall perform Fluorides testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purpose of determining compliance with Condition D.1.10, 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 Fluorides test shall be repeated thereafter at least once every 5 years from the date of the most recent valid compliance demonstration.

(h) No later than 5 years after the date of the most recent valid compliance demonstration, the Permittee shall perform Manganese testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purpose of determining compliance with Condition D.1.11, 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.

The Manganese test shall be repeated thereafter at least once every 5 years from the date of the most recent valid compliance demonstration.

(i) No later than 5 years after the date of the most recent valid compliance demonstration, the Permittee shall perform for VOC testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purpose of determining compliance with Condition D.1.7, 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 VOC test shall be repeated thereafter at least once every 5 years from the date of the most recent valid compliance demonstration.

D.1.19 CO Continuous Emission Rate Monitoring Requirement [326 IAC 2-1.1-11] [326 IAC 3-5]

(a) The Permittee shall calibrate, certify, operate, and maintain a continuous emission monitoring system (CEMS) for measuring CO emissions rates in pounds per hour averaged over a three (3) hour block period from the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

(b) The Permittee shall record the output of the continuous monitoring system(s) pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

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

(d) 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).

(e) Except as otherwise provided by a rule or provided specifically in this permit, whenever the CO continuous emission monitor system (CEMS) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of twenty-four (24) hours or more during meltshop operation, the Permittee shall perform once per day operational status inspections of the fourth hole duct or direct shell evacuation system, the dampers, the damper switches and the outsides of the ductwork and hoods for the presence of holes or flow constrictions caused by dents. Any deficiencies shall be noted and proper maintenance performed. This requirement does not replace the routine monthly inspections of the same equipment.

(f) 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, 326 IAC 2-2, and 40 CFR Part 60.

D.1.20 Visible Emission Observations and Continuous Opacity Monitoring (COM) [326 IAC 2-1.1-11] [326 IAC 3-5] [40 CFR 60.273a]

(a) If the Permittee elects to operate a continuous opacity monitoring system (COMS) under 40 CFR 60.273a, then:

(1) The Permittee shall calibrate, certify, operate, and maintain a continuous opacity monitoring system (COMS) to measure opacity from the EAFs Baghouse stack (Stack 1) in accordance with 326 IAC 3-5-2 and 3-5-3.

(2) The Permittee shall submit to IDEM, OAQ, within (90) days after installation of a new monitor, a complete written continuous monitoring standard operating procedure (SOP). If revisions are made to the SOP, updates shall be submitted to IDEM, OAQ biennially.

(b) The COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.

(c) In the event that a breakdown of a COMS occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever the COMS is malfunctioning or is down for maintenance or repairs for more than twenty-four (24) hours during meltshop operation, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to take visible emission readings from the EAFs Baghouse stack (Stack 1).

(1) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.

(2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once per day during daylight operations, until a COM is online.

(3) Method 9 readings may be discontinued once a COM is online.

(4) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

(5) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

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

D.1.21 Bag Leak Detection System (BLDS) [40 CFR 60.273a]

If the Permittee elects to operate a bag leak detection system (BLDS) under 40 CFR 60.273a, then:

(a) The Permittee shall operate a continuous bag leak detection systems (BLDS) for the EAFs Baghouse. The BLDS shall meet the following requirements:

(1) The BLDS must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 0.0018 grains per actual cubic foot or less.

(2) The BLDS sensor must provide output of relative particulate matter loading.

(3) The BLDS must be equipped with an alarm system that will alarm when an increase in relative particulate loading is detected over a preset level.

(4) The BLDS shall be operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for operation and adjustment of the system.

(5) In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.

(6) The bag detector must be installed downstream of the baghouse.

(b) Method 9 visible emission observations shall be conducted in accordance with the applicable requirements of 40 CFR 60.273a(c).

(c) In the event of a bag leak detection system alarm:

(1) The affected compartments will be shut down as soon as possible until the failed units have been repaired or replaced.

(2) Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B.11 - Emergency Provisions).

D.1.22 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from the LMS Baghouse 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, at least eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligations with respect to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.23 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the LMS baghouse at least once per day when the respective facilities are in operation.

(b) When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response steps. The normal range for this unit is a pressure drop between 2.0 and 9.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(c) The instrument 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 every six (6) months.

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

D.1.24 Record Keeping Requirements [326 IAC 2-1.1-11] [40 CFR 60.276a]

(a) To document the compliance status with Conditions D.1.19 – CO Continuous Emission Rate Monitoring Requirement and D.1.20 –Continuous Opacity Monitoring (if the Permittee elects to operate a COMS under 40 CFR 60.273a), the Permittee shall maintain records required under 326 IAC 3-5-6 at the source, or at such other site, in a manner so that they may be inspected by the IDEM, OAQ, or the U.S. EPA., if so requested or required.

(b) To document the compliance status with Condition D.1.1 - EAFs Operation Limitation, the Permittee shall maintain records of the amount of steel produced per twelve (12) consecutive month period.

(c) To document the compliance status with Condition D.1.5 - Carbon Monoxide (CO) - PSD Best Available Control Technology, the Permittee shall maintain records of the readings of the CO CEMS.

(d) If the Permittee elects to operate a COMS under 40 CFR 60.273a, then to document the compliance status with Condition D1.20(d) – Continuous Opacity Monitoring (COM), the Permittee shall maintain records of visible emission readings that may be required by that provision and make the records available upon request to IDEM, OAQ.

(e) To document the compliance status with Condition D.1.4 – Sulfur Dioxide – PSD BACT, the Permittee shall maintain records of the verification of sulfur content of DRI, charge carbon, and injection carbon added into the EAFs.

(f) If the Permittee elects to operate a BLDS under 40 CFR 60.273a, then to document the compliance status with Condition D.1.21 – Bag Leak Detection System, the Permittee shall maintain records of the dates and times of all bag leak detection system alarms, the cause of each alarm, and an explanation of all corrective actions taken. In accordance with 40 CFR 60.273a(c), records shall be maintained of any 6-minute average that is in excess of the emission limit specified in 40 CFR 60.272a(a).

(g) To document the compliance status with Condition D.1.22 – Visible Emission Notations, the Permittee shall maintain records of the visible emission notations required by that condition. 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).

(h) To document the compliance status with Condition D.1.23, the Permittee shall maintain records of the pressure drop readings required by that condition. 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).

(i) Condition C.19 - General Record Keeping Requirements contains the Permittee's obligations with respect to the records required by this condition.

(j) Records necessary to demonstrate compliance shall be available not later than 30 days after the end of each compliance period.

D.1.25 Reporting Requirements [326 IAC 2-1.1-11] [40 CFR 60.276a

(a) The Permittee shall submit a quarterly summary of the actual amount of steel produced, using the Steel Production Report or its equivalent. .

(b) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the CEMS data for CO pursuant to 326 IAC 3-5-7.

(c) If the Permittee elects to operate a COMS under 40 CFR 60.273a, then the Permittee shall submit a quarterly excess emissions report, if applicable, based on the COMS data, pursuant to 326 IAC 3-5-7.

(d) When required, these reports shall be submitted not later than thirty (30) calendar days following the end of each calendar quarter. Section C – General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) These reports 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(35).

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]**

D.1.26 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the EAFs except when otherwise specified in 40 CFR Part 60, Subpart AAa.

D.1.27 New Source Performance Standards for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983 [40 CFR Part 60, Subpart AAa] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart AAa (included in its entirety as Attachment A), which are incorporated by reference at 326 IAC 12. Where the NSPS provides options for compliance, nothing in this condition precludes the Permittee from choosing among those options or requires the Permittee to use a particular option:

(1) 40 CFR 60.270a
(2) 40 CFR 60.271a
(3) 40 CFR 60.272a
(4) 40 CFR 60.273a
(5) 40 CFR 60.274a
(6) 40 CFR 60.275a
(7) 40 CFR 60.276a

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]**

D.1.28 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.10690, the Permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the electric arc furnace steelmaking facility as specified in Table 1 of 40 CFR 63, Subpart YYYYY in accordance with the schedule in 40 CFR 63, Subpart YYYYY.

D.1.29 National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities [40 CFR Part 63, Subpart YYYYY]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart YYYYY (included in its entirety as Attachment B). Where the NESHAP provides options for compliance, nothing in this condition precludes the Permittee from choosing among those options or requires the Permittee to use a particular option:

(1) 40 CFR 63.10681(a)
(2) 40 CFR 63.10685
(3) 40 CFR 63.10686(a), (b), (d)(1), (d)(3), (d)(4), (d)(6), (e)
(4) 40 CFR 63.10690
(5) Table 1 to 40 CFR 63, Subpart YYYYY

**SECTION D.2 FACILITY OPERATION CONDITIONS**

**Facility Description** [326 IAC 2-7-5(14)]

(d) Preheaters

(1) Four (4) natural gas-fired low $NO_x$ ladle preheaters (ID#s3b through 3e), permitted for construction in 2001, each with a nominal heat input rate of 10 million British thermal units per hour (MMBtu/hr).

(2) One (1) natural gas-fired low NOx tundish nozzle preheater (ID#3g), permitted for construction in 2001, with a nominal heat input rate of 10 MMBtu/hr.

(3) Two (2) natural gas-fired low NOx tundish preheaters (ID#s3h and 3i), permitted for construction in 2001 and permitted for modification in 2008, each with a nominal heat input rate of 15 MMBtu/hr.

(4) One (1) natural gas-fired Tundish Nozzle Preheater, identified as (ID#3m), permitted for construction in 2005, nominally rated at 10 MMBtu/hr.

(5) One (1) natural gas-fired Tundish Preheater, identified as (ID#3n), permitted for construction in 2001 and permitted for modification 2008, nominally rated at 15 MMBtu/hr.

(6) One (1) natural gas-fired low NOx tundish preheater (ID#3p), permitted for construction in 2008, with a nominal heat input rate of 15 MMBtu/hr.

(7) Four (4) natural gas-fired low NOx horizontal ladle preheaters (ID#3q, 3r, 3s and 3t), permitted for construction in 2008, with a nominal heat input rate of 10 MMBtu/hr, each.

(8) Two (2) natural gas-fired low NOx vertical ladle preheaters (ID#3u and 3v), permitted for construction in 2008, with a nominal heat input rate of 10 MMBtu/hr, each.

Combustion emissions from the preheaters exhaust inside the building, and are collected by the overhead roof exhaust system and ducted to the EAF Baghouse stack (stack 1) and/or LMS Baghouse stack (stack 43).

(e) Dryers

(1) Two (2) natural gas-fired low NOx ladle dryers (ID#3f), permitted for construction in 2001 and (ID#3l), permitted for construction in 2005 each with a nominal heat input rate of 10 MMBtu/hr.

(2) One (1) natural gas-fired low NOx tundish dryer (ID#3j), permitted for construction in 2001 with a nominal heat input rate of 5 MMBtu/hr.

(3) One (1) natural gas-fired Tundish Dryer (ID#3o), permitted for construction in 2005 nominally rated at 5 MMBtu/hr.

(4) Two (2) natural gas-fired low NOx tundish dryers, (ID#3w and 3x), permitted for construction in 2008, with a nominal heat input rate of 5 MMBtu/hr, each.

Combustion emissions from the dryers exhaust inside the building, and are collected by the overhead roof exhaust system and ducted to the EAF Baghouse stack (stack 1) and/or LMS Baghouse stack (stack 43).

(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 Nitrogen Oxides ($NO_X$) Emissions [326 IAC 2-2]

Pursuant to PSD SSM 183-23905-00030:

(a) The total natural gas combusted by tundish preheaters ID#3p, 3n, 3h and 3i shall be less than 241 million standard cubic feet (MMSCF) per twelve consecutive month period with compliance determined at the end of each month.

(b) The NOx emissions from tundish preheater ID# 3p, ladle preheaters ID# 3q, 3r, 3s, 3t, 3u and 3v and tundish dryers ID# 3w and 3x shall not exceed 0.1 pounds per MMBtu.

Compliance with these limits, and the NOx BACT limits on preheaters ID# 3n, 3h and 3i, is equal to a NOx emission increase from the modification of less than 40 tons per year and renders the requirements of 326 IAC 2-2 not applicable.

D.2.2 PM/PM10 Emissions - PSD Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD SSM 183-23905-00030 and 326 IAC 2-2-3 (PSD - BACT), the PM/PM10 emissions from tundish preheaters ID#3p, 3h, 3i, ladle preheaters ID#3q, 3r, 3s, 3t, 3u and 3v and tundish dryers ID# 3w and 3x shall not exceed 0.0076 pounds per MMBtu.

D.2.3 Nitrogen Oxides ($NO_x$) - PSD Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD CP183-10097-00030, issued July 7, 1999, amended by PSD SSM183-12692-00030, issued January 10, 2001, and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the following units:

(a) Four (4) natural gas-fired low $NO_x$ ladle preheaters (ID#s3b through 3e),

(b) One (1) natural gas-fired low $NO_x$ tundish nozzle preheater (ID#3g),

(c) Two (2) natural gas-fired low $NO_x$ tundish preheaters (ID#s 3h and 3i),

(d) One (1) natural gas-fired low $NO_x$ ladle dryer (ID#3f), and

(e) One (1) natural gas-fired low $NO_x$ tundish dryer (ID#3j)

shall use low $NO_x$ natural gas-fired burners and $NO_x$ emissions shall not exceed 0.10 pound per MMBtu.

D.2.4 Ladle Dryer - PSD Best Available Control Technology Limits [326 IAC 2-2]

Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005, PSD SSM 183-23905-00030 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), Best Available Control Technology (BACT) requirements shall be the following:

(a) The second ladle dryer (ID#3l) shall use natural gas as fuel.

(b) Low $NO_x$ burners shall be utilized to control the $NO_x$ emissions from the second ladle dryer (ID#3l).

(c) The nitrogen oxides ($NO_x$) emissions from the second ladle dryer (ID#3l) shall not exceed 0.1 pounds per MMBtu based on a three (3) hour block average.

(d) The carbon monoxide (CO) emissions from the second ladle dryer (ID#3l) shall not exceed 0.084 pounds per MMBtu based on a three (3) hour block average.

(e) The volatile organic compound (VOC) emissions from the second ladle dryer (ID#3l) shall not exceed 0.0055 pounds per MMBtu based on a three (3) hour block average.

(f) The sulfur dioxide ($SO_2$) emissions from the second ladle dryer (ID#3l) shall not exceed 0.0006 pounds per MMBtu based on a three (3) hour block average.

(g) The PM (filterable) emissions from the second ladle dryer (ID#3l) shall not exceed 0.0019 pounds per MMBtu based on a three (3) hour block average

(h) The $PM_{10}$ (filterable and condensable) emissions from the second ladle dryer (ID#3l) shall not exceed 0.0076 pounds per MMBtu based on a three (3) hour block average.

(i) Good combustion practices shall be observed.

D.2.5 Tundish Nozzle Preheater - PSD Best Available Control Technology Limits [326 IAC 2-2]

Pursuant to PSD SSM183-18426-00030, issued November 18, 2005, PSD SSM 183-23905-00030**,** and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), Best Available Control Technology (BACT) requirements shall be the following:

(a) The Tundish Nozzle Preheater (ID#3m) shall use natural gas as the primary fuel and propane as back up fuel.

(b) Low $NO_x$ burners shall be utilized to control the $NO_x$ emissions from the Tundish Nozzle Preheater (ID#3m).

(c) The $NO_x$ emissions from the Tundish Nozzle Preheater (ID#3m) shall not exceed 0.1 pounds per MMBtu based on a 3-hour block average.

(d) The CO emissions from the Tundish Nozzle Preheater (ID#3m) shall not exceed 0.084 pounds per MMBtu based on a 3-hour block average.

(e) The VOC emissions from the Tundish Nozzle Preheater (ID#3m) shall not exceed 0.0055 pounds per MMBtu based on a 3-hour block average.

(f) The $SO_2$ emissions from the Tundish Nozzle Preheater (ID#3m) shall not exceed 0.0006 pounds per MMBtu based on a 3-hour block average.

(g) The filterable and condensable particulate matter ($PM/PM_{10}$) emissions from the Tundish Nozzle Preheater (ID#3m) shall not exceed 0.0076 pounds per MMBtu based on a 3-hour block average.

(h) Good combustion practices shall be observed.

D.2.6 Tundish Preheater - PSD Best Available Control Technology Limits [326 IAC 2-2]

Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005, PSD SSM 183-23905-00030 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), Best Available Control Technology (BACT) requirements shall be the following:

(a) The Tundish Preheater (ID#3n) shall use natural gas as the primary fuel and propane as back up fuel.

(b) Low $NO_x$ burners shall be utilized to control the $NO_x$ emissions from the Tundish Preheater (ID#3n).

(c) The $NO_x$ emissions from the Tundish Preheater (ID#3n) shall not exceed 0.1 pounds per MMBtu based on a 3-hour block average.

(d) The CO emissions from the Tundish Preheater (ID#3n) shall not exceed 0.084 pounds per MMBtu based on a 3-hour block average.

(e) The VOC emissions from the Tundish Preheater (ID#3n) shall not exceed 0.0054 pounds per MMBtu based on a 3-hour block average.

(f) The $SO_2$ emissions from the Tundish Preheater (ID#3n) shall not exceed 0.0006 pounds per MMBtu based on a 3-hour block average.

(g) The filterable and condensable particulate matter ($PM/PM_{10}$) emissions from the Tundish Preheater (ID#3n) shall not exceed 0.0076 pounds per MMBtu based on a 3-hour block average.

(h) Good combustion practices shall be observed.

D.2.7 Tundish Dryer - PSD Best Available Control Technology Limits [326 IAC 2-2]

Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005, PSD SSM 183-23905-00030, and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), Best Available Control Technology (BACT) requirements shall be the following:

(a) The Tundish Dryer (ID#3o) shall use natural gas as the primary fuel and propane as back up fuel.

(b) Low $NO_x$ burners shall be utilized to control the $NO_x$ emissions from the Tundish Dryer (ID#3o).

(c) The $NO_x$ emissions from the Tundish Dryer (ID#3o) shall not exceed 0.1 pounds per MMBtu, based on a 3-hour block average.

(d) The CO emissions from the Tundish Dryer (ID#3o) shall not exceed 0.084 pounds per million Btu based on a 3-hour block average.

(e) The VOC emissions from the Tundish Dryer (ID#3o) shall not exceed 0.0055 pounds per MMBtu based on a 3-hour block average.

(f) The $SO_2$ emissions from the Tundish Dryer (ID#3o) shall not exceed 0.0006 pounds per MMBtu based on a 3-hour block average.

(g) The filterable and condensable particulate matter ($PM/PM_{10}$) emissions from the Tundish Dryer (ID# 3o) shall not exceed 0.0076 pounds per MMBtu based on a 3-hour block average.

(h) Good combustion practices shall be observed.

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

D.2.8 Record Keeping Requirements

To document the compliance status with Condition D.2.1, the Permittee shall maintain daily records of the fuel used by tundish preheaters ID#3p, 3n, 3h and 3i. Section C - General Record Keeping Requirements contains the Permittee's obligations regarding the records required by this condition.

D.2.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not 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(35).

## SECTION D.3 FACILITY OPERATION CONDITIONS

**Facility Description** [326 IAC 2-7-5(14)]

(f) Reheat Furnaces - - Stack 2 and Stack 41

(1) One (1) natural gas-fired low $NO_x$ reheat furnace (RH) (ID#2), permitted for construction in 2001 and approved for modification in 2009 to increase its nominal heat input rate from 260 MMBtu/hr to 320 MMBtu/hr.

Combustion and process emissions from the RH (ID#2) exhaust through a stack identified as Stack 2.

(2) One (1) natural gas-fired low $NO_x$ reheat furnace, identified as (ID#42), permitted for construction in 2005, with a nominal heat input rate of 260 MMBtu/hr.

Combustion and process emissions from this reheat furnace (ID#42) exhaust through a stack, identified as Stack 41.

(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 Nitrogen Oxides ($NO_x$) - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification 183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the Reheat Furnace (RF) (ID#2) shall be limited to the use of low- $NO_x$ natural gas-fired burners such that $NO_x$ emissions shall not exceed 0.11 pound per MMBtu.

(b) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification 183-12692-00030, issued January 10, 2001, the Permittee shall not allow more than 189.8 million cubic feet of natural gas to be combusted in the Reheat Furnace (RF) (ID#2) on a monthly basis averaged over a twelve (12) month period, with compliance determined at the end of each month.

D.3.2 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2]

Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD 183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the CO emissions from the Reheat Furnace (RF) (ID#2) shall not exceed 0.03 pound per MMBtu.

D.3.3 Reheat Furnace PSD BACT [326 IAC 2-2]

Pursuant to PSD Permit SSM183-18426-00030, issued November 21, 2005 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

(a) The Reheat Furnace (ID#42) shall use natural gas as the primary fuel and propane as back up fuel.

(b) Low $NO_x$ burners shall be utilized to control the $NO_x$ emissions whenever the Reheat Furnace (ID#42) is in operation.

(c) The $NO_x$ emissions from the Reheat Furnace (ID#42) shall not exceed 0.08 pounds per MMBtu and 20.8 pounds per hour, based on a 3-hour block average.

(d) The CO emissions from the Reheat Furnace (ID#42) shall not exceed 0.03 pounds per MMBtu and 7.8 pounds per hour, based on a 3-hour block average.

(e) The VOC emissions from the Reheat Furnace (ID#42) shall not exceed 0.005 pounds per MMBtu and 1.3 pounds per hour, based on a 3-hour block average.

(f) The $SO_2$ emissions from the Reheat Furnace (ID#42 shall not exceed 0.0006 pounds per MMBtu and 0.156 pounds per hour, based on a 3-hour block average.

(g) The filterable particulate matter (PM) emissions from the Reheat Furnace (ID#42) shall not exceed 0.0019 pounds per MMBtu and 0.49 pounds per hour, based on a 3-hour block average.

(h) The filterable and condensable particulate matter ($PM/PM_{10}$) emissions from the Reheat Furnace (ID#42) shall not exceed 0.0076 pounds per MMBtu and 1.98 pounds per hour, based on a 3-hour block average.

(i) The visible emissions from the Reheat Furnace (ID#42) Stack 41 shall not exceed 3% opacity.

(j) The lead emissions from the Reheat Furnace (ID#42) shall not exceed 0.0005 pounds per MMBtu and 0.13 pounds per hour, based on a 3-hour block average.

(k) The mercury emissions from the Reheat Furnace (ID#42) shall not exceed 0.00026 pounds per MMBtu and 0.068 pounds per hour, based on a 3-hour block average.

(l) Good combustion practices shall be observed.

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

D.3.4 Testing Requirements [326 IAC 2-1.1-11]

(a) Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform NOx and CO testing on the reheat furnace (RF) (ID#2) for the purpose of determining compliance with Conditions D.3.1(a) and D.3.2, 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.

The NOx and CO tests shall be repeated thereafter at least once every 5 years from the most recent valid compliance demonstration

(b) Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform NOx testing on the reheat furnace (ID#42) for the purpose of determining compliance with Condition D.3.3(c), 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 $NO_x$ test shall be repeated thereafter at least once every 5 years from the date of the last valid compliance demonstration.

(c) Section C – Performance Testing contains the Permittee's obligations regarding the performance testing required by this condition.

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

D.3.5 Record Keeping Requirements [326 IAC 2-7-5] [326 IAC 2-7-19]

(a) To document the compliance status with Condition D.3.1(b), the Permittee shall maintain records of the natural gas and propane combusted in the Reheat Furnace (RF) (ID#2) each month and make the records available upon request to IDEM, OAQ, and the US EPA.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations regarding the records required by this condition.

D.3.6 Reporting Requirements

A quarterly summary of the monthly natural gas used in Reheat Furnace ID#2 to document the compliance status with Condition D.3.1(b), shall be submitted quarterly to the address listed in Section C - General Reporting Requirements, of this permit using the reporting form located at the end of this permit, or its equivalent not later than thirty (30) days after 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(35).

## SECTION D.4 FACILITY OPERATION CONDITIONS

**Facility Description** [326 IAC 2-7-5(14)]

(g) Ladle Vacuum Degasser (LVD) and LVD Boiler - - Stack 40
One (1) ladle vacuum degasser (LVD) (ID#40), permitted for construction in 2002 and permitted for modification in 2005, with a nominal capacity of 300 tons per hour of steel and one (1) boiler permitted for construction in 2002, to power the LVD. The LVD Boiler (ID#41) has a nominal heat input capacity of 41.8 MMBtu/hr, and uses LVD gas, natural gas as the primary fuel, with propane as an emergency back up fuel.

Emissions from the boiler exhausts through a stack identified as Stack 40.

(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 $PM/PM_{10}$ Limitations [326 IAC 2-2]

Pursuant to PSD Permit SSM183-15170-00030, issued May 31, 2002 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the total $PM/PM_{10}$ (including both filterable and condensable) emissions from the LVD Boiler (ID#41) shall not exceed 0.0076 pound per MMBtu of heat input and 0.318 pound per hour.

D.4.2 $NO_x$ Limitations [326 IAC 2-2]

Pursuant to PSD Permit SSM183-15170-00030, issued May 31, 2002 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the $NO_x$ emissions from the LVD Boiler (ID#41) shall not exceed 0.04 pound per million Btu of heat input and 1.67 pounds per hour.

D.4.3 CO Limitations PSD BACT [326 IAC 2-2]

Pursuant to PSD Permit SSM183-15170-00030, issued May 31, 2002 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the CO emissions from the LVD Boiler (ID#41) shall not exceed 0.084 pound per MMBtu of heat input and 3.51 pounds per hour.

D.4.4 VOC Limitations PSD BACT [326 IAC 2-2]

Pursuant to PSD Permit SSM183-15170-00030, issued May 31, 2002 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the VOC emissions from the LVD Boiler (ID#41) shall not exceed 0.0026 pound per MMBtu of heat input and 0.11 pound per hour.

D.4.5 $SO_2$ Limitations PSD BACT [326 IAC 2-2]

Pursuant to PSD Permit SSM183-15170-00030, issued May 31, 2002 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the $SO_2$ emissions from the LVD Boiler (ID#41) shall not exceed 0.0006 pound per MMBtu of heat input and 0.025 pound per hour.

D.4.6 Operating Parameters [326 IAC 2-2]

Pursuant to PSD Permit SSM183-15170-00030, issued May 31, 2002 and 326 IAC 2-2 (PSD), the following conditions shall apply:

(a) Only LVD gas, natural gas or propane fuels shall be used in the LVD Boiler (ID#41).

(b) The amount of natural gas used in the LVD Boiler (ID#41) shall not exceed 209 million cubic feet per 12-consecutive month period, with compliance determined at the end of each month.

(c) The amount of propane used in the LVD Boiler (ID#41) shall not exceed 222 kilogallons per 12 consecutive month period with compliance determined at the end of each month.

(d) Combustion emissions shall be controlled through the use of good combustion practices.

D.4.7 Preventive Maintenance Plan (PMP) [316 IAC 1-6-3] [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan (PMP) is required for the LVD Boiler (ID#41). Section B - Preventive Maintenance Plan (PMP) contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

D.4.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform $NO_x$ and CO testing on the LVD Boiler (ID#41), for the purpose determining compliance with Conditions D.4.2 and D.4.3, 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.

The NOx and CO tests shall be repeated thereafter at least once every 5 years from the most recent valid compliance demonstration

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

D.4.9 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Condition D.4.6 - Operating Parameters, the Permittee shall keep records of monthly fuel used by LVD Boiler (ID#41), including the types of fuel and amount used.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations regarding the records required by this condition.

D.4.10 Reporting Requirements [326 IAC 2-1.1-11]

A quarterly summary of the monthly natural gas and propane usage by the LVD Boiler (ID#41) to document the compliance status with Condition D.4.6 shall be submitted quarterly to the address listed in Section C - General Reporting Requirements, of this permit using the reporting form located at the end of this permit, or its equivalent not later than thirty (30) days after 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(35).

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]**

D.4.11 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference at 326 IAC 12-1, for the LVD Boiler (ID#41) except as otherwise specified in 40 CFR Part 60, Subpart Dc.

D.4.12 New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (included in its entirety as Attachment C), which are incorporated by reference at 326 IAC 12. Where the NSPS provides options for compliance, nothing in this condition precludes the Permittee from choosing among those options or requires the Permittee to use a particular option:

(1) 40 CFR 60.48c(a)(1), (3)
(2) 40 CFR 60.48c(g)
(3) 40 CFR 60.48c(i)
(4) 40 CFR 60.48c(j)

**SECTION D.5 FACILITY OPERATION CONDITIONS**

Facility Description [326 IAC 2-7-5(14)]

(h) One (1) EAF dust storage silo (ID# 4), equipped with a pneumatic dust collection system for particulate

(i) Eight (8) raw material storage silos (ID# 5 through ID# 12) and the associated raw material receiving station, permitted in 2001.

Existing three (3) raw material storage silos (ID#12a through ID#12c), permitted in 2012.

(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 Particulate Matter ($PM/PM_{10}$) - PSD Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification 183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the filterable PM/PM10 emissions from each of the nine (9) storage silos (ID#4 through ID#12) shall not exceed 0.01 grains per dry standard cubic feet.

(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the PM and PM10/PM2.5 emissions from each of the three (3) material storage bins/silos (ID#12a through ID#12c) shall be limited to 0.01 grain per dry standard cubic foot (gr/dscf).

D.5.2 Visible Emission Limitation - PSD Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the visible emissions from each of the nine (9) storage silos (ID#4 through ID#12) shall not exceed three percent (3%) opacity.

(b) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the visible emissions from the raw material receiving station shall not exceed three percent (3%) opacity or greater based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(c) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the visible emissions from each of the three (3) material storage bins/silos (ID#12a through ID#12c) shall not exceed three percent (3%) opacity based on a six (6) minute average.

D.5.3 Preventive Maintenance Plan (PMP) [326 IAC 1-6-3] [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan (PMP) is required for these facilities and associated control devices. Section B - Preventive Maintenance Plan (PMP) contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

D.5.4 Bin Vent Filter Operation [326 IAC 2-2]

(a) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the bin vent filters shall be in operation or shall be in place and control emissions at all times when the storage silos (ID#5 through ID#12) are in operation. The pneumatic dust collection system shall be in operation and control emissions at all times when the EAF dust storage silo (ID#4) is in operation.

(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2, PSD, the bin vent filters shall be in operation or shall be in place at all times when material storage bins/silos (ID#12a through ID#12c) are in operation.

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

D.5.5 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) Once per day visible emission notations of the twelve (12) storage silos (ID#4 through ID#12 and ID#12a through ID#12c) shall be performed if exhausting to the atmosphere during normal daylight operations when loading or unloading material. 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, when the process is in operation, not counting startup or shut down time.

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C.16 Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C.16 Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.5.6 Broken or Failed Bin Vent Filter Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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

(b) For a single compartment bag filter controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.5.7 Record Keeping Requirements [326 IAC 2-7-5] [326 IAC 2-7-19]

(a) To document compliance with Condition D.5.2 - Visible Emission Limitation PSD BACT, the Permittee shall maintain records of the following and make the records available upon request to IDEM, OAQ, and the US EPA:

(i) Daily visible emission notations of the bin vent exhaust and raw material receiving station.

(ii) Documentation of all response steps implemented for every event that visible emissions were noted to be “abnormal”.

(b) Condition C.19 - General Record Keeping Requirements contains the Permittee’s requirements for record keeping required by this condition.

## SECTION D.6 FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(14)]**

(j) A slag handling and processing area (ID#14), permitted for construction in 2001, operated by an independent contractor, with a nominal rated capacity of 250 tons per hour.

This processing area consists of slag pot dumping, deskulling, slag cooling, digging of slag pits by a front-end loader, loading of grizzly feeder by a front-end loader, crushing, screening, conveyor transfer points, loading of materials into piles, storage piles, load out of materials from piles, and vehicle movement around piles.

(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 Annual Slag Production Limitation [326 IAC 2-1.1-5] [326 IAC 2-2]

Pursuant to PSD SSM 183-23905-00030, 326 IAC 2-1.1-5 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the Permittee shall not process more than 438,000 tons of slag per 12-consecutive month period, with compliance determined at the end of each month.

D.6.2 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the combined filterable particulate emissions from the crushing, screening, conveyor transfer points, continuous stacking operations shall not exceed 60.96 pounds per hour.

This limit is based on the nominal process weight rate of 250 tons per hour.

The pound per hour limitation was calculated using the following equation:

$E = 55.0P^{0.11}-40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour.

The above equation shall be used for extrapolation of the data for process weight rates in excess of sixty thousand (60,000) pounds per hour.

D.6.3 Visible Emission Limitations - PSD Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, PSD SSM 183-23905-00030, and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the fugitive dust emissions from the various slag handling and processing operations shall be controlled in accordance with the Fugitive Dust Control Plan (FDCP) (included in Section E.1 of this permit) such that the following visible emission limitations are not exceeded:

| Slag Handling/Processing Operation | Visible Emission Limitation (% opacity) (six (6) minute average) |
|---|---|
| Transferring of skull slag to slag pot | 10 % |
| Dumping of liquid slag from slag pot to slag pit and cooling | 3 % |
| Transferring of skull slag from slag pot to skull pit | 5 % |
| Digging skull slag pits | 5 % |
| Digging slag pits | 3 % |
| Stockpiling of slag adjacent to the grizzly feeder | 3 % |
| Wind erosion of stockpiles | 3 % |
| Crushing | 3 % |

| Slag Handling/Processing Operation | Visible Emission Limitation (% opacity) (six (6) minute average) |
|---|---|
| Screening | 3 % |
| Conveyor transfer points | 3 % |
| Continuous stacking of processed slag to stockpiles | 3 % |
| Loadout of processed slag from stockpiles to haul trucks for shipment | 3 % |
| Inplant hauling of slag pots (filled) and processed slag | 3 % |

D.6.4 Preventive Maintenance Plan (PMP) [326 IAC 1-6-3] [326 IAC 2-7-5(12)]

Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, amended by PSD SSM 183-12692-00030, issued January 10, 2001 and 326 IAC 1-6-3, a Preventive Maintenance Plan (PMP), in accordance with Condition B.10 - Preventive Maintenance Plan (PMP), of this permit, is required for the slag handling and processing operations associated control devices.

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

D.6.5 Testing Requirements [326 IAC 2-2

Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform opacity testing, for the purpose of determining compliance Condition D.6.3, utilizing 40 CFR Part 60, Appendix A, Method 9, or other 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.

The opacity test shall be repeated thereafter at least once every 5 years from the most recent valid compliance demonstration

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

D.6.6 Record Keeping Requirements [326 IAC 2-7-19]

(a) To document the compliance status with Condition D.6.1 - Annual Slag Production Limitation, the Permittee shall maintain records of the amount of slag processed.

(b) Section C – General Record Keeping Requirements contains the Permittee's obligations regarding the records required by this condition.

D.6.7 Reporting Requirements [326 IAC 2-1.1-11]

The Permittee shall submit a quarterly summary of the amount of slag processed using the reporting form (Slag Production Report) located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the quarter being reported. This report 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(35).

## SECTION D.7 FACILITY OPERATION CONDITIONS

**Facility Description** [326 IAC 2-7-5(14)]

Transporting on paved roadways and parking lots, unpaved roadways, and unpaved areas around slag storage piles and steel scrap piles.

(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 Fugitive Dust Emission Limitations - Best Available Control Technology [326 IAC 2-2]

Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the fugitive dust emissions from transporting on paved roadways and parking lots, unpaved roadways, and unpaved areas around slag storage piles and steel scrap piles shall be controlled in accordance with the Fugitive Dust Control Plan (FDCP) (Section E.1) such that the following limitations are not exceeded:

Instantaneous opacity from paved roadways and parking lots 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:

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

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

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

The three (3) readings shall be taken at the point of maximum opacity.

The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, 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 paved roadway.

D.7.2 Visible Emission Limitations - Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD Permits CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the visible emissions from unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall not exceed an average instantaneous opacity of 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:

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

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

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

The three (3) readings shall be taken at the point of maximum opacity.

The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, 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 unpaved roadway.

## SECTION D.8 FACILITY OPERATION CONDITIONS

**Facility Description** [326 IAC 2-7-5(14)]

(l) One (1) cooling tower (ID#13), permitted for construction in 2001, with a nominal water flow of 15,000 gallons per minute.

(m) Existing seven (7) cooling towers, permitted in 2012:

(1) Two (2) contact cooling tower for the rolling mill (ID#15a and ID#15b), one (1) with a nominal flow rate of 4,000 gallons per minute and one (1) with a nominal flow rate of 8,000 gallons per minute.

(2) One (1) non-contact cooling tower for the rolling mill (ID#15c), with a nominal flow rate of 81,250 gallons per minute.

(3) One (1) contact cooling tower for #1 cast (ID#15d), with a nominal flow rate of 5,000 gallons per minute.

(4) One (1) non-contact cooling tower for the rolling mill/caster (ID#15e), with a nominal flow rate of 18,000 gallons per minute.

(5) One (1) contact cooling tower for the caster sprays (ID#15f), with a nominal flow rate of 3,500 gallons per minute.

(6) One (1) contact cooling tower for the LVD Boiler (ID#15g), with a nominal flow rate of 2,500 gallons per minute.

(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 Particulate Matter ($PM/PM_{10}$) - Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD Permits CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements) the filterable $PM/PM_{10}$ emissions from the cooling tower (ID#13) shall not exceed 0.008 pound per hour.

D.8.2 Particulate Emissions (PM and $PM_{10}/PM_{2.5}$) - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the Permittee shall ensure that the cooling towers are equipped with high efficiency drift eliminators such that the guaranteed design total drift rates do not exceed the following limits:

| Cooling Tower ID | BACT PM and PM10 Limits (Drift Rate Limit (%)) | BACT Control |
|---|---|---|
| Rolling Mill (ID#15a) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling Mill (ID#15c) (non-contact) | PM/PM10 = 0.001 | Drift Eliminator |
| #1 Cast (ID#15d) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling mill/Caster (ID#15e) (non-contact) | PM/PM10 = 0.003 | Drift Eliminator |
| Caster Sprays (ID#15f) (contact) | PM/PM10 = 0.001 | Drift Eliminator |

| Cooling Tower ID | BACT PM and PM10 Limits (Drift Rate Limit (%)) | BACT Control |
|---|---|---|
| Rolling Mill (ID#15b) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| LVD Boiler (ID#15g) (contact) | PM/PM10 = 0.005 | Drift Eliminator |

To demonstrate compliance with this requirement, the Permittee shall submit to IDEM, OAQ the manufacturer's design specifications of the cooling towers equipped with high efficiency drift eliminators not later than 180 days after issuance of this permit SSM/PSD 183-27145-00030.

(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the Permittee shall not use chromium based water treatment chemicals in the cooling towers (ID#15a through ID#15g).

## SECTION E.1 FUGITIVE DUST CONTROL PLAN (FDCP)

### E.1.1 Implementation and Contact

(a) The following fugitive dust control plan (FDCP), when implemented, is designed to reduce uncontrolled fugitive dust, based on a $PM_{10}$ mass emission basis, from:

(1) paved roadways and parking lots.

(2) unpaved areas within the slag processing area, and

(3) the slag processing operations,

such that the visible emissions limitations specified in the permit are met.

(b) This FDCP shall be implemented on a year-round basis until such time as another plan is approved or ordered by the Indiana Department of Environmental Management (IDEM).

(c) If there is a change in the name, title, and telephone number of the person who is responsible for implementing the fugitive dust control plan (FDCP), the information will be supplied to the Office of Air Quality (OAQ) Compliance Section within ninety (90) of such change.

### E.1.2 Paved Roadways and Parking Lots

The following dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

(a) Paved roads and parking lots shall be controlled by the use of a vehicular vacuum sweeper, wet sweeping, or water flushing and shall be performed every 14 days.

(b) Since an Industrial Augmentation factor of I=1 was used for the emissions inventory, vehicles shall be limited to traveling on paved surfaces only and not allowed to enter any paved surface except from public paved roads and tarred and chipped roads.

Vehicles shall also not be allowed to travel on the shoulder of paved road ways.

(c) Upon request of the Indiana Department of Environmental Management (IDEM), Steel Dynamics, Inc. (SDI) shall sample and provide to IDEM surface material silt content and surface dust loadings in accordance with C. Cowherd, Jr., et al., Iron and Steel Plant Open Dust Source Fugitive Emission Evaluation, EPA-600/2-79-103, U.S. Environmental Protection Agency, Cincinnati, OH, May 1979.

IDEM will have the right to specify road segments to be sampled.

(d) Cleaning of paved road segments and parking lots may be delayed by one day when:

(1) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled cleaning.

(2) The road segment is closed or abandoned. Abandoned roads will be barricaded to prevent vehicle access.

(3) It is raining on the day of the scheduled cleaning.

(4) Ambient air temperature is below 32 $^{o}$F.

### E.1.3 Unpaved Areas within the Slag Processing Area and Scrap Yard

The following dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

(a) Unpaved areas traveled around slag storage piles and steel scrap piles shall be treated with an IDEM-approved dust suppressant in order to meet compliance with the associated visible emissions limitations.

(b) Fugitive dust emissions shall be reduced.

(c) Treating of unpaved areas may be delayed by one day when:

(1) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled treatment.

(2) Unpaved areas are saturated with water such that chemical dust suppressants cannot be accepted by the surface.

(3) Unpaved areas are frozen or covered by ice, snow, or standing water.

(4) The area is closed or abandoned.

(5) It is raining on the day of the scheduled treatment.

(6) The ambient air temperature is below $32^0$F.

### E.1.4 Wind Erosion from Open Slag Piles

Open slag piles consist of slag in various stages of processing.

To maintain product quality and chemical stability, watering the stockpiles shall be the primary means of dust control.

Water must be limited so as to keep the moisture content of the product within standards.

Slag piles shall be sprayed with water, on an “as-needed” basis to control wind erosion and not exceed the visible emission limitations in the permit. Water added to the product during processing provides added control. Visible emissions shall be determined in accordance with the procedures specified in the permit.

### E.1.5 Slag Handling and Processing

(a) During transferring of the skull slag to the slag pot, the drop height shall be minimized and the transferring shall be performed such that the visible emission limitations in the permit are not exceeded.

(b) Pouring of liquid slag from the EAFs or LMS to the slag pot shall be conducted inside the melt shop and emissions shall be captured by the melt shop roof canopy and ducted to the EAF baghouse such that the visible emission limitations in the permit are not exceeded.

(c) Emissions during the dumping of liquid slag from the slag pot to the slag pit shall be controlled by the use of skull slag and by applying water, as needed, such that the visible emission limitations in the permit are not exceeded.

(d) Water suppression to control emissions during the transferring of the skull slag from the slag pot to the skull pit is waived for safety reasons.

(e) Emissions during the digging of the slag and skull pit by front-end loaders shall be controlled by applying water, as needed, such that the visible emission limitations in the permit are not exceeded.

(f) Emissions from slag processing operations shall be controlled, as needed, through the application of water.

Spray bars shall be used as needed to apply water on crushing and screening operations, and conveyor transfer points.

(g) The stacker to pile drop height shall be minimized where practicable.

E.1.6 Vehicle Speed Control

(a) Speed limits on paved roads shall be posted to be 20 mph.

(b) Speed limits on unpaved areas shall be 10 mph.

(e) Upon violation, employees shall receive a written warning, followed by a one day suspension if a second violation occurs.

(f) Visitors to the plant shall be denied access if repeated violations occur.

E.1.7 Material Spill Control

Incidents of material spillage on plant property that may create fugitive dust shall be investigated and properly cleaned up.

E.1.8 Monitoring and Recording Keeping

Records of the dates when vacuum sweeping, wet sweeping, or water flushing and spill control activities were performed, and dust suppressant application and amount of the suppressant applied shall be kept.

The records shall also contain the amount of water sprayed:

(a) on the aggregate piles,

(b) at the slag quench station, and

(c) at the slag processing spray bars.

E.2.9 Compliance Schedule

This FDCP shall be fully implemented when construction and modification are completed.

Until that time, the plan shall be implemented within portions of the site where construction is considered complete.

Where construction is incomplete, appropriate control measures shall be implemented, but cannot be comprehensively addressed.

# 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
## CERTIFICATION

| | |
|---|---|
| Source Name: | Slang Handling – On-site Contractor for Steel Dynamics, Inc. (SDI) - Structural and Rail Division |
| Source Address: | 2601 County Road 700 East, Columbia City, Indiana 46725 |
| Part 70 Operating Permit No.: | T183-17160-00030 |

| |
|---|
| **This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.**<br><br>Please check what document is being certified: |
| □ Test Result (specify) |
| □ Report (specify) |
| □ Notification (specify) |
| □ Affidavit (specify) |
| □ Other (specify) |

| |
|---|
| I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.<br><br>Signature: |
| Printed Name: |
| Title/Position: |
| Date: |
| Telephone: |

| | |
|---|---|
| **F**orm Completed By: | |
| Title/Position: | |
| Date: | Telephone: |

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

## Part 70 Operating Permit
## EMERGENCY OCCURRENCE REPORT

Source Name: Steel Dynamics, Inc. (SDI) - Structural and Rail Division
Source Address: 2601 County Road 700 East, Columbia City, Indiana 46725
Part 70 Operating Permit No. T183-17160-00030

**This Report 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) daytime 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.

Address: 100 North Senate Avenue, Indianapolis, Indiana 46204-2251
This Emergency Occurrence Report consists of 2 pages.

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: |
| Date/Time Emergency started |
| Date/Time Emergency was corrected: |

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

**Page 2 of 2**

| |
|---|
| 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: |
| Telephone: |

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

## Part 70 Quarterly Report

| | |
|---|---|
| Source Name: | Steel Dynamics, Inc. (SDI) - Structural and Rail Division |
| Source Address: | 2601 County Road 700 East, Columbia City, Indiana 46725 |
| Part 70 Operating Permit No. | T183-17160-00030 |
| Facility: | EAF |
| Parameter: | Steel Production per year |
| Limit: | 2,628,000 tons per 12-consective month period with compliance demonstrated at the end of each month |

QUARTER: _____YEAR:_____

| Month | Steel Production | | |
|---|---|---|---|
| | Column 1 | Column 2 | Column 1 + Column 2 |
| | This month (tons/month) | Previous 11 Months | 12-Month Total (tons/year) |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

| |
|---|
| Form Completed By: |
| Title/Position: |
| Date: |
| Telephone: |

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

## Part 70 Quarterly Report

| | |
|---|---|
| Source Name: | Steel Dynamics, Inc. (SDI) - Structural and Rail Division |
| Source Address: | 2601 County Road 700 East, Columbia City, Indiana 46725 |
| Facility: | LVD Boiler (ID# 41) (41.08 MMBtu/hr) |
| Parameters: | natural gas and propane usages |
| Limits: | 209 MMCF of natural gas per twelve consecutive month period and 222 kilogallons of propane per twelve consecutive month period |

QUARTER: _____YEAR: _____

| Month | Fuel | Natural Gas and Propane Used | | |
|---|---|---|---|---|
| | | Column 1 | Column 2 | Column 1 + Column 2 |
| | | This Month | Previous 11 Months | 12-Month Total |
| Month 1 | Natural gas (MMCF) | | | |
| | Propane (kgal) | | | |
| Month 2 | Natural gas (MMCF) | | | |
| | Propane (kgal) | | | |
| Month 3 | Natural gas (MMCF) | | | |
| | Propane (kgal) | | | |

| |
|---|
| Form Completed By: |
| Title/Position: |
| Date: |
| Telephone: |

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

**Part 70 Quarterly Report**

| | |
|---|---|
| Source Name: | Slag Handling – On-site Contractor for Steel Dynamics, Inc. (SDI) - Structural and Rail Division |
| Source Address: | 2601 County Road 700 East, Columbia City, Indiana 46725 |
| Part 70 Operating Permit No. | T183-17160-00030 |
| Facility: | Slag Handling |
| Parameter: | slag per year |
| Limit: | 438,000 per 12 consecutive month period with compliance demonstrated at the end of each month. |

QUARTER: _____YEAR: _____

| Month | Slag Production | | |
|---|---|---|---|
| | Column 1 | Column 2 | Column 1 + Column 2 |
| | This month (tons/month) | Previous 11 Months | 12- Month Total (tons/year) |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

| |
|---|
| Form Completed By: |
| Title/Position: |
| Date: |
| Telephone: |

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

**Part 70 Quarterly Report**

Source Name: Steel Dynamics, Inc. - Structural and Rail Division

Source Address: 2601 County Road 700 East, Columbia City, IN 46725
Part 70 Permit No.: T183-17160-00030
Facility: Tundish preheaters ID# 3p, 3n, 3h and 3i
Parameter: Fuel consumption
Limit: The natural gas combusted by tundish preheaters ID# 3p, 3n, 3h and 3i shall be less than 241 million standard cubic feet (MMSCF) per twelve consecutive month period with compliance determined at the end of each month.

QUARTER: YEAR:

| Month | Natural gas consumption (MMSCF) | Natural gas consumption (MMSCF) | Natural gas consumption (MMSCF) |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: Steel Dynamics, Inc. - Structural and Rail Division
Source Address: 26011 County Road 700 East, Columbia City, Indiana 46725
Part 70 Permit No.: T183-17160-00030
Facility: Reheat Furnace ID#2
Parameter: Natural Gas and Propone Usage
Limit: 189.8 million cubic feet of natural gas to be combusted in the Reheat Furnace (RF) (ID# 2) on a monthly basis averaged over a twelve (12) month period, with compliance determined at the end of each month

**QUARTER:_____YEAR:_____**

| Month | Natural Gas Fuel Usage<br>This Month | Average Natural Gas Fuel Usage Over<br>12 Months |
|---|---|---|
| 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: Steel Dynamics, Inc. (SDI) - Structural and Rail Division
Source Address: 2601 County Road 700 East, Columbia City, Indiana 46725
Part 70 Permit No.: T183-17160-00030

**Months: _____ to _____ Year: _____**



This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ 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: _____

**ATTACHMENT A**

**Title 40: Protection of Environment**

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

**Subpart AAa—Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983**

**Source:** 49 FR 43845, Oct. 31, 1984, unless otherwise noted.

**§ 60.270a Applicability and designation of affected facility.**

(a) The provisions of this subpart are applicable to the following affected facilities in steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces, argon-oxygen decarburization vessels, and dust-handling systems.

(b) The provisions of this subpart apply to each affected facility identified in paragraph (a) of this section that commences construction, modification, or reconstruction after August 17, 1983.

**§ 60.271a Definitions.**

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

*Argon-oxygen decarburization vessel* (AOD vessel) means any closed-bottom, refractory-lined converter vessel with submerged tuyeres through which gaseous mixtures containing argon and oxygen or nitrogen may be blown into molten steel for further refining.

*Bag leak detection system* means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other conditions that result in increases in particulate loadings. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

*Capture system* means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture or transport particulate matter generated by an electric arc furnace or AOD vessel to the air pollution control device.

*Charge* means the addition of iron and steel scrap or other materials into the top of an electric arc furnace or the addition of molten steel or other materials into the top of an AOD vessel.

*Control device* means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by an electric arc furnace or AOD vessel.

*Direct-shell evacuation control system (DEC system)* means a system that maintains a negative pressure within the electric arc furnace above the slag or metal and ducts emissions to the control device.

*Dust-handling system* means equipment used to handle particulate matter collected by the control device for an electric arc furnace or AOD vessel subject to this subpart. For the purposes of this subpart, the dust-handling system shall consist of the control device dust hoppers, the dust-conveying equipment, any central dust storage equipment, the dust-treating equipment (e.g., pug mill, pelletizer), dust transfer equipment (from storage to truck), and any secondary control devices used with the dust transfer equipment.

*Electric arc furnace (EAF)* means a furnace that produces molten steel and heats the charge materials with electric arcs from carbon electrodes. For the purposes of this subpart, an EAF shall consist of the furnace shell and roof and the transformer. Furnaces that continuously feed direct-reduced iron ore pellets as the primary source of iron are not affected facilities within the scope of this definition.

*Heat cycle* means the period beginning when scrap is charged to an empty EAF and ending when the EAF tap is completed or beginning when molten steel is charged to an empty AOD vessel and ending when the AOD vessel tap is completed.

*Meltdown and refining period* means the time period commencing at the termination of the initial charging period and ending at the initiation of the tapping period, excluding any intermediate charging periods and times when power to the EAF is off.

*Melting* means that phase of steel production cycle during which the iron and steel scrap is heated to the molten state.

*Negative-pressure fabric filter* means a fabric filter with the fans on the downstream side of the filter bags.
*Positive-pressure fabric filter* means a fabric filter with the fans on the upstream side of the filter bags.
*Refining* means that phase of the steel production cycle during which undesirable elements are removed from the molten steel and alloys are added to reach the final metal chemistry.
*Shop* means the building which houses one or more EAF's or AOD vessels.
*Shop opacity* means the arithmetic average of 24 observations of the opacity of emissions from the shop taken in accordance with Method 9 of appendix A of this part.
*Tap* means the pouring of molten steel from an EAF or AOD vessel.
*Tapping period* means the time period commencing at the moment an EAF begins to pour molten steel and ending either three minutes after steel ceases to flow from an EAF, or six minutes after steel begins to flow, whichever is longer.
[49 FR 43845, Oct. 31, 1984, as amended at 64 FR 10110, Mar. 2, 1999; 70 FR 8532, Feb. 22, 2005]

**§ 60.272a Standard for particulate matter.**
(a) On and after the date of which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an EAF or an AOD vessel any gases which:
(1) Exit from a control device and contain particulate matter in excess of 12 mg/dscm (0.0052 gr/dscf);
(2) Exit from a control device and exhibit 3 percent opacity or greater; and
(3) Exit from a shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.
(b) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the dust-handling system any gases that exhibit 10 percent opacity or greater.

**§ 60.273a Emission monitoring.**
(a) Except as provided under paragraphs (b) and (c) of this section, a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device(s) shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this subpart.
(b) No continuous monitoring system shall be required on any control device serving the dust-handling system.
(c) A continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device(s) is not required on any modular, multi-stack, negative-pressure or positive-pressure fabric filter if observations of the opacity of the visible emissions from the control device are performed by a certified visible emission observer; or on any single-stack fabric filter if visible emissions from the control device are performed by a certified visible emission observer and the owner installs and continuously operates a bag leak detection system according to paragraph (e) of this section. Visible emission observations shall be conducted at least once per day for at least three 6-minute periods when the furnace is operating in the melting and refining period. All visible emissions observations shall be conducted in accordance with Method 9. If visible emissions occur from more than one point, the opacity shall be recorded for any points where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emission, only one set of three 6-minute observations will be required. In that case, the Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in §60.272a(a).
(d) A furnace static pressure monitoring device is not required on any EAF equipped with a DEC system if observations of shop opacity are performed by a certified visible emission observer as follows: Shop opacity observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period. Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Shop opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity

observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.
(e) A bag leak detection system must be installed and continuously operated on all single-stack fabric filters if the owner or operator elects not to install and operate a continuous opacity monitoring system as provided for under paragraph (c) of this section. In addition, the owner or operator shall meet the visible emissions observation requirements in paragraph (c) of this section. The bag leak detection system must meet the specifications and requirements of paragraphs (e)(1) through (8) of this section.
(1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.
(2) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using electronic or other means ( *e.g.,* using a strip chart recorder or a data logger.)
(3) The bag leak detection system must be equipped with an alarm system that will sound when an increase in relative particulate loading is detected over the alarm set point established according to paragraph (e)(4) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.
(4) For each bag leak detection system required by paragraph (e) of this section, the owner or operator shall develop and submit to the Administrator or delegated authority, for approval, a site-specific monitoring plan that addresses the items identified in paragraphs (i) through (v) of this paragraph (e)(4). For each bag leak detection system that operates based on the triboelectric effect, the monitoring plan shall be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document “Fabric Filter Bag Leak Detection Guidance” (EPA–454/R–98–015). The owner or operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan shall describe the following:
(i) Installation of the bag leak detection system;
(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established;
(iii) Operation of the bag leak detection system including quality assurance procedures;
(iv) How the bag leak detection system will be maintained including a routine maintenance schedule and spare parts inventory list; and
(v) How the bag leak detection system output shall be recorded and stored.
(5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time (if applicable).
(6) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided for in paragraphs (e)(6)(i) and (ii) of this section.
(i) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects including temperature and humidity according to the procedures identified in the site-specific monitoring plan required under paragraphs (e)(4) of this section.
(ii) If opacities greater than zero percent are observed over four consecutive 15-second observations during the daily opacity observations required under paragraph (c) of this section and the alarm on the bag leak detection system does not sound, the owner or operator shall lower the alarm set point on the bag leak detection system to a point where the alarm would have sounded during the period when the opacity observations were made.
(7) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detection sensor must be installed downstream of the baghouse and upstream of any wet scrubber.
(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
(f) For each bag leak detection system installed according to paragraph (e) of this section, the owner or operator shall initiate procedures to determine the cause of all alarms within 1 hour of an alarm. Except as provided for under paragraph (g) of this section, the cause of the alarm must be alleviated within 3 hours of the time the alarm occurred by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to, the following:

(1) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate emissions;
(2) Sealing off defective bags or filter media;
(3) Replacing defective bags or filter media or otherwise repairing the control device;
(4) Sealing off a defective baghouse compartment;
(5) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; and
(6) Shutting down the process producing the particulate emissions.
(g) In approving the site-specific monitoring plan required in paragraph (e)(4) of this section, the Administrator or delegated authority may allow owners or operators more than 3 hours to alleviate specific conditions that cause an alarm if the owner or operator identifies the condition that could lead to an alarm in the monitoring plan, adequately explains why it is not feasible to alleviate the condition within 3 hours of the time the alarm occurred, and demonstrates that the requested additional time will ensure alleviation of the condition as expeditiously as practicable.
[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6672, Feb. 14, 1989; 64 FR 10111, Mar. 2, 1999; 70 FR 8532, Feb. 22, 2005]

**§ 60.274a Monitoring of operations.**
(a) The owner or operator subject to the provisions of this subpart shall maintain records of the following information:
(1) All data obtained under paragraph (b) of this section; and
(2) All monthly operational status inspections performed under paragraph (c) of this section.
(b) Except as provided under paragraph (e) of this section, the owner or operator subject to the provisions of this subpart shall check and record on a once-per-shift basis the furnace static pressure (if DEC system is in use, and a furnace static pressure gauge is installed according to paragraph (f) of this section) and either: check and record the control system fan motor amperes and damper position on a once-per-shift basis; install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check and record damper positions on a once-per-shift basis. The monitoring device(s) may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of ±10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The Administrator may require the owner or operator to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of appendix A of this part.
(c) When the owner or operator of an affected facility is required to demonstrate compliance with the standards under §60.272a(a)(3) and at any other time that the Administrator may require (under section 114 of the CAA, as amended) either: the control system fan motor amperes and all damper positions, the volumetric flow rate through each separately ducted hood, or the volumetric flow rate at the control device inlet and all damper positions shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b) of this section. The owner or operator may petition the Administrator for reestablishment of these parameters whenever the owner or operator can demonstrate to the Administrator's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. Operation at other than baseline values may be subject to the requirements of §60.276a(c).
(d) Except as provided under paragraph (e) of this section, the owner or operator shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system ( *i.e.* , pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.
(e) The owner or operator may petition the Administrator to approve any alternative to either the monitoring requirements specified in paragraph (b) of this section or the monthly operational status

inspections specified in paragraph (d) of this section if the alternative will provide a continuous record of operation of each emission capture system.
(f) Except as provided for under §60.273a(d), if emissions during any phase of the heat time are controlled by the use of a DEC system, the owner or operator shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The pressure shall be recorded as 15-minute integrated averages. The monitoring device may be installed in any appropriate location in the EAF or DEC duct prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of ±5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions.
(g) Except as provided for under §60.273a(d), when the owner or operator of an EAF controlled by a DEC is required to demonstrate compliance with the standard under §60.272a(a)(3), and at any other time the Administrator may require (under section 114 of the Clean Air Act, as amended), the pressure in the free space inside the furnace shall be determined during the meltdown and refining period(s) using the monitoring device required under paragraph (f) of this section. The owner or operator may petition the Administrator for reestablishment of the pressure whenever the owner or operator can demonstrate to the Administrator's satisfaction that the EAF operating conditions upon which the pressures were previously established are no longer applicable. The pressure determined during the most recent demonstration of compliance shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility.
(h) During any performance test required under §60.8, and for any report thereof required by §60.276a(f) of this subpart, or to determine compliance with §60.272a(a)(3) of this subpart, the owner or operator shall monitor the following information for all heats covered by the test:
(1) Charge weights and materials, and tap weights and materials;
(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside an EAF when direct-shell evacuation control systems are used;
(3) Control device operation log; and
(4) Continuous opacity monitor or Method 9 data.
[49 FR 43845, Oct. 31, 1984, as amended at 64 FR 10111, Mar. 2, 1999; 65 FR 61758, Oct. 17, 2000; 70 FR 8533, Feb. 22, 2005]

**§ 60.275a Test methods and procedures.**
(a) During performance tests required in §60.8, the owner or operator shall not add gaseous diluents to the effluent gas stream after the fabric in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.
(b) When emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner or operator shall use either or both of the following procedures during a performance test (see also §60.276a(e)):
(1) Determine compliance using the combined emissions.
(2) Use a method that is acceptable to the Administrator and that compensates for the emissions from the facilities not subject to the provisions of this subpart.
(c) When emission from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, the owner or operator shall demonstrate compliance with §60.272(a)(3) based on emissions from only the affected facility(ies).
(d) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).
(e) The owner or operator shall determine compliance with the particulate matter standards in §60.272a as follows:
(1) Method 5 shall be used for negative-pressure fabric filters and other types of control devices and Method 5D shall be used for positive-pressure fabric filters to determine the particulate matter concentration and volumetric flow rate of the effluent gas. The sampling time and sample volume for each

run shall be at least 4 hours and 4.50 dscm (160 dscf) and, when a single EAF or AOD vessel is sampled, the sampling time shall include an integral number of heats.
(2) When more than one control device serves the EAF(s) being tested, the concentration of particulate matter shall be determined using the following equation:

$$c_{st} = \left[ \sum_{i=1}^{n} \left( c_{si} \, Q_{sdi} \right) \right] \sum_{i=1}^{n} Q_{sdi}$$

where:
$c_{st}$=average concentration of particulate matter, mg/dscm (gr/dscf).
$c_{si}$=concentration of particulate matter from control device “i”, mg/dscm (gr/dscf).
n=total number of control devices tested.
$Q_{sdi}$=volumetric flow rate of stack gas from control device “i”, dscm/hr (dscf/hr).
(3) Method 9 and the procedures of §60.11 shall be used to determine opacity.
(4) To demonstrate compliance with §60.272a(a) (1), (2), and (3), the Method 9 test runs shall be conducted concurrently with the particulate matter test runs, unless inclement weather interferes.
(f) To comply with §60.274a (c), (f), (g), and (h), the owner or operator shall obtain the information required in these paragraphs during the particulate matter runs.
(g) Any control device subject to the provisions of the subpart shall be designed and constructed to allow measurement of emissions using applicable test methods and procedures.
(h) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner or operator may use any of the following procedures during a performance test:
(1) Base compliance on control of the combined emissions;
(2) Utilize a method acceptable to the Administrator that compensates for the emissions from the facilities not subject to the provisions of this subpart, or;
(3) Any combination of the criteria of paragraphs (h)(1) and (h)(2) of this section.
(i) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, determinations of compliance with §60.272a(a)(3) will only be based upon emissions originating from the affected facility(ies).
(j) Unless the presence of inclement weather makes concurrent testing infeasible, the owner or operator shall conduct concurrently the performance tests required under §60.8 to demonstrate compliance with §60.272a(a) (1), (2), and (3) of this subpart.
[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989; 65 FR 61758, Oct. 17, 2000]

**§ 60.276a Recordkeeping and reporting requirements.**
(a) Records of the measurements required in §60.274a must be retained for at least 2 years following the date of the measurement.
(b) Each owner or operator shall submit a written report of exceedances of the control device opacity to the Administrator semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.
(c) Operation at a furnace static pressure that exceeds the value established under §60.274a(g) and either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under §60.274a(c) or operation at flow rates lower than those established under §60.274a(c) may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Administrator semiannually.
(d) The requirements of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.
(e) When the owner or operator of an EAF or AOD is required to demonstrate compliance with the standard under §60.275 (b)(2) or a combination of (b)(1) and (b)(2) the owner or operator shall obtain approval from the Administrator of the procedure(s) that will be used to determine compliance. Notification of the procedure(s) to be used must be postmarked at least 30 days prior to the performance test.

(f) For the purpose of this subpart, the owner or operator shall conduct the demonstration of compliance with §60.272a(a) of this subpart and furnish the Administrator a written report of the results of the test. This report shall include the following information:
(1) Facility name and address;
(2) Plant representative;
(3) Make and model of process, control device, and continuous monitoring equipment;
(4) Flow diagram of process and emission capture equipment including other equipment or process(es) ducted to the same control device;
(5) Rated (design) capacity of process equipment;
(6) Those data required under §60.274a(h) of this subpart;
(i) List of charge and tap weights and materials;
(ii) Heat times and process log;
(iii) Control device operation log; and
(iv) Continuous opacity monitor or Method 9 data.
(7) Test dates and test times;
(8) Test company;
(9) Test company representative;
(10) Test observers from outside agency;
(11) Description of test methodology used, including any deviation from standard reference methods;
(12) Schematic of sampling location;
(13) Number of sampling points;
(14) Description of sampling equipment;
(15) Listing of sampling equipment calibrations and procedures;
(16) Field and laboratory data sheets;
(17) Description of sample recovery procedures;
(18) Sampling equipment leak check results;
(19) Description of quality assurance procedures;
(20) Description of analytical procedures;
(21) Notation of sample blank corrections; and
(22) Sample emission calculations.
(g) The owner or operator shall maintain records of all shop opacity observations made in accordance with §60.273a(d). All shop opacity observations in excess of the emission limit specified in §60.272a(a)(3) of this subpart shall indicate a period of excess emission, and shall be reported to the administrator semi-annually, according to §60.7(c).
(h) The owner or operator shall maintain the following records for each bag leak detection system required under §60.273a(e):
(1) Records of the bag leak detection system output;
(2) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
(3) An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.
[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6673, Feb. 14, 1989; 64 FR 10111, Mar. 2, 1999; 65 FR 61758, Oct. 17, 2000; 70 FR 8533, Feb. 22, 2005]

**Attachment B**

**Title 40: Protection of Environment**
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

**Subpart YYYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities**

**Source:** 72 FR 74111, Dec. 28, 2007, unless otherwise noted.

**Applicability and Compliance Dates**

**§ 63.10680 Am I subject to this subpart?**

(a) You are subject to this subpart if you own or operate an electric arc furnace (EAF) steelmaking facility that is an area source of hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each EAF steelmaking facility.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source on or before September 20, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source after September 20, 2007.

(c) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act (CAA).

(d) If you own or operate an area source subject to this subpart, you must have or obtain a permit under 40 CFR part 70 or 40 CFR part 71.

**§ 63.10681 What are my compliance dates?**

(a) Except as provided in paragraph (b) of this section, if you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart by no later than June 30, 2008.

(b) If you own or operate an existing affected source, you must achieve compliance with opacity limit in § 63.10686(b)(2) or (c)(2) by no later than December 28, 2010 if you demonstrate to the satisfaction of the permitting authority that additional time is needed to install or modify emission control equipment.

(c) If you start up a new affected source on or before December 28, 2007, you must achieve compliance with the applicable provisions of this subpart by no later than December 28, 2007.

(d) If you start up a new affected source after December 28, 2007, you must achieve compliance with the applicable provisions of this subpart upon startup of your affected source.

**Standards and Compliance Requirements**

**§ 63.10685 What are the requirements for the control of contaminants from scrap?**

(a) *Chlorinated plastics, lead, and free organic liquids* . For metallic scrap utilized in the EAF at your facility, you must comply with the requirements in either paragraph (a)(1) or (2) of this section. You may have certain scrap at your facility subject to paragraph (a)(1) of this section and other scrap subject to paragraph (a)(2) of this section provided the scrap remains segregated until charge make-up.

(1) *Pollution prevention plan* . For the production of steel other than leaded steel, you must prepare and implement a pollution prevention plan for metallic scrap selection and inspection to minimize the amount of chlorinated plastics, lead, and free organic liquids that is charged to the furnace. For the production of leaded steel, you must prepare and implement a pollution prevention plan for scrap selection and inspection to minimize the amount of chlorinated plastics and free organic liquids in the scrap that is charged to the furnace. You must submit the scrap pollution prevention plan to the permitting authority for approval. You must operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. You must keep a copy of the plan onsite, and you must provide training on the plan's requirements to all plant personnel with materials acquisition or inspection duties. Each plan must include the information in paragraphs (a)(1)(i) through (iii) of this section:

(i) Specifications that scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace.

(ii) A requirement in your scrap specifications for removal (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel.

(iii) Procedures for determining if the requirements and specifications in paragraph (a)(1) of this section are met (such as visual inspection or periodic audits of scrap providers) and procedures for taking corrective actions with vendors whose shipments are not within specifications.

(iv) The requirements of paragraph (a)(1) of this section do not apply to the routine recycling of baghouse bags or other internal process or maintenance materials in the furnace. These exempted materials must be identified in the pollution prevention plan.

(2) *Restricted metallic scrap* . For the production of steel other than leaded steel, you must not charge to a furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, lead-containing components, chlorinated plastics, or free organic liquids. For the production of leaded steel, you must not charge to the furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, chlorinated plastics, or free organic liquids. This restriction does not apply to any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed or cleaned to the extent practicable such that the materials do not include lead components, chlorinated plastics, or free organic liquids. This restriction does not apply to motor vehicle scrap that is charged to recover the chromium or nickel content if you meet the requirements in paragraph (b)(3) of this section.

(b) *Mercury requirements* . For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment. For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches* . You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the permitting authority for approval. You must operate according to this plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permitting authority may change the approval status of the plan upon 90-days written notice based upon the semiannual compliance report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from that scrap as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the permitting authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers that motor vehicle scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section).

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to your facility during the previous year and the basis for the estimate. The permitting authority may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap provider to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the permitting authority will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the permitting authority that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregated form and does not have to be submitted for each scrap provider, contract, or shipment. The permitting authority may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Vehicle Mercury Switch Recovery Program and the Vehicle Switch Recovery Program mandated by Maine State law are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from the motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the permitting authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or provide other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

(c) *Recordkeeping and reporting requirements.* In addition to the records required by § 63.10, you must keep records to demonstrate compliance with the requirements for your pollution prevention plan in paragraph (a)(1) of this section and/or for the use of only restricted scrap in paragraph (a)(2) of this section and for mercury in paragraphs (b)(1) through (3) of this section as applicable. You must keep records documenting compliance with paragraph (b)(4) of this section for scrap that does not contain motor vehicle scrap.

(1) If you are subject to the requirements for a site-specific plan for mercury under paragraph (b)(1) of this section, you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted inspections or taken other means of corroboration as required under paragraph (b)(1)(ii)(C) of this section. You may include this information in the semiannual compliance reports required under paragraph (c)(3) of this section.

(2) If you are subject to the option for approved mercury programs under paragraph (b)(2) of this section, you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(3) You must submit semiannual compliance reports to the Administrator for the control of contaminants from scrap according to the requirements in § 63.10(e). The report must clearly identify any deviation from the requirements in paragraphs (a) and (b) of this section and the corrective action taken. You must identify which compliance option in paragraph (b) of this section applies to each scrap provider, contract, or shipment.

**§ 63.10686 What are the requirements for electric arc furnaces and argon-oxygen decarburization vessels?**

(a) You must install, operate, and maintain a capture system that collects the emissions from each EAF (including charging, melting, and tapping operations) and argon-oxygen decarburization (AOD) vessel and conveys the collected emissions to a control device for the removal of particulate matter (PM).

(b) Except as provided in paragraph (c) of this section, you must not discharge or cause the discharge into the atmosphere from an EAF or AOD vessel any gases which:

(1) Exit from a control device and contain in excess of 0.0052 grains of PM per dry standard cubic foot (gr/dscf); and

(2) Exit from a melt shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.

(c) If you own or operate a new or existing affected source that has a production capacity of less than 150,000 tons per year (tpy) of stainless or specialty steel (as determined by the maximum production if specified in the source's operating permit or EAF capacity and maximum number of operating hours per year), you must not discharge or cause the discharge into the atmosphere from an EAF or AOD vessel any gases which:

(1) Exit from a control device and contain particulate matter (PM) in excess of 0.8 pounds per ton (lb/ton) of steel. Alternatively, the owner or operator may elect to comply with a PM limit of 0.0052 grains per dry standard cubic foot (gr/dscf); and

(2) Exit from a melt shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.

(d) Except as provided in paragraph (d)(6) of this section, you must conduct performance tests to demonstrate initial compliance with the applicable emissions limit for each emissions source subject to an emissions limit in paragraph (b) or (c) of this section.

(1) You must conduct each PM performance test for an EAF or AOD vessel according to the procedures in § 63.7 and 40 CFR 60.275a using the following test methods in 40 CFR part 60, appendices A-1, A-2, A-3, and A-4:

(i) Method 1 or 1A of appendix A-1 of 40 CFR part 60 to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A-1 of 40 CFR part 60 to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B of appendix A-3 of 40 CFR part 60 to determine the dry molecular weight of the stack gas. You may use ANSI/ASME PTC 19.10-1981, “Flue and Exhaust Gas Analyses” (incorporated by reference—see § 63.14) as an alternative to EPA Method 3B.

(iv) Method 4 of appendix A-3 of 40 CFR part 60 to determine the moisture content of the stack gas.

(v) Method 5 or 5D of appendix A-3 of 40 CFR part 60 to determine the PM concentration. Three valid test runs are needed to comprise a PM performance test. For EAF, sample only when metal is being melted and refined. For AOD vessels, sample only when the operation(s) are being conducted.

(2) You must conduct each opacity test for a melt shop according to the procedures in § 63.6(h) and Method 9 of appendix A-4 of 40 CFR part 60. When emissions from any EAF or AOD vessel are combined with emissions from emission sources not subject to this subpart, you must demonstrate compliance with the melt shop opacity limit based on emissions from only the emission sources subject to this subpart.

(3) During any performance test, you must monitor and record the information specified in 40 CFR 60.274a(h) for all heats covered by the test.

(4) You must notify and receive approval from the Administrator for procedures that will be used to determine compliance for an EAF or AOD vessel when emissions are combined with those from facilities not subject to this subpart.

(5) To determine compliance with the PM emissions limit in paragraph (c) of this section for an EAF or AOD vessel in a lb/ton of steel format, compute the process-weighted mass emissions ($E_p$ ) for each test run using Equation 1 of this section:

$$E_p = \frac{C \times Q \times T}{P \times K} \qquad \text{(Eq. 1)}$$

Where:

$E_p$ = Process-weighted mass emissions of PM, lb/ton;

C = Concentration of PM or total metal HAP, gr/dscf;

Q = Volumetric flow rate of stack gas, dscf/hr;

T = Total time during a test run that a sample is withdrawn from the stack during steel production cycle, hr;

P = Total amount of metal produced during the test run, tons; and

K = Conversion factor, 7,000 grains per pound.

(6) If you own or operate an existing affected source that is subject to the emissions limits in paragraph (b) or (c) of this section, you may certify initial compliance with the applicable emission limit for one or more emissions sources based on the results of a previous performance test for that emissions source in lieu of the requirement for an initial performance test provided that the

test(s) were conducted within 5 years of the compliance date using the methods and procedures specified in paragraph (d)(1) or (2) of this section; the test(s) were for the affected facility; and the test(s) were representative of current or anticipated operating processes and conditions. Should the permitting authority deem the prior test data unacceptable to demonstrate compliance with an applicable emissions limit, the owner or operator must conduct an initial performance test within 180 days of the compliance date or within 90 days of receipt of the notification of disapproval of the prior test, whichever is later.

**Other Information and Requirements**

**§ 63.10690 What parts of the General Provisions apply to this subpart?**

(a) You must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as provided in Table 1 of this subpart.

(b) The notification of compliance status required by § 63.9(h) must include each applicable certification of compliance, signed by a responsible official, in paragraphs (b)(1) through (6) of this section.

(1) For the pollution prevention plan requirements in § 63.10685(a)(1): “This facility has submitted a pollution prevention plan for metallic scrap selection and inspection in accordance with § 63.10685(a)(1)”;

(2) For the restrictions on metallic scrap in § 63.10685(a)(2): “This facility complies with the requirements for restricted metallic scrap in accordance with § 63.10685(a)(2)”;

(3) For the mercury requirements in § 63.10685(b):

(i) “This facility has prepared a site-specific plan for mercury switches in accordance with § 63.10685(b)(1)”;

(ii) “This facility participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator in accordance with § 63.10685(b)(2)” and has prepared a plan demonstrating how the facility participates in the EPA-approved program in accordance with § 63.10685(b)(2)(iv);

(iii) “The only materials from motor vehicles in the scrap charged to an electric arc furnace at this facility are materials recovered for their specialty alloy content in accordance with § 63.10685(b)(3) which are not reasonably expected to contain mercury switches”; or

(iv) “This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with § 63.10685(b)(4).”

(4) This certification of compliance for the capture system requirements in § 63.10686(a), signed by a responsible official: “This facility operates a capture system for each electric arc furnace and argon-oxygen decarburization vessel that conveys the collected emissions to a PM control device in accordance with § 63.10686(a)”.

(5) If applicable, this certification of compliance for the performance test requirements in § 63.10686(d)(6): “This facility certifies initial compliance with the applicable emissions limit in

§ 63.10686(a) or (b) based on the results of a previous performance test in accordance with § 63.10686(d)(6)".

(6) This certification of compliance for the monitoring requirements in § 63.10686(e), signed by a responsible official: "This facility has developed and submitted proposed monitoring information in accordance with 40 CFR part 64".

**§ 63.10691 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the EPA or a delegated authority such as a State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that Agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (6) of this section.

(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g).

(2) Approval of an alternative opacity emissions standard under § 63.6(h)(9).

(3) Approval of a major change to test methods under § 63.7(e)(2)(ii) and (f). A "major change to test method" is defined in 40 CFR 63.90.

(4) Approval of major change to monitoring under 40 CFR 63.8(f). A "major change to monitoring" is defined in 40 CFR 63.90.

(5) Approval of a major change to recordkeeping/reporting under 40 CFR 63.10(f). A "major change to recordkeeping/reporting" is defined in 40 CFR 63.90.

(6) Approval of a program for the removal of mercury switches under § 63.10685(b)(2).

**§ 63.10692 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section as follows:

*Argon-oxygen decarburization (AOD) vessel* means any closed-bottom, refractory-lined converter vessel with submerged tuyeres through which gaseous mixtures containing argon and oxygen or nitrogen may be blown into molten steel for further refining.

*Capture system* means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture or transport emissions generated by an electric arc furnace or argon-oxygen decarburization vessel to the air pollution control device.

*Chlorinated plastics* means solid polymeric materials that contain chlorine in the polymer chain, such as polyvinyl chloride (PVC) and PVC copolymers.

*Control device* means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by an electric arc furnace or argon-oxygen decarburization vessel.

*Deviation* means any instance where an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emissions limitation or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emissions limitation in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Electric arc furnace (EAF)* means a furnace that produces molten steel and heats the charge materials with electric arcs from carbon electrodes. An electric arc furnace consists of the furnace shell, roof, and the transformer.

*Electric arc furnace (EAF) steelmaking facility* means a steel plant that produces carbon, alloy, or specialty steels using an EAF. This definition excludes EAF steelmaking facilities at steel foundries and EAF facilities used to produce nonferrous metals.

*Free organic liquids* means material that fails the paint filter test by EPA Method 9095B, (revision 2, dated November 1994) (incorporated by reference—see § 63.14) after accounting for water using a moisture determination test by ASTM Method D2216-05 (incorporated by reference—see § 63.14). If, after conducting a moisture determination test, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains *free organic liquids* .

*Leaded steel* means steel that must meet a minimum specification for lead content (typically 0.25 percent or more) and for which lead is a necessary alloy for that grade of steel.

*Mercury switch* means each mercury-containing capsule or switch assembly that is part of a convenience light switch mechanism installed in a vehicle.

*Motor vehicle* means an automotive vehicle not operated on rails and usually operated with rubber tires for use on highways.

*Motor vehicle scrap* means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. *Motor vehicle scrap* does not include automobile manufacturing bundles, or miscellaneous vehicle parts, such as wheels, bumpers or other components that do not contain mercury switches.

*Nonferrous metals* means any pure metal other than iron or any metal alloy for which an element other than iron is its major constituent by percent in weight.

*Scrap provider* means the person (including a broker) who contracts directly with a steel mill to provide scrap that contains motor vehicle scrap. Scrap processors such as shredder operators or vehicle dismantlers that do not sell scrap directly to a steel mill are not *scrap providers* .

*Specialty steel* means low carbon and high alloy steel other than stainless steel that is processed in an argon-oxygen decarburization vessel.

*Stainless steel* means low carbon steel that contains at least 10.5 percent chromium.

**Table 1 to Subpart YYYYY of Part 63—Applicability of General Provisions to Subpart YYYYY**

**As required in § 63.10691(a), you must comply with the requirements of the NESHAP** General Provisions (40 CFR part 63, subpart A) shown in the following table.

| **Citation** | **Subject** | **Applies to subpart YYYYY?** | **Explanation** |
|---|---|---|---|
| § 63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)-(a)(12), (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e) | Applicability | Yes | |
| § 63.1(a)(5), (a)(7)-(a)(9), (b)(2), (c)(3), (c)(4), (d) | Reserved | No | |
| § 63.2 | Definitions | Yes | |
| § 63.3 | Units and Abbreviations | Yes | |
| § 63.4 | Prohibited Activities and Circumvention | Yes | |
| § 63.5 | Preconstruction Review and Notification Requirements | Yes | |
| § 63.6(a), (b)(1)-(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1), (e)(3)(i), (e)(3)(iii)-(e)(3)(ix), (f), (g), (h)(1), (h)(2), (h)(5)-(h)(9), (i), (j) | Compliance with Standards and Maintenance Requirements | Yes | |
| § 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv) | Reserved | No | |
| § 63.7 | Applicability and Performance Test Dates | Yes | |
| § 63.8(a)(1), (a)(2), (b), (c), (d), (e), (f)(1)-(5), (g) | Monitoring Requirements | Yes | Requirements apply if a COMS or CEMS is used. |
| § 63.8(a)(3) | [Reserved] | No | |
| § 63.8(a)(4) | Additional Monitoring | No | |

| **Citation** | **Subject** | **Applies to subpart YYYYY?** | **Explanation** |
|---|---|---|---|
| | Requirements for Control Devices in § 63.11 | | |
| § 63.8(c)(4) | Continuous Monitoring System Requirements | Yes | Requirements apply if a COMS or CEMS is used. |
| § 63.8(f)(6) | RATA Alternative | Yes | Requirements apply if a CEMS is used. |
| § 63.9(a), (b)(1), (b)(2), (b)(5), (c), (d), (f), (g), (h)(1)-(h)(3), (h)(5), (h)(6), (i), (j) | Notification Requirements | Yes | |
| § 63.9(b)(3), (h)(4) | Reserved | No | |
| § 63.9(b)(4) | | No | |
| § 63.10(a), (b)(1), (b)(2)(i)-(v), (b)(2)(xiv), (b)(3), (c)(1), (c)(5)-(c)(8), (c)(10)-(c)(15), (d), (e)(1)-(e)(4), (f) | Recordkeeping and Reporting Requirements | Yes | Additional records for CMS in § 63.10(c) (1)-(6), (9)-(15), and reports in § 63.10(d)(1)-(2) apply if a COMS or CEMS is used. |
| § 63.10(b)(2)(xiii) | CMS Records for RATA Alternative | Yes | Requirements apply if a CEMS is used. |
| § 63.10(c)(2)-(c)(4), (c)(9) | Reserved | No | |
| § 63.11 | Control Device Requirements | No | |
| § 63.12 | State Authority and Delegations | Yes | |
| §§ 63.13-63.16 | Addresses, Incorporations by Reference, Availability of Information, Performance Track Provisions | Yes | |

**ATTACHMENT C**

**Title 40: Protection of Environment**

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

**Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

**Source:** 72 FR 32759, June 13, 2007, unless otherwise noted.

**§ 60.40c Applicability and delegation of authority.**

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide ($SO_2$ ) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(e) Affected facilities ( *i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and 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, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

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

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and $NO_X$ standards under this subpart and the $SO_2$ standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

**§ 60.41c 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 an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum 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 during a period of 12 consecutive calendar months.

*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 derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural

gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product 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 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

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

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit ( *i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

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

*Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see § 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see § 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see § 60.17).

*Dry flue gas desulfurization technology* means a $SO_2$ control system that is located between the steam generating unit and the exhaust vent or stack, and that 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 reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*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 $SO_2$ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(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 a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*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.

*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 stationary gas turbines, internal combustion engines, and kilns).

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

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

*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 (LP) 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 oil and residual oil.
*Potential sulfur dioxide emission rate* means the theoretical $SO_2$ emissions (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.
*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.
*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see § 60.17).
*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as 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.
*Temporary boiler* means a steam generating unit that combusts natural gas or distillate oil with a potential $SO_2$ emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:
(1) The equipment is attached to a foundation.
(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.
(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.
(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.
*Wet flue gas desulfurization technology* means an $SO_2$ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.
*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 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

**§ 60.42c Standard for sulfur dioxide ($SO_2$ ).**
(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the 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 combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential $SO_2$ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential $SO_2$ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain $SO_2$ in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.
(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the 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:
(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:
(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential $SO_2$ emission rate (80 percent reduction); nor
(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of $SO_2$ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input $SO_2$ emissions limit or the 90 percent $SO_2$ reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.
(2) Combusts only coal and that uses an emerging technology for the control of $SO_2$ emissions shall neither:
(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 50 percent (0.50) of the potential $SO_2$ emission rate (50 percent reduction); nor
(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent $SO_2$ reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.
(c) On and after the date on which the initial 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 combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).
(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;
(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.
(3) Affected facilities located in a noncontinental area; or
(4) Affected facilities that combust coal 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 in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.
(d) On and after the date on which the initial 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 combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.
(e) On and after the date on which the initial 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 combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain $SO_2$ in excess of the following:

(1) The percent of potential $SO_2$ emission rate or numerical $SO_2$ emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that
(i) Combusts coal in combination with any other fuel;
(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and
(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and
(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

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

Where:
$E_s$ = $SO_2$ emission limit, expressed in ng/J or lb/MMBtu heat input;
$K_a$ = 520 ng/J (1.2 lb/MMBtu);
$K_b$ = 260 ng/J (0.60 lb/MMBtu);
$K_c$ = 215 ng/J (0.50 lb/MMBtu);
$H_a$ = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];
$H_b$ = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and
$H_c$ = Heat input from the combustion of oil, in J (MMBtu).
(f) Reduction in the potential $SO_2$ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:
(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential $SO_2$ emission rate; and
(2) Emissions from the pretreated fuel (without either combustion or post-combustion $SO_2$ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.
(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.
(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f), as applicable.
(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).
(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).
(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).
(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).
(i) The $SO_2$ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.
(j) For affected facilities located in noncontinental areas and affected 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 under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.
[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

**§ 60.43c Standard for particulate matter (PM).**
(a) On and after the date on which the initial 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 or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, 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 if the affected facility combusts only coal, or combusts coal with 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 with other fuels, 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.
(b) On and after the date on which the initial 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 wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:
(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or
(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.
(c) On and after the date on which the initial 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 combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility 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 (c).
(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.
(e)(1) 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, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater 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, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.
(2) As an alternative to meeting the requirements of paragraph (e)(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, whichever date comes first, 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 heat input capacity of 8.7 MW (30 MMBtu/h) or greater 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) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or $SO_2$ emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

**§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.**

(a) Except as provided in paragraphs (g) and (h) of this section and § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. 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.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and $SO_2$ emission limits under § 60.42c 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 affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

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

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly $SO_2$ emission rate ($E_{ho}$ ) and the 30-day average $SO_2$ emission rate ($E_{ao}$ ). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate $E_{ao}$ when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted $E_{ho}$ ($E_{ho}$ o) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted $E_{ao}$ ($E_{ao}$ o). The $E_{ho}$ o is computed using the following formula:

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

Where:

$E_{ho}$ o = Adjusted $E_{ho}$ , ng/J (lb/MMBtu);

$E_{ho}$ = Hourly $SO_2$ emission rate, ng/J (lb/MMBtu);

$E_w$ = $SO_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 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. The owner or operator does not have to measure $E_w$ if the owner or operator elects to assume $E_w$ = 0.

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

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$ or $X_k$ if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the $SO_2$ emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential $SO_2$ emission rate 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 $SO_2$ emission rate, in percent;

$\%R_g$ = $SO_2$ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and
$\%R_f$ = $SO_2$ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.
(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:
(i) To compute the $\%P_s$ , an adjusted $\%R_g$ ($\%R_g$ o) is computed from $E_{ao}$ o from paragraph (e)(1) of this section and an adjusted average $SO_2$ inlet rate ($E_{ai}$ o) using the following formula:

$$\%R_g o = 100\left(1 - \frac{E_{ao}^{o}}{E_{ai}^{o}}\right)$$

Where:
$\%R_g$ o = Adjusted $\%R_g$ , in percent;
$E_{ao}$ o = Adjusted $E_{ao}$ , ng/J (lb/MMBtu); and
$E_{ai}$ o = Adjusted average $SO_2$ inlet rate, ng/J (lb/MMBtu).
(ii) To compute $E_{ai}$ o, an adjusted hourly $SO_2$ inlet 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 $E_{hi}$ , ng/J (lb/MMBtu);
$E_{hi}$ = Hourly $SO_2$ inlet rate, ng/J (lb/MMBtu);
$E_w$ = $SO_2$ concentration in fuels other than coal and oil combusted in the affected facility, as determined by 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. The owner or operator does not have to measure $E_w$ if the owner or operator elects to assume $E_w$ = 0; and
$X_k$ = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.
(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).
(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the $SO_2$ standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable.
(i) The owner or operator of an affected facility seeking to demonstrate compliance with the $SO_2$ standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.
(j) The owner or operator of an affected facility shall use all valid $SO_2$ emissions data in calculating $\%P_s$ and $E_{ho}$ under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or $E_{ho}$ pursuant to paragraphs (d), (e), or (f) of this section, as applicable.
[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

**§ 60.45c Compliance and performance test methods and procedures for particulate matter.**

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) 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 may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected 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 of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

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

(6) For determination of PM emissions, an oxygen ($O_2$ ) or carbon dioxide ($CO_2$ ) measurement shall be 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.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The $O_2$ or $CO_2$ measurements 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.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) 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 install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

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

(2) Notify the Administrator 1 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 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 (d) 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 paragraph (c)(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 (c)(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 (c)(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) For O2 (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 on a 30-day rolling average.
(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in § 60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit ( *i.e.,* reference method) data and performance test ( *i.e.,* compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/* ) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.
(d) The owner or operator of an affected facility seeking to demonstrate compliance under § 60.43c(e)(4) shall follow the applicable procedures under § 60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).
[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

**§ 60.46c Emission monitoring for sulfur dioxide.**
(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the $SO_2$ emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring $SO_2$ concentrations and either $O_2$ or $CO_2$ concentrations at the outlet of the $SO_2$ control device (or the outlet of the steam generating unit if no $SO_2$ control device is used), and shall

record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure $SO_2$ concentrations and either $O_2$ or $CO_2$ concentrations at both the inlet and outlet of the $SO_2$ control device.

(b) The 1-hour average $SO_2$ emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average $SO_2$ emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under § 60.13(h)(2). Hourly $SO_2$ emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

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

(1) 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) 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 subject to the percent reduction requirements under § 60.42c, the span value of the $SO_2$ CEMS at the inlet to the $SO_2$ control device shall be 125 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted, and the span value of the $SO_2$ CEMS at the outlet from the $SO_2$ control device shall be 50 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the $SO_2$ CEMS at the outlet from the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) shall be 125 percent of the maximum estimated hourly potential $SO_2$ emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average $SO_2$ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the $SO_2$ control device (or outlet of the steam generating unit if no $SO_2$ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average $SO_2$ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the 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 $SO_2$ input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure $SO_2$ at the inlet or outlet of the $SO_2$ control 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 $CO_2$ measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 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 (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the $SO_2$ standards based on fuel supplier certification, as described under § 60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit 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.

**§ 60.47c Emission monitoring for particulate matter.**

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the 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 in § 60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use 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 § 60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(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 or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(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 or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(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 within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; 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 45 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 45 calendar days according to the requirements in § 60.45c(a)(8).

(ii) If no visible emissions are observed for 10 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) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in § 60.43c(c) are not required to operate a COMS if they follow the applicable procedures in § 60.48c(f).

(d) 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 § 60.45c(c). The CEMS specified in paragraph § 60.45c(c) 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.

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that 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 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) 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.

(ii) 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).

(iii) 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).

(iv) 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.

(2) 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.
(3) 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.
(4) You must record the CO measurements and calculations performed according to paragraph (e) 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.
(f) An owner or operator of an affected facility that is subject to an opacity standard in § 60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.
(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section § 60.48Da of this part.
(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section § 60.48Da of this part.
(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit 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. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under § 60.48c(c).
[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

**§ 60.48c Reporting and recordkeeping requirements.**
(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by § 60.7 of this part. This notification shall include:
(1) The design heat input capacity of the affected facility and identification of 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 § 60.42c, or § 60.43c.
(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.
(4) Notification if an emerging technology will be used for controlling $SO_2$ emissions. The Administrator will examine the description of the control device 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 § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.
(b) The owner or operator of each affected facility subject to the $SO_2$ emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in § 60.7, the owner or operator of an affected facility subject to the opacity limits in § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(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 (c)(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 (c)(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
(d) The owner or operator of each affected facility subject to the $SO_2$ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit reports to the Administrator.
(e) The owner or operator of each affected facility subject to the $SO_2$ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.
(1) Calendar dates covered in the reporting period.
(2) Each 30-day average $SO_2$ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.
(3) Each 30-day average percent of potential $SO_2$ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.
(4) Identification of any steam generating unit operating days for which $SO_2$ or diluent ($O_2$ or $CO_2$ ) 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 a description of corrective actions taken.
(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions 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 the F factor used in calculations, method of determination, and type of fuel combusted.
(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.
(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.
(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.
(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.
(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the

affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.
(f) Fuel supplier certification shall include the following information:
(1) For distillate oil:
(i) The name of the oil supplier;
(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and
(iii) The sulfur content or maximum sulfur content of the oil.
(2) For residual oil:
(i) The name of the oil supplier;
(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;
(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and
(iv) The method used to determine the sulfur content of the oil.
(3) For coal:
(i) The name of the coal supplier;
(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);
(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and
(iv) The methods used to determine the properties of the coal.
(4) For other fuels:
(i) The name of the supplier of the fuel;
(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and
(iii) The method used to determine the potential sulfur emissions rate of the fuel.
(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the $SO_2$ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the $SO_2$ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
(j) The reporting period for the reports required under this subpart is each six-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.
[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009

# Indiana Department of Environmental Management
# Office of Air Quality

Addendum to the
Technical Support Document for a PSD/Significant Source Modification
and a Significant Permit Modification

| | |
|---|---|
| Source Name: | Steel Dynamics, Inc.- Structural and Rail Division |
| Source Location: | 2601 County Road 700 East, Columbia City, IN 46725 |
| County: | Whitley |
| SIC Code: | 3312 |
| Part 70 Operating Permit No.: | 183-17160-00030 |
| Part 70 Operating Permit Issuance Date: | July 3, 2007 |
| PSD/Significant Source Modification No.: | 183-27145-00030 |
| Significant Permit Modification No.: | 183-27483-00030 |
| Permit Reviewer: | Aida DeGuzman |

On October 26, 2012, the Office of Air Quality (OAQ) had a notice published in the Post & Mail Newspaper, Columbia City, Indiana stating that Steel Dynamics, Inc.- Structural and Rail Division (SDI) applied for a PSD/Significant Source Modification (PSD/SSM) and a Significant Permit Modification (SPM). The PSD/SSM permit is intended to satisfy the requirements of the construction permit rules for the three (3) material storage bins/silos and seven (7) cooling towers that were constructed prior to issuance of this permit and the SPM will allow SDI to continue operating these emission units.

The notice also stated that OAQ proposed to issue permits for this change 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.

US EPA- REGION 5 COMMENTS:

*On November 20, 2012, US EPA, Region 5 made the following comments to the draft permit. Additions are **bolded** and deletions are ~~struck-through~~ for emphasis:*

**Comment 1:**

Section D.8 does not specify a compliance determination method for the Particulate Matter (PM) Best Available Control Technology (BACT) limits in permit condition D.8.2 for cooling towers ID #15a-ID#15g. The permit should clarify how compliance is determined for these limits.

**Response 1:**

The manufacturer's specifications include in the design information the "guaranteed drift loss of water flow rate" using high efficiency drift eliminators for the cooling towers. Manufacturers establish the drift rates for drift eliminators using a small scale laboratory testing method, which is the testing standard for the industry. There are no known large scale test methods that can be performed to test cooling towers. Since these units are insignificant activities, submitting the manufacturer's design specifications to IDEM, OAQ is sufficient.

IDEM has clarified this condition as follows:

D.8.2 Particulate Emissions (PM and $PM_{10}$/$PM_{2.5}$) - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the Permittee shall ~~comply with the following limits and particulate control associated with the cooling towers~~ **ensure that the cooling towers are equipped with high efficiency drift eliminators such that the guaranteed design total drift rates do not exceed the following limits**:

| Cooling Tower ID | BACT PM and PM10 Limits (Drift Rate Limit (%)) | BACT Control |
|---|---|---|
| Rolling Mill (ID#15a) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling Mill (ID#15c) (non-contact) | PM/PM10 = 0.001 | Drift Eliminator |
| #1 Cast (ID#15d) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling mill/Caster (ID#15e) (non-contact) | PM/PM10 = 0.003 | Drift Eliminator |
| Caster Sprays (ID#15f) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling Mill (ID#15b) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| LVD Boiler (ID#15g) (contact) | PM/PM10 = 0.005 | Drift Eliminator |

To demonstrate compliance with this requirement, the Permittee shall submit to IDEM, OAQ ~~any available~~ **the manufacturer's** design specifications of the **cooling towers equipped with high efficiency** drift eliminators ~~associated with the cooling towers~~ not later than 180 days after issuance of this permit SSM/PSD 183-27145-00030.

(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the Permittee shall not use chromium based water treatment chemicals in the cooling towers (ID#15a through ID#15g).

**Comment 2:**

The BACT analysis on page 11 of the Technical Support Document, Appendix B, states the use of baghouses to control PM emissions from the three material storage bins/silos (ID#12a-ID#12c) is cost prohibitive due to low particulate emissions from these bins/silos. However, the BACT analysis does not include calculations of the cost in dollars per ton ($/ton) of the emissions removed for this control option. The permit documentation should include this information to justify the conclusion that this BACT option is cost prohibitive.

**Response 2:**

These material storage bins/silos (ID#12a-ID#12c) are insignificant activities and are passive. Although these emission units have particulate emissions that are well below the PSD significant levels, IDEM determined that these emissions should be evaluated as part of a PSD project (PSD 183-18426-00030, issued on November 21, 2005). The BACT analysis did not include

calculations of the cost in $/ton of the particulate removed because these emissions are so low that the cost to control them would be intuitively cost prohibitive.

NUCOR STEEL COMMENTS:

*On November 9, 2012, Nucor Steel made the following comments to SDI's draft PSD/Significant Source Modification and Significant Permit Modification. Additions are **bolded** and deletions are ~~struck-through~~ for emphasis:*

**Comment 1:**

Condition D.5.5(a), (b), (c), (d) and (e) - Nucor proposes that IDEM remove these conditions in their entirety because they are inappropriate for a bin vent filter. Nucor also has numerous bin vents that control silos and material handling operations. All of these operations have insignificant potential to emit. In addition, these systems operate at ambient or very low pressure differentials and, as a result, parametric monitoring is a useless indicator of their performance. These conditions, originally written for a baghouse, do not translate to bin vent filters. Consequently, it is inappropriate and burdensome, with respect to coordinating visible emissions notation reading with truck deliveries, to impose parametric monitoring requirement upon the facility's bin vent filters.

**Response 1:**

The silos in SECTION D.5, although insignificant activities, are subject to PSD review. Therefore, the PSD BACT determined for these silos is the use of bin vent filters with particulate emission limits and opacity limits. No stack testing was required for these silos to demonstrate compliance with the emission limitations. In lieu of stack testing, once per day visible emission notations during normal daylight operations, only when loading and unloading of material, is required. Requiring visible emission notations is reasonable. Therefore, no changes have been made to Condition D.5.5 as a result of this comment.

STEEL DYNAMICS (SDI) COMMENTS:

*On November 21, 2012, Steel Dynamics, Inc. (SDI) made the following comments to the draft PSD/Significant Source Modification and Significant Permit Modification. Additions are **bolded** and deletions are ~~struck-through~~ for emphasis:*

**Comment 1:**

Please make the revisions to the following sections of the TSD to match the changes made to the draft Permit:

**Federal Rule Applicability Determination**

(2) 40 CFR Part 63, Subpart YYYYY - Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Area Sources. This NESHAP which was promulgated on December 28, 2007 is now applicable to the source. Nonapplicable portions of the NESHAP have not been included in the permit. The following requirements shall apply to the existing EAF-1a and EAF-1b:

~~40 CFR § 63.10680(a), (b)(1), (d)~~
40 CFR § 63.10681(a)~~, (b)~~
40 CFR § 63.10685
40 CFR § 63.10686(~~(~~a), (b), (d)(1), (d)(3), (d)(4), (d)(6), (e) ~~(b), (d), (e)~~
40 CFR § 63.10690

~~40 CFR § 63.10691~~
~~40 CFR § 63.10692~~
Table 1 to 40 CFR 63, Subpart YYYYY

**Proposed Changes**

The changes listed below have been made to Part 70 Operating Permit No. T183-17160-00030 issued on July 3, 2007. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

*(a) A Reporting Condition has been added to the permit in Section D.3 for the Reheat Furnace ID#2 fuel usage limit, since it was inadvertently omitted in the permit. A Reporting Form related to this limit has been added as well.*

*(b) On December 28, 2007, 40 CFR Part 63, Subpart YYYYY for Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in an area source was promulgated. SDI, which is an area source, is subject to this NESHAP. Therefore, its requirements were* added *in the permit with the following applicable sections. Nonapplicable portions of the NESHAP have not been included in the permit. The following requirements shall apply to the existing EAF-1a and EAF-1b:*

*~~(1) 40 CFR 63.10680(a), (b)(1), (d)~~*
*(2) 40 CFR 63.10681(a)*
*(3) 40 CFR 63.10685*
*(4) 40 CFR 63.10686(a), (b), (d)(1), (d)(3), (d)(4), (d)(6), (e)*
*(5) 40 CFR 63.10690*
*~~(6) 40 CFR 63.10691~~*
*~~(7) 40 CFR 63.10692~~*
*(8) Table 1 to 40 CFR 63, Subpart YYYYY*

*The following Condition C.8 should match the short condition in the draft permit:*

~~C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]~~
~~The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140~~

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

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

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

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

~~(A) Asbestos removal or demolition start date;~~

~~(B) Removal or demolition contractor; or~~

~~(C) Waste disposal site.~~

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

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

~~All required notifications shall be submitted to:~~

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

~~The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

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

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

~~(g) Indiana Licensed Asbestos Inspector~~

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

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

**The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140 when conducting any asbestos abatement project covered by those rules.**

**The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140 when conducting any asbestos abatement project covered by those rules.**

~~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 **as returning or have** 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 **necessarily** 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.~~

*Please revise Condition C.15 to match the draft permit:*

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 **as returning or have** 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 **necessarily** 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.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]**

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

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

**(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:**

**(1) initial inspection and evaluation;**

**(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or**

**(3) any necessary follow-up actions to return operation to normal or usual manner of operation.**

**(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not necessarily limited to, the following:**

**(1) monitoring results;**

**(2) review of operation and maintenance procedures and records; and/or**

**(3) inspection of the control device, associated capture system, and the process.**

**(d) Failure to take reasonable response steps shall be considered a deviation from the permit.**

**(e) The Permittee shall record the reasonable response steps taken.**

**SECTION D.3 FACILITY OPERATION CONDITIONS**

D.3.6 Reporting Requirements **~~[326 IAC 2-1.1-11] [40 CFR 60.276a]~~**

A quarterly summary of the monthly natural gas used in Reheat Furnace ID#2 to document the compliance status with Condition D.3.1(b), shall be submitted quarterly to the address listed in Section C - General Reporting Requirements, of this permit using the reporting form located at the end of this permit, or its equivalent not later than thirty (30) days after 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.5 FACILITY OPERATION CONDITIONS**

D.5.~~6~~ **4**Bin Vent **Filter** Operation [326 IAC 2-2]

**(a)** Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the bin vent filters shall be in operation **or shall be in place** and control emissions at all times when the storage silos **(**ID#5 through ID#12) are in operation. The pneumatic dust collection system shall be in operation and control emissions at all times when the EAF dust storage silo (ID#4) is in operation.

(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2, PSD, the bin vent filters shall be in operation **or shall be in place** at all times when material storage bins/silos (ID#12a through ID#12c) are in operation.

## SECTION D.8 FACILITY OPERATION CONDITIONS

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

(l) One (1) cooling tower (ID#13), constructed in 2002, with a nominal water flow of 15,000 gallons per minute.

**(**m) Existing seven (7) cooling towers, permitted in 2012:

(1) Two (2) contact cooling tower for the rolling mill (ID#15a and ID#15b), one (1) with a nominal flow rate of 4,000 gallons per minute and one (1) with a nominal flow rate of 8,000 gallons per minute.

(2) One (1) **non-**contact cooling tower for the rolling mill (ID#15c), with a nominal flow rate of 81,250 gallons per minute.

(3) One (1) contact cooling tower for #1 cast (ID#15d), with a nominal flow rate of 5,000 gallons per minute.

(4) One (1) non-contact cooling tower for the rolling mill/caster (ID#15e), with a nominal flow rate of 18,000 gallons per minute.

(5) One (1) contact cooling tower for the caster sprays (ID#15f), with a nominal flow rate of 3,500 gallons per minute.

(6) One (1) contact cooling tower for the LVD Boiler (ID#15g), with a nominal flow rate of 2,500 gallons per minute.

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

**Outstanding Appeal Issues Proposed Changes**

D.1.18 Testing Requirements [326 IAC 2-1.1-11] [40 CFR 60.275a]

(a) ~~Within~~ **Not later than** 2.5 years after the **date of the** most recent valid compliance demonstration, the Permittee shall perform NOx testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purposes of determining compliance with Condition D.1.2, 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 NOx test shall be repeated thereafter at least once every 2.5 years from the date of the most recent valid compliance demonstration.

(b) ~~Within~~ **Not later than** 5 years after the **date of the** most recent valid compliance demonstration, the Permittee shall perform $PM/PM_{10}$ testing on the stack emissions from the EAF Baghouse (stack 1), for purposes of determining compliance with Condition D.1.3 ~~and 40 CFR Part 60~~, 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. PM includes filterable particulate matter only. $PM_{10}$ includes filterable and condensable PM.

These tests shall be repeated thereafter at least once every 5 years from the date of the most recent valid compliance demonstration.

(c) ~~Within~~ **Not later than** 5 years after the **date of the** most recent valid compliance demonstration, the Permittee shall perform PM/$PM_{10}$ and opacity testing on the LMS Baghouse (stack 43), for purposes of determining compliance with t**he PM and PM10 limits in** Condition D.1.15, **and opacity limit in Condition D.1.14(b)**, 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. PM includes filterable particulate matter only. $PM_{10}$ includes filterable and condensable PM.

These tests shall be repeated thereafter at least once every 5 years from the **date of the** most recent valid compliance demonstration.

(d) ~~Within~~ **Not later than** 1 year after the **date of the** most recent valid compliance demonstration, the Permittee shall perform Lead testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.8 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 Lead test shall be repeated thereafter at least once every year from the **date of the** most recent valid compliance demonstration.

(e) ~~Within~~ **Not later than** 2.5 years after the **date of the** most recent valid compliance demonstration, the Permittee shall perform $SO_2$ testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.4**(a)**, 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 $SO_2$ test shall be repeated thereafter at least once every 2.5 years from the **date of the** most recent valid compliance demonstration.

(f) ~~Within~~ **Not later than** 1 year after the **date of the** most recent valid compliance demonstration, the Permittee shall perform Mercury testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.9, 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 Mercury test shall be repeated thereafter at least once every year from the **date of the** most recent valid compliance demonstration.

(g) ~~Within~~ **Not later than** 5 years after the **date of the** most recent valid compliance demonstration, the Permittee shall perform Fluorides testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.10**(b)**, 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 Fluorides test shall be repeated thereafter at least once every 5 years from the **date of the** most recent valid compliance demonstration.

(h) ~~Within~~ **Not later than** 5 years after the **date of the** most recent valid compliance demonstration, the Permittee shall perform Manganese testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.11**(b)**, 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.

The Manganese test shall be repeated thereafter at least once every 5 years from the **date of the** most recent valid compliance demonstration.

(i) ~~Within~~ **Not later than** 5 years after the **date of the** most recent valid compliance demonstration, the Permittee shall perform for VOC testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.7, 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 VOC test shall be repeated thereafter at least once every 5 years from the **date of the** most recent valid compliance demonstration.

**Response 1:**

IDEM, OAQ prefers not to change the TSD in order to preserve the original information that formed the basis of the draft permit. IDEM, OAQ agrees with these changes. However, this TSD Addendum will document the changes to the TSD as you proposed to match the draft permit conditions.

*IDEM, OAQ has also revised the following conditions to match the changes made to the TSD in this addendum:*

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(~~14~~**12**)] [326 IAC 1-6-3]

B.11 Emergency Provisions [326 IAC 2-7-16]

* * *

(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~~ **8**) be revised in response to an emergency.

SDI Comments to the Draft Permit

**Comment 1:**

The TSD indicates that the phrase "The provisions of 326 IAC 6-5 are not federally enforceable" was supposed to be deleted from the permit. Likewise, please delete the PSD rule cite (326 IAC 2-2)

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), and 326 IAC 2-2, fugitive particulate matter emissions shall be controlled according to the plan submitted to IDEM and maintained on site. The provisions of 326 IAC 6-5 are not federally enforceable.

**Response 2:**

The TSD added and did not delete this phrase "The provisions of 326 IAC 6-5 are not federally enforceable" in Condition C.6 since it was shown in bold. Therefore, this phrase will remain in the draft permit; however, the PSD rule citation was removed as shown below:

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), ~~and 326 IAC 2-2~~, fugitive particulate matter emissions shall be controlled according to the plan submitted to IDEM and maintained on site. The provisions of 326 IAC 6-5 are not federally enforceable.

**Comment 2:**

The hourly throughput limit in D.1.1(a) is not needed for practical enforceability of any limit; Section D.1 contains lb/hr, lb/ton, and tons/yr limits. IDEM does not include a capacity descriptor as a limit unless it is being used to artificially limit throughput to stay below some sort of permitting applicability threshold or if modeling requires it (BACT does not typically require limits on production). However, when IDEM issued SSM 18426 permitting this modification, it incorrectly included a 300 tons/hour limit in Condition D.1.1 despite the fact that such an artificial limit was not requested to stay below a permit applicability threshold, was not determined to be BACT for any pollutant, and was not necessary for modeling. No BACT analysis in the TSD for SSM 18426 determined that a production restriction of 300 tons/hour was BACT for any pollutant emitted from the EAF. Further, the PSD Air Quality Analysis in the application for 18426 does not rely on a 300 tons/hour capacity limit. The only pollutant which required refined modeling was PM10, and the PM10 PTE calculations are based on the baghouse outlet grain loading and are not dependent on the EAF hourly capacity. Thus, there is no basis for turning this capacity descriptor into a limit in the permit, and SDI requests that it be removed.

D.1.1 EAFs Operation Limitation [326 IAC 2-1.1-5] [326 IAC 2-2]

Pursuant to PSD SSM 183-18426-00030, issued November 18, 2005, 326 IAC 2-1.1-5 (Air Quality Requirements) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), the Permittee shall operate EAF-1a and EAF-1b at a maximum combined rate of:

~~(a) 300 tons of molten steel per hour, and~~

(b) 2,628,000 tons of molten steel per 12-consecutive month period, with compliance determined at the end of each month.

**Response 2:**

In the initial PSD 183-10097-00030, issued on July 7, 1999, SDI was permitted for two (2) EAFs, one (1) as the main EAF and the other as the backup. These furnaces are operated one at a time to produce molten steel at a maximum rate of 200 tons per hour.

During the issuance process of this PSD, US EPA - Region 5 and several concerned citizens made the following comment:

IDEM, OAQ must include a provision in the permit to limit the operation of one (1) EAF at a time, since this is the basis of the permit and must include a production limit of 200 tons per hour since both EAFs have a combined production rate of more than 200 tons/hour when both EAFs are operating. Therefore, IDEM, OAQ, included the following condition, pursuant to Air Quality Requirements under 326 IAC 2-1.1-5 and not based on PSD rules (326 IAC 2-2).

D.1.1 EAF Operation Limitation [326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-1.1-5 (Air Quality Requirements), the Permittee shall only operate one electric arc furnace (EAF) at a time to produce molten steel at a maximum rate of 200 tons per hour.

In PSD 183-18426-0030, issued on November 21, 2006, SDI requested that the permit be modified to allow both EAFs to operate simultaneously and to increase the allowable melt rate to 300 tons of molten steel per hour. The previous limit of 200 tons per hour was for one furnace only and so the 300 tons per hour limit, which is a reduction from the potential maximum rate of 400 tons per hour (2 x 200 tph), that the furnace would otherwise be capable of, is necessary to ensure the melt rate does not exceed the permitted rate of 300 tons per hour. As part of this BACT review, the new limited melt rate was used as part of the analysis for several of the BACT determinations. The 300 tons per hour was used to compare emission limits on a pounds per hour basis for multiple pollutants. Given this, the determination was made that the limits established as part of this PSD permit were dependent upon a 300 tons/hour melt rate and therefore this was included as part of the BACT determination. Consequently, IDEM has determined that this limit cannot be modified or removed from the permit without a re-evaluation of BACT.

**Comment 3:**

In Condition D.1.13, Scrap Management Plan (SMP), the reference to SO2 should be removed. In the Third Partial Settlement Agreement and Stay filed with OEA on April 24, 2012 in OEA Cause No. 05-A-J-3636, IDEM agreed to remove the reference to SO2 in this condition. Similarly, the newly-added reference to the LMS should be removed because the LMS does not melt scrap. None of the underlying permit conditions requiring the SMP stated that LMS emissions were to be controlled with SMP.

**Response 3:**

The following Condition D.1.13 has been revised to reflect the Third Partial Settlement Agreement and Stay filed with OEA on April 24, 2012 in OEA Cause No. 05-A-J-3636:

D.1.13 Scrap Management Plan (SMP) [326 IAC 2-2]

(a) Pursuant to PSD Best Available Control Technology (326 IAC 2-2-3), ~~SO2~~, VOC, lead, and mercury emissions from EAF-1a, EAF-1b ~~and LMS~~ shall be controlled by a Scrap Management Plan (SMP).

(b) The Permittee shall implement the SMP, which shall be in writing and available for inspection.

(c) In order to control VOC emissions, the SMP shall provide that:

(1) All grades of scrap charged to the furnaces shall not contain excessive non-metallics.

(2) All grades of scrap shall not contain excessive oil and grease.

(3) Heavily oiled scrap shall not be used.

**Comment 4:**

Please make the following corrections to Condition D.1.19:

D.1.19 CO Continuous Emission Rate Monitoring Requirement [326 IAC 2-1.1-11] [326 IAC 3-5]

(a) The Permittee shall calibrate, certify, operate, and maintain a continuous emission monitoring system (CEMS) for measuring CO emissions rates in pounds per hour averaged over a three (3) hour block period from the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

(b) The Permittee shall record the output of the continuous monitoring system(s) pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

(c) In the event that a breakdown of the CO continuous emission monitoring systems (CEMS) occurs, **a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem**. ~~the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.~~

(d) 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).

(e) Except as otherwise provided by a rule or provided specifically in this permit, whenever ~~a~~ **the CO** continuous emission monitor system (CEMS) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of twenty-four (24) hours or more during meltshop operation, the Permittee shall perform once per day operational status inspections of the fourth hole duct or direct shell evacuation system, the dampers, the damper switches and the outsides of the ductwork and hoods for the presence of holes or flow constrictions caused by dents. Any deficiencies shall be noted and proper maintenance performed. This requirement does not replace the routine monthly inspections of the same equipment.

(f) 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, 326 IAC 2-2, and 40 CFR Part 60.

**Response 4:**

IDEM, OAQ made the corrections to Condition D.1.19 as requested.

**Comment 5:**

Please make the following corrections to Condition D.1.23

D.1.23 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the LMS baghouse at least once per day when the respective facilities are in operation.

(b) When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response steps. The normal range for this unit is a pressure drop between 2.0 and 9.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. **A pressure reading that is outside the above mentioned range is not a deviation from this permit**. Failure to take response steps shall be considered a deviation from this permit.

(c) The instrument 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 every six (6) months **or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications if used.**

**Response 5:**

The statement, "A pressure reading that is outside the above mentioned range is not a deviation from this permit," was added back in Condition D.1.23(b) since it was overlooked in the draft permit.

Calibration "once every six months" of an instrument used for parametric reading is reasonable, especially under harsh conditions and in a high source of particulate emissions like the steel LMS operation. Therefore, a longer timeframe that a manufacturer might recommend will not be allowed. No change was made to condition D.1.23(c) as a result of this comment.

D.1.23 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the LMS baghouse at least once per day when the respective facilities are in operation.

(b) When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response steps. The normal range for this unit is a pressure drop between 2.0 and 9.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. **A pressure reading that is outside the above mentioned range is not a deviation from this permit**. Failure to take response steps shall be considered a deviation from this permit.

(c) The instrument 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 every six (6) months.

**Comment 6:**

Please correct the limit of 0.10 pound per MMBtu to 0.1 pound per MMBtu, consistent with the BACT limit in D.2.1, D.2.4, D.2.5, D.2.6 and D.2.7

D.2.3 Nitrogen Oxides ($NO_x$) - PSD Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD CP183-10097-00030, issued July 7, 1999, amended by PSD SSM183-12692-00030, issued January 10, 2001, and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the following units:

(a) Four (4) natural gas-fired low $NO_x$ ladle preheaters (ID#s3b through 3e),

(b) One (1) natural gas-fired low $NO_x$ tundish nozzle preheater (ID#3g),

(c) Two (2) natural gas-fired low $NO_x$ tundish preheaters (ID#s 3h and 3i),

(d) One (1) natural gas-fired low $NO_x$ ladle dryer (ID#3f), and

(e) One (1) natural gas-fired low $NO_x$ tundish dryer (ID#3j)

shall use low $NO_x$ natural gas-fired burners and $NO_x$ emissions shall not exceed ~~0.10~~ **0.1** pound per MMBtu

**Response 6:**

This requires a PSD BACT re-evaluation to change the PSD limit of 0.10 lb/MMBtu. Therefore, no change has been made in this permitting action for this condition.

**Comment 7:**

The opacity reading requirement below is confusing because nowhere does the permit state the frequency with which these reading are to be taken. SDI wants to clarify when opacity determinations are required. Please add "Upon request by IDEM, OAQ, opacity shall be determined as follows:"

D.7.1 Fugitive Dust Emission Limitations - Best Available Control Technology [326 IAC 2-2]

Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the fugitive dust emissions from transporting on paved roadways and parking lots, unpaved roadways, and unpaved areas around slag storage piles and steel scrap piles shall be controlled in accordance with the Fugitive Dust Control Plan (FDCP) (Section E.1) such that the following limitations are not exceeded:

Instantaneous opacity from paved roadways and parking lots shall not exceed ten percent (10%).

**Upon request by IDEM, OAQ, opacity shall be determined as follows:**

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:

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

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

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

The three (3) readings shall be taken at the point of maximum opacity.

The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, 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 paved roadway.

D.7.2 Visible Emission Limitations - Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD Permits CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the visible emissions from unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall not exceed an average instantaneous opacity of ten percent (10%).

**Upon request by IDEM, OAQ, opacity shall be determined as follows**

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:

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

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

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

The three (3) readings shall be taken at the point of maximum opacity.

The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, 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 unpaved roadway.

**Response 7**:

Pursuant to the Annual Compliance Certification the source must be able to certify compliance with the terms and conditions contained in this permit. The source is not obligated to perform the

readings required in Condition D.7.2 pursuant to a schedule. However, the only way the source can certify compliance with Condition D.7.2, is to perform readings as often and as many times necessary to ensure compliance. IDEM, OAQ can perform the readings at any time to ensure that no violation is occurring. Therefore, Condition D.7.2 will remain as proposed.

**Comment 8:**

In a 2005 PSD action, IDEM removed the references to reduction percentages from the Fugitive Dust Control Plan (FDCP), except for the percentage in E.1.3(b). SDI is requesting the correction of this error.

**Response 8**:

Since IDEM meant to delete all the reduction percentages in PSD 183-18426-00030, the remaining "90%" in Condition E.1.3 has been deleted.

E.1.3 Unpaved Areas within the Slag Processing Area and Scrap Yard

The following dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

(a) Unpaved areas traveled around slag storage piles and steel scrap piles shall be treated with an IDEM-approved dust suppressant in order to meet compliance with the associated visible emissions limitations.

(b) Fugitive dust emissions shall be reduced ~~by at least 90 percent (90%) instantaneous control on a PM10 mass emission basis.~~

(c) Treating of unpaved areas may be delayed by one day when:

(1) 0.1 or more inches of rain have accumulated during the 24-hour period prior to the scheduled treatment.

(2) Unpaved areas are saturated with water such that chemical dust suppressants cannot be accepted by the surface.

(3) Unpaved areas are frozen or covered by ice, snow, or standing water.

(4) The area is closed or abandoned.

(5) It is raining on the day of the scheduled treatment.

(6) The ambient air temperature is below $32^0$F.

**Comment 9:**

The BACT analysis done in CP 183-10097-00030 did not result in any particular drop height ranges. Rather, the BACT analysis concluded that "minimizing the drop height is considered BACT" See TSD App B to this CP 183-10097-00030, pages 26-28 of 30. No BACT re-evaluation should be needed to revise this language to match the original BACT determination.

**Response 9:**

IDEM, OAQ reviewed the BACT analysis made for the Slag Handling operation in CP 183-10097-00030. Based on the determination made in this permit, the BACT does not include the "48 inches" slag pile drop height limit. IDEM, OAQ agrees that BACT re-evaluation is not necessary

to remove this limit. Therefore, the following condition has been revised to match this original BACT determination.

E.1.5 Slag Handling and Processing

(a) During transferring of the skull slag to the slag pot, the drop height shall be minimized and the transferring shall be performed such that the visible emission limitations in the permit are not exceeded.

(b) Pouring of liquid slag from the EAFs or LMS to the slag pot shall be conducted inside the melt shop and emissions shall be captured by the melt shop roof canopy and ducted to the EAF baghouse such that the visible emission limitations in the permit are not exceeded.

(c) Emissions during the dumping of liquid slag from the slag pot to the slag pit shall be controlled by the use of skull slag and by applying water, as needed, such that the visible emission limitations in the permit are not exceeded.

(d) Water suppression to control emissions during the transferring of the skull slag from the slag pot to the skull pit is waived for safety reasons.

(e) Emissions during the digging of the slag and skull pit by front-end loaders shall be controlled by applying water, as needed, such that the visible emission limitations in the permit are not exceeded.

(f) Emissions from slag processing operations shall be controlled, as needed, through the application of water.

Spray bars shall be used as needed to apply water on crushing and screening operations, and conveyor transfer points.

(g) The stacker to pile drop height shall be **minimized where practicable**. ~~limited to less than 48 inches, and front end loader batch drop height into trucks shall be limited to less than 48 inches.~~

*On November 2, 2011, the Indiana Air Pollution Control Board issued a revision to 326 IAC 2. The revision resulted in a change to the rule cite of the "responsible official" definition. The rule cite for the responsible official has changed from 326 IAC 2-7-1(34) to 326 IAC 2-7-1(35). The permit has been revised to reflect this change.*

# Indiana Department of Environmental Management
# Office of Air Quality

## Technical Support Document (TSD) for a Part 70 Prevention of Significant Deterioration/Significant Source Modification and Significant Permit Modification

### Source Description and Location

| | |
|---|---|
| Source Name: | Steel Dynamics, Inc. - Structural and Rail Division |
| Source Location: | 2601 County Road 700 East, Columbia City, Indiana 46725 |
| County: | Whitley |
| SIC Code: | 3312 |
| Operation Permit No.: | T 183-17160-00030 |
| Operation Permit Issuance Date: | July 3, 2007 |
| PSD/Significant Source Modification No.: | 183-27145-00030 |
| Significant Permit Modification No.: | 183-27483-00030 |
| Permit Reviewer: | Aida De Guzman |

### Existing Approvals

The source was issued Part 70 Operating Permit No. 183-17160-00030 on July 3, 2007.
The source has since received the following approvals:

(a) First Significant Permit Modification No. 183-24522-00030, issued on April 15, 2008; and

(b) First Administrative Amendment No. 183-27131-00030, issued on February 16, 2009.

### County Attainment Status

The source is located in Whitley County.

| Pollutant | Designation |
|---|---|
| $SO_2$ | Better than national standards. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| $O_3$ | Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1] |
| $PM_{10}$ | Unclassifiable effective November 15, 1990. |
| $NO_2$ | Cannot be classified or better than national standards. |
| Pb | Not designated. |

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards

(1) 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. Whitley 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) Whitley County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and $SO_2$ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Whitley County has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed PSD source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

| Pollutant | Potential To Emit* (tons/year) |
|---|---|
| PM | Greater than 100 |
| $PM_{10}$ | Greater than 100 |
| $SO_2$ | Greater than 100 |
| VOC | Greater than 100 |
| CO | Greater than 100 |
| $NO_x$ | Greater than 100 |
| Pb | Greater than 0.6 |

*** This information was taken from TSD for SSM 183-23905-0030 and SPM 183-24522 issued on February 28, 2008 and April 15, 2008, respectively.**

This existing source is a major stationary source under PSD (326 IAC 2-2), because PM/PM10, SO2, VOC, CO and NOx are emitted at a rate of 100 tons per year or more, and it is in one of the twenty-eight (28) listed PSD source categories (steel mills), as specified in 326 IAC 2-2-1(gg)(1).

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) |
|---|---|
| A single HAP (Pb) | Less than 10 |
| Total HAPs | Less than 25 |

* According to the TSD for T183-17160-00030, issued July 3, 2007.

This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area 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 2011 OAQ emission data.

| **Pollutant** | **Actual Emissions** (ton/yr) |
|---|---|
| PM | not reported |
| $PM_{10}$ | 37 |
| $PM_{2.5}$ | 61 |
| $SO_2$ | 98 |
| VOC | 27 |
| CO | 1,619 |
| $NO_X$ | 170 |
| Lead (Pb) | 0.12 |

## Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Steel Dynamics, Inc. - Structural and Rail Division on November 20, 2008, under IDEM's Self-Disclosure and Environmental Audit Policy, A-002-OE-06-P-R1, Enforcement # 0005 (Effective July 13, 2007) for the following emission units constructed at the plant without a proper permit:

(a) Seven (7) Cooling Towers:

| Facility ID | Flow Rate (gallon/minute) |
|---|---|
| Rolling Mill (contact) | 4,000 |
| Rolling Mill (non-contact) | 81,250 |
| #1 Cast (contact) | 5,000 |
| Rolling mill/Caster (non-contact) | 18,000 |
| Caster Sprays (contact) | 3,500 |
| Rolling Mill (contact) | 8,000 |
| LVD Boiler (contact) | 2,500 |

(b) Three (3) Material Storage Bins/Silos (ID#12a - ID#12c) -

SDI installed one (1) EAF dust silo and eleven (11) material storage bins/silos, (ID#5 through ID#12 and ID#12a through ID#12c). The one (1) EAF dust silo and eight (8) (ID#5 through and ID#12) from these eleven (11) material storage bins/silos went through PSD review under PSD 183-10097-00030, issued on July 7, 1999.

## Enforcement Issues

This modification was submitted under IDEM's Self-Disclosure and Environmental Audit Policy, A-002-OE-06-P-R1, Enforcement # 0005 (Effective July 13, 2007). This proposed approval is intended to satisfy the requirements of the construction permit rules.

## Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations for the cooling towers. Since PTE was not the factor in the determination of this PSD review, there were no PTE calculations made for the three (3) material storage bins/silos.

## 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."

(a) This source modification is subject to 326 IAC 2-7-10.5(g), Significant Source Modification because it is subject to Prevention of Significant Deterioration (PSD) review under 326 IAC 2-2.

(b) This PSD/Significant Source Modification Permit will be incorporated into the Part 70 Operating Permit under 326 IAC 2-7-12, Significant Permit Modification, because this modification involves significant changes to permit terms and conditions. It also involves a case-by-case determination of an emission limit and significant changes to record keeping requirements in association with new compliance requirements.

## Permit Level Determination – PSD

This section normally includes a table that summarizes the potential to emit, reflecting all limits, of the emission units. However, since the emission units in this modification are PSD units/insignificant activities and the PTE is well below the PSD significant levels, no PTE table was included.

This modification to an existing major stationary source is major because this project should have been submitted as part of PSD 107-10097-00030, issued on July 7, 1999, but was constructed without approval. This modification was submitted by SDI under IDEM's Self-Disclosure and Environmental Audit Policy, A-002-OE-06-P-R1, Enforcement # 0005 (Effective July 13, 2007).

## Federal Rule Applicability Determination

(a) New Source Performance Standards (NSPS) (326 IAC 12 and 40 CR Part 60):

There are no NSPS standards applicable to this modification associated with the cooling towers and material storage bins/silos.

(b) National Emissions Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63):

(1) 326 IAC 20 and 40 CFR Part 63, Subpart Q - Emission Standard for Hazardous Air Pollutants for Industrial Process Cooling Towers

326 IAC 20 and 40 CFR Part 63, Subpart Q is not applicable to the seven (7) cooling towers because they are not using chromium based water treatment chemicals.

(2) 40 CFR Part 63, Subpart YYYYY - Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Area Sources. This NESHAP which was promulagated on December 28, 2007 is now applicable to the source. Nonapplicable portions of the NESHAP have not been included in the permit. The following requirements shall apply to the existing EAF-1a and EAF-1b:

40 CFR § 63.10680(a), (b)(1), (d)
40 CFR § 63.10681(a), (b)
40 CFR § 63.10685

40 CFR § 63.10686((a), (b), (d)(1), (d)(3), (d)(4), (d)(6), (e) (b), (d), (e)
40 CFR § 63.10690
40 CFR § 63.10691
40 CFR § 63.10692
Table 1 to 40 CFR 63, Subpart YYYYY

(3) There are no other NESHAPs applicable to this modification associated with the material storage bins/silos and cooling towers.

**State Rule Applicability Determination**

(a) 326 IAC 2-2 (PSD)

This source modification was submitted by SDI pursuant to IDEM's Self-Disclosure and Environmental Audit Policy, A-002-OE-06-P-R1, Enforcement # 0005 (Effective July 13, 2007) that should have been submitted as part of the original PSD application (183-10097-00030). Therefore, this source modification is subject to Prevention of Significant Deterioration (PSD) review under 326 IAC 2-2.

(b) 326 IAC 2-2-3 (PSD Rule: Control Technology Review Requirements)

See Appendix B for the PSD BACT analysis.

(c) 326 IAC 2-2-4 (Air Quality Analysis Requirements)

Section (4)(a) of this rule, requires that the PSD application shall contain an analysis of ambient air quality in the area that the major stationary source would affect for pollutants that are emitted at major levels or significant amount. Although the PM and PM10/PM2.5 emissions in this modification are not emitted at major levels, an air quality analysis was performed since this modification is subject to PSD. See Appendix C for the Air Modeling.

(d) 326 IAC 2-2-5 (Air Quality Impact Requirements)

326 IAC 2-2-5(e)(1) of this rule requires that the air quality impact analysis required by this section shall be conducted in accordance with the following provisions:

(1) Any estimates of ambient air concentrations used in the demonstration processes required by this section shall be based upon the applicable air quality models, data bases, and other requirements specified in 40 CFR Part 51, Appendix W (Requirements for Preparation, Adoption, and Submittal of Implementation Plans, Guideline on Air Quality Models).

(2) Where an air quality impact model specified in the guidelines cited in subdivision (1) is inappropriate, a model may be modified or another model substituted provided that all applicable guidelines are satisfied.

(3) Modifications or substitution of any model may only be done in accordance with guideline documents and with written approval from U.S. EPA and shall be subject to public comment procedures set forth in 326 IAC 2-1.1-6.

(e) 326 IAC 2-2-6 (Increment Consumption Requirements)

326 IAC 2-2-6(a) requires that any demonstration under section 5 of this rule shall demonstrate that increased emissions caused by the proposed major stationary source will not exceed eighty percent (80%) of the available maximum allowable increases (MAI) over the baseline concentration of Particulate Matter, indicated in subsection (b)(1) of this rule. Particulate Matter (PM) and PM10/PM2.5 are emitted and subject to PSD in this proposed permit, PSD 183-27145-00030.

(f) 326 IAC 2-2-7 (Additional Analysis, Requirements)

326 IAC 2-2-7(a) requires an analysis of the impairment to visibility, soils and vegetation. An analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the source. See Appendix C for the Air Modeling.

(g) 326 IAC 2-2-8 (Source Obligation)

(1) Pursuant to 2-2-8(1), approval to construct, shall become invalid if construction is not commenced within eighteen (18) months after receipt of the approval, if construction is discontinued for a period of eighteen (18) months or more, or if construction is not completed within a reasonable time. Note: The emission units associated with the PSD/SSM 183-27145-00030 were already constructed and are in operation. This proposed approval is intended to satisfy the requirements of the construction permit rules.

(2) Approval for construction shall not relieve the Permittee of the responsibility to comply fully with applicable provisions of the state implementation plan and any other requirements under local, state, or federal law.

(h) 326IAC 2-2-10 (Source Information)

The Permittee has submitted all information necessary to perform analysis or make the determination required under this rule.

(i) 326 IAC 2-2-12 (Permit Rescission)

The permit issued under this rule shall remain in effect unless and until it is rescinded, modified, revoked, or it expires in accordance with 326 IAC 2-1.1.-9.5 or section 8 of this rule.

(k) 326 IAC 6-3 (Particulate Emission Limitations from Manufacturing Processes)

326 IAC 6-3 is not applicable to the seven (7) cooling towers and three (3) material storage bin/silos because they are subject to a more stringent mass limit for PM under 326 IAC 2-2.

## 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 following Compliance Determination and Monitoring Requirements applicable to seven (7) cooling towers and three (3) material storage bins/silos:

(a) The bin filters shall be in operation or shall be in place when material storage bins/silos are loading and unloading materials.

(b) Visible Emission Notations on the stack exhausts of the material storage bin/silos once per day during normal daylight operations when loading and unloading of materials.

These Compliance Determination and Monitoring Requirements are necessary to continuously demonstrate compliance with the PSD BACT limits.

**Proposed Changes**

The changes listed below have been made to Part 70 Operating Permit No. T183-17160-00030 issued on July 3, 2007. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

*(a) A Reporting Condition has been added to the permit in Section D.3 for the Reheat Furnace ID#2 fuel usage limit, since it was inadvertently omitted in the permit. A Reporting Form related to this limit has been added as well.*

*(b) On December 28, 2007, 40 CFR Part 63, Subpart YYYYY for Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in an area source was promulgated. SDI, which is an area source, is subject to this NESHAP. Therefore, its requirements were* added *in the permit with the following applicable sections. Nonapplicable portions of the NESHAP have not been included in the permit. The following requirements shall apply to the existing EAF-1a and EAF-1b:*

*(1) 40 CFR 63.10681(a)*
*(2) 40 CFR 63.10685*
*(3) 40 CFR 63.10686(a), (b), (d)(1), (d)(3), (d)(4), (d)(6), (e)*
*(4) 40 CFR 63.10690*
*(5) Table 1 to 40 CFR 63, Subpart YYYYY*

*The requirements of this NESHAP, Subpart YYYYY have been added in Section D.1.*

*(c) Section D.5 and D.8 have been modified to incorporate the SSM/PSD 183-27145-00030.*

*(d) The numbering in Section D.5 project description table has been changed to match the correct numbering system used in the Part 70 Operating Permit.*

*(e) The rule cite [326 IAC 2-1.1-11] that required Visible Emission Notations in Condition D.5.5 and D.5.6 Broken or Failed Bin Vent Detection has been changed to 326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)].*

*(f) In June of 2005, the US Appeals Court for the Washington DC Circuit remanded several components of the NSR reforms back to EPA including the Clean Units provisions. IDEM has deleted the Clean Units provisions from Part 70 permits.*

*On January 22, 2008, U.S. EPA promulgated a rule to address the remand, by the U.S. Court of Appeals for the District of Columbia on June 25, 2005, of the reasonable possibility provisions of the December 31, 2002 major NSR reform rule. IDEM has agree with U.S. EPA to interpret "reasonable possibility" in 326 IAC 2-2 and 326 IAC 2-3 consistent with the January 22, 2008 U.S. EPA rule. To implement this interpretation, IDEM is revising Section C - General Record Keeping Requirements and Section C - General Reporting Requirements.*

*(g) IDEM has made the following changes to Section B and C conditions consistent with IDEM's updates and the changes made to the Part 70 Permit T063-20969-00037 for another SDI (Engineered Bar Products, Division) through Joint Stipulation for Stay agreed upon by IDEM and SDI in OEA Cause No. 03-A-J-3183.*

## SECTION B GENERAL CONDITIONS

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

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

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

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

Except for the respective construction authorizations, all terms and conditions of the following permits:

| PSD Permit Number | Issuance Dates |
|---|---|
| 183-10097-00030 | July 7, 1999 |
| 183-12692-00030 | January 10, 2001 |
| 183-15170-00030 | May 31, 2002 |
| 183-18658-00030 | May 5, 2004 |
| **183-18426-00030** | **November 21, 2005** |
| **183-23905-00030** | **February 25, 2008** |

Issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. Except for the construction authorizations in ~~Section B of~~ Permit Nos. 183-10097-00030, 183-12692-00030, 183-15170-00030, ~~and~~ 183-18658-00030, **183-18426-00030 and 183-23905-00030,** these prior permits and all of their terms and conditions are hereby superseded.

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

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(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 **reasonable** deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

Any such application shall be certified by the Aresponsible 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)]

~~(d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.~~

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~~ **2**) 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~~ **3**) The Permittee notifies the:

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

and

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

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

(~~5~~ **4**) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b), (c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

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

***

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

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

~~(a)~~ 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.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~~ **a permit revision reflecting a** change **to** the ownership or operational control of the source and no other change in the permit is necessary.

## SECTION C SOURCE OPERATION CONDITIONS

**Entire Source**

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

C.2 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 forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

~~326 IAC 5-1-2 (Opacity Limitations) is not federally enforceable.~~

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. ~~326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.~~

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5] ~~[326 IAC 2-2]~~

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), ~~and 326 IAC 2-2~~, fugitive particulate matter emissions shall be controlled according to the plan submitted to IDEM and maintained on site. **The provisions of 326 IAC 6-5 are not federally enforceable**.

C.7 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.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

~~The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140~~

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

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

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

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

**(A) Asbestos removal or demolition start date;**

**(B) Removal or demolition contractor; or**

**(C) Waste disposal site.**

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

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

**All required notifications shall be submitted to:**

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

**The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).**

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

**(f) Demolition and Renovation**
**The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos**

**pursuant to 40 CFR 61.145(a).**

**(g) Indiana Licensed Asbestos Inspector**

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

C.9 Performance Testing [326 IAC 3-6]

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

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

Indiana Department of Environmental Management
~~Compliance Data Section, Office of Air Quality~~ **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) 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).~~ **The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).**

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation 5) days prior to the end of the initial forty-five (45) day period.

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

C.11 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 no later than ninety (90) days after 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 no later than ninety (90) days, after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:~~ **Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit**

**issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:**

Indiana Department of Environmental Management
~~Compliance Branch, Office of Air Quality~~ **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).~~ **The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).**

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

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

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 **as returning or have** 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 **necessarily** 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.

*IDEM, OAQ has clarified the rule cites for the Preventive Maintenance Plan.*

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5**(14)** ~~(15)~~][326 IAC 2-7-1(22)]

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A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5**(14)** ~~(15)~~]

***

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] 326 IAC 2-7-5(**14)** ~~(15)~~]

***

B.10 Preventive Maintenance Plan [326 IAC 2-7-5~~(1),(3) and (13)~~ **(12)**] [~~326 IAC 2-7-6(1) and (6)~~][326 IAC 1-6-3]

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B.11 Emergency Provisions [326 IAC 2-7-16]

***

(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)~~ **(8)** be revised in response to an emergency.

***

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)~~,~~ **or** (c)~~, or (e)~~ without a prior permit revision, if each of the following conditions is met:

***

(~~5~~**4**) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)~~,~~ **or** (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)~~,~~ **and** (c)(1)~~, and (e)(2)~~.

***

C.14 Risk Management Plan [326 IAC 2-7-5(**11**~~12~~)] [40 CFR 68]

***

SECTION Ds FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(**14**~~15~~)]

* * *

***

D.1.16, D.4.7, D.5.3 and D.6.4- Preventive Maintenance Plan [326 IAC 2-7-5(**12**~~13~~)]

*On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions included the incorporation of the U.S. EPA's definition of reasonable possibility. The permit previously sited to the EPA definition. Also, the revisions resulted in changes to other rule cites listed in the permit. Neither of these changes are changes to the underlining provisions. The change is only to cite to these rules in Section C - General Reporting and Section C - General Recordkeeping.*

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. **Support information includes the following:**

**(1) All calibration and maintenance records.**
**(2) All original strip chart recordings for continuous monitoring instrumentation.**
**(3) Copies of all reports required by the Part 70 permit.**
**Records of required monitoring information include the following:**
**(4) The date, place, as defined in this permit, and time of sampling or measurements.**
**(5) The dates analyses were performed.**
**(6) The company or entity that performed the analyses.**
**(7) The analytical techniques or methods used.**
**(8) The results of such analyses.**
**(9) The operating conditions as existing at the time of sampling or measurement**.

(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)~~ **326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)**) that a "project" (as defined in 326 IAC 2-2-1(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **jj**)) 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~~ **dd**) and/or 326 IAC 2-3-1(~~z~~ **y**)) 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~~ **pp**) and/or 326 IAC 2-3-1(~~mm~~ **kk**)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **jj**)) at an existing emissions unit, document and maintain the following records:

***

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

***

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(~~rr~~ **pp**)(2)(A)(iii) and/or 326 IAC 2-3-1 (~~mm~~ **kk**)(2)(A)(iii); and

***

(d) If there is a reasonable possibility (as defined in ~~40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)~~ **326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)**) that a "project" (as defined in 326 IAC 2-2-1(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **jj**)) 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~~ **dd**) and/or 326 IAC 2-3-1(~~z~~ **y**)) 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~~ **pp**) and/or 326 IAC 2-3-1(~~mm~~ **kk**)), the Permittee shall comply with following:

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]

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

(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~~ **ww**) and/or 326 IAC 2-3-1 (~~qq~~ **pp**), for that regulated NSR pollutant, and...

**SECTION D.1**

*Condition D.1.5, now D.1.3 - IDEM, OAQ recognizes that this condition meant to say "filterable" only. Therefore, this condition has been changed as follows:*

~~D.1.5~~ **D.1.3**Particulate Matter (PM/$PM_{10}$) - PSD Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD CP 183-10097-00030, issued July 7, 1999, PSD SSM 183-23905-00030 and 326 IAC 2-2 (PSD – Control Technology Review Requirements):

(a) ~~The total~~ **F**filterable **particulate matter (**PM/~~$PM_{10}$~~**)** emissions from the EAFs Baghouse shall not exceed 0.0018 grains per dry standard cubic feet and 14.4 pounds per hour based on a 3-hour block average.

(b) The total filterable and condensable $PM_{10}$ emissions from the EAFs Baghouse shall not exceed 0.0052 grains per dry standard cubic feet and 41.6 pounds per hour based on a 3-hour block average.

*IDEM, OAQ has clarified the following condition:*

D.1.23 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the LMS baghouse at least once per day when the respective facilities are in operation.

(b) When for any one reading, the pressure drop **across the baghouse** is outside the normal range ~~of 3.0 and 9.0 inches of water until a range established during the latest stack test,~~ the Permittee shall take reasonable response steps. **The normal range for this unit is a pressure drop between 2.0 and 9.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.**~~in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~ **Section C - Response to Excursions or 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.**

(c) The instrument 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 every six (6) months.

**SECTION D.3 FACILITY OPERATION CONDITIONS**

**D.3.6 Reporting Requirements [326 IAC 2-1.1-11] [40 CFR 60.276a]**

**A quarterly summary of the monthly natural gas used in Reheat Furnace ID#2 to document the compliance status with Condition D.3.1(b), shall be submitted quarterly to the address listed in Section C - General Reporting Requirements, of this permit using the reporting form located at the end of this permit, or its equivalent not later than thirty (30) days after 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).**

*Fugitive Dust Control Plan - In the 2005 PSD permit, the silt loading limit was removed from the permit. See Appendix A of the TSD Addendum to SSM 18426, pages 72, 76-77 of 90 – IDEM removed the silt loading from D.7.1, but inadvertently missed revising the FDCP accordingly. Therefore, IDEM has deleted the silt loading limit in this permitting action.*

**SECTION E.1 FUGITIVE DUST CONTROL PLAN (FDCP)**

E.1.1 Implementation and Contact

(a) The following fugitive dust control plan (FDCP), when implemented, is designed to reduce uncontrolled fugitive dust, based on a $PM_{10}$ mass emission basis, from:

(1) paved roadways and parking lots ~~down to 9.7 grams per square meter~~.
(2) unpaved areas within the slag processing area, and

(3) the slag processing operations,

such that the visible emissions limitations specified in the permit are met.

(b) This FDCP shall be implemented on a year-round basis until such time as another plan is approved or ordered by the Indiana Department of Environmental Management (IDEM).

(c) If there is a change in the name, title, and telephone number of the person who is responsible for implementing the fugitive dust control plan (FDCP), the information will be supplied to the Office of Air Quality (OAQ) Compliance Section within ninety (90) of such change.

# INDIANA DEPARTMENT OF ENVIRONME
## OFFICE OF AIR QUALITY
## COMPLIANCE AND ENFORCEMENT BRANCH

# Part 70 Quarterly Report

**Source Name:** Steel Dynamics, Inc. - Structural and Rail Division
**Source Address:** 26011 County Road 700 East, Columbia City, Indiana 46725
**Part 70 Permit No.:** T183-17160-00030
**Facility:** Reheat Furnace ID#2
**Parameter:** Natural Gas Usage
**Limit:** 189.8 million cubic feet of natural gas to be combusted in the Reheat Furnace (RF) (ID#2) on a monthly basis averaged over a twelve (12) month period, with compliance determined at the end of each month

**QUARTER:_____YEAR:_____**

| Month | Natural Gas Fuel Usage This Month | Average Natural Gas Fuel Usage Over 12 Months |
|---|---|---|
| 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.5 FACILITY OPERATION CONDITIONS**

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

(~~a~~ **h**) One (1) EAF dust storage silo (ID#4), equipped with a pneumatic dust collection system for particulate.

(~~b~~ **i**) Eight (8) raw material storage silos (ID#~~s~~ 5 through **ID#**12) and the associated raw material receiving station, permitted for construction in 2001.

**Existing three (3) raw material storage silos (ID#12a through ID#12c), permitted in 2012.**

~~Each silo is equipped with a bin vent filter for particulate control~~.

(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 Particulate Matter ($PM/PM_{10}$) - PSD Best Available Control Technology [326 IAC 2-2]

**(a)** Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification 183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the filterable $PM/PM_{10}$ emissions from each of the nine (9) storage silos **(ID#4 through ID#12)** shall not exceed 0.01 grains per dry standard cubic feet.

**(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the PM and PM10/PM2.5 emissions from each of the three (3) material storage bins/silos (ID#12a through ID#12c) shall be limited to 0.01 grain per dry standard cubic foot (gr/dscf).**

D.5.2 Visible Emission Limitation - PSD Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the visible emissions from each of the nine (9) storage silos **(ID#4 through ID#12)** shall not exceed three percent (3%) opacity.

(b) Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the visible emissions from the EAFs dust handling system and the raw material receiving station shall not exceed three percent (3%) opacity or greater based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

**(c) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the visible emissions from each of the three (3) material storage bins/silos (ID#12a through ID#12c) shall not exceed three percent (3%) opacity based on a six (6) minute average.**

***

D.5.5 Preventive Maintenance Plan (PMP) [326 IAC 1-6-3] [326 IAC 2-7-5(13)]

~~Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 326 IAC 1-6-3, a Preventive Maintenance Plan (PMP), in accordance with Condition B.10 - Preventive Maintenance Plan (PMP), of this permit, is required for the bin vent filters.~~

**A Preventive Maintenance Plan (PMP) is required for these facilities and associated control devices. Section B - Preventive Maintenance Plan (PMP) contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.**

**Compliance Determination Requirements [326 IAC 2-1.1-11]**

D.5.~~6~~ **4**Bin Vent **Filter** Operation [326 IAC 2-2]

**(a)** Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the bin vent filters shall be in operation and control emissions at all times when the storage silos **(ID#4 through ID#12)** are in operation. **The pneumatic dust collection system shall be in operation and control emissions at all times when the EAF dust storage silo (ID#4) is in operation.**

**(b)** **Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2, PSD, the bin vent filters shall be in operation at all times when material storage bins/silos (ID#12a through ID#12c) are in operation**.

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

D.5.~~7~~ **5** Visible Emissions Notations ~~[326 IAC 2-1.1-11]~~ **[326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

~~Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-1.1-11:~~

(a) ~~Weekly~~ **Once per day** visible emission notations of the ~~nine (9)~~ **twelve (12)** storage silos (**ID#4 through ID#12 and ID#12a through ID#12c)** exhaust vents and the raw material receiving station shall be performed during normal daylight operations when loading or unloading material. 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, when the process is in operation, not counting startup or shut down time.

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C.16 Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C.16 Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.5.~~8~~**6** Broken or Failed Bin Vent Filter Detection ~~[326 IAC 2-1.1-11]~~ **[326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

~~Pursuant to CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001and 326 IAC 2-1.1-11:~~

~~In the event that filter failure has been observed, for single compartment filters, failed units and the associated process will be shut down as soon as possible until the failed units have been repaired or replaced.~~ (**a) For a single compartment bag filter controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

**(b) For a single compartment bag filter controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

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

D.5.~~9~~**7** Record Keeping Requirements [326 IAC 2-7-5] [326 IAC 2-7-19]

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(i) ~~Weekly~~ **Daily** visible emission notations of the bin vent exhaust and raw material receiving station.

**SECTION D.8 FACILITY OPERATION CONDITIONS**

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

(l) One (1) cooling tower (ID#13), constructed in 2002, with a nominal water flow of 15,000 gallons per minute.

**(m) Existing seven (7) cooling towers, permitted in 2012:**

**(1) Two (2) contact cooling tower for the rolling mill (ID#15a and ID#15b), one (1) with a nominal flow rate of 4,000 gallons per minute and one (1) with a nominal flow rate of 8,000 gallons per minute.**

**(2) One (1) contact cooling tower for the rolling mill (ID#15c), with a nominal flow rate of 81,250 gallons per minute.**

**(3) One (1) contact cooling tower for #1 cast (ID#15d), with a nominal flow rate of 5,000 gallons per minute.**

**(4) One (1) non-contact cooling tower for the rolling mill/caster (ID#15e), with a nominal flow rate of 18,000 gallons per minute.**

**(5) One (1) contact cooling tower for the caster sprays (ID#15f), with a nominal flow rate of 3,500 gallons per minute.**

**(6) One (1) contact cooling tower for the LVD Boiler (ID#15g), with a nominal flow rate of 2,500 gallons per minute.**

(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 Particulate Matter ($PM/PM_{10}$) - Best Available Control Technology [326 IAC 2-2]

Pursuant to PSD Permits CP183-10097-00030, issued July 7, 1999, amended by PSD Significant Source Modification SSM183-12692-00030, issued January 10, 2001 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements) and the filterable $PM/PM_{10}$ emissions from the cooling tower **(ID#13)** shall not exceed 0.008 pound per hour.

**D.8.2 Particulate Emissions (PM and $PM_{10}$/$PM_{2.5}$) - Best Available Control Technology [326 IAC 2-2]**

**(a) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the Permittee shall comply with the following limits and particulate control associated with the cooling towers:**

| Cooling Tower ID | BACT PM and PM10 Limits (Drift Rate Limit (%)) | BACT Control |
|---|---|---|
| Rolling Mill (ID#15a) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling Mill (ID#15c) (non-contact) | PM/PM10 = 0.001 | Drift Eliminator |
| #1 Cast (ID#15d) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling mill/Caster (ID#15e) (non-contact) | PM/PM10 = 0.003 | Drift Eliminator |
| Caster Sprays (ID#15f) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling Mill (ID#15b) (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| LVD Boiler (ID#15g) (contact) | PM/PM10 = 0.005 | Drift Eliminator |

**To demonstrate compliance with this requirement, the Permittee shall submit to IDEM, OAQ any available design specifications of the drift eliminators associated with the cooling towers not later than 180 days after issuance of this permit SSM/PSD 183-27145-00030.**

**(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the Permittee shall not use chromium based water treatment chemicals in the cooling towers (ID#15a through ID#15g).**

**Proposed Changes Due to Appeals**

SDI appealed the issuance of PSD/SSM No. 183-18426-00030, issued on November 21, 2005; Part 70 Operating Permit No. 183-17160-00030, issued on July 3, 2007; SSM No. 183-23905-00030, issued on February 25, 2008; and SPM No. 183-24522-00030, issued on April 15, 2008 with CAUSE NO. 05-A-J-3636, Consolidated with 07-A-J-3947, 08-A-J-4081 and 08-A-J-4100. The IDEM and SDI jointly agreed to the following resolution of certain appealed conditions contained in the mentioned permits. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

*(a) IDEM, OAQ has deleted the references to the requirements of VOC Continuous Emission Monitoring System (CEMS) in Conditions D.1.20, D.1.27(c) and D.1.28(b):*

D.1.~~20~~**19** CO ~~and VOC~~ Continuous Emission Rate Monitoring Requirement [326 IAC 2-1.1-11] [326 IAC 3-5]

~~(a) Pursuant to 326 IAC 2-1.1-11 and 326 IAC 3-5-1(d), the Permittee shall calibrate, certify, operate, and maintain a continuous emission monitoring system (CEMS) for measuring CO and VOC emissions rates in pounds per hour from the EAFs Baghouse stack (Stack ) and the LMS Baghouse stack (Stack 43) in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.~~

~~(b) Pursuant to 326 IAC 2-1.1-11 and 326 IAC 3-5-4(a), the Permittee shall submit to IDEM, OAQ, within ninety (90) days after installation of a new monitor, a complete written continuous monitoring standard operating procedure (SOP). If revisions are made to an existing SOP, updates shall be submitted to IDEM, OAQ biennially.~~

~~(c) Pursuant to 326 IAC 2-1.1-11, 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.~~

~~(d) Whenever the CO or VOC continuous emission monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, the Permittee shall perform once per day operational status inspections of the equipment that is important to the performance of the DEC, canopy hood and total capture system (i.e., pressure sensors, dampers, and damper switches).~~

~~This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion) unless such observations require the process units to be inoperative.~~

~~Any deficiencies shall be noted and proper maintenance performed. This requirement does not replace the routine monthly inspections of the same equipment.~~

**(a) The Permittee shall calibrate, certify, operate, and maintain a continuous emission monitoring system (CEMS) for measuring CO emissions rates in pounds per hour averaged over a three (3) hour block period from the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.**

**(b) The Permittee shall record the output of the continuous monitoring system(s) pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.**

**(c) In the event that a breakdown of the CO 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.**

**(d) 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).**

**(e) 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 twenty-four (24) hours or more during meltshop operation, the Permittee shall perform once per day operational status inspections of the fourth hole duct or direct shell evacuation system, the dampers, the damper switches and the outsides of the ductwork and hoods for the presence of holes or flow constrictions caused by dents. Any deficiencies shall be noted and proper maintenance performed. This requirement does not replace the routine monthly inspections of the same equipment.**

**(f) 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, 326 IAC 2-2, and 40 CFR Part 60.**

D.1.27 Record Keeping Requirements [326 IAC 2-1.1-11] [40 CFR 60.276a]

(a) To document compliance with Conditions D.1.20 and D.1.21, the Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner so that they may be inspected by the IDEM, OAQ, or the U.S. EPA., if so requested or required.

(b) To document compliance with Condition D.1.1 - EAFs Operation Limitation, the Permittee shall maintain records of the amount of steel produced.

(c) To document compliance with Conditions D.1.7 - CO PSD BACT ~~and D.1.9 - VOC PSD BACT~~, the Permittee shall maintain records of the readings of the CO ~~and VOC~~ CEMS.

***

D.1.~~28~~ **25** Reporting Requirements [326 IAC 2-1.1-11] [40 CFR 60.276a]

(a) To document compliance with Condition D.1.1 - EAFs Operation Limitation, the Permittee ~~shall submit a quarterly summary of the actual amount of steel produced, using the Steel Production Report or its equivalent, located at the end of this permit. These reports shall be submitted not later than thirty (30) calendar days following the end of each calendar quarter and in accordance with Condition C.20 - General Reporting Requirements of this permit.~~

**The Permittee shall submit a quarterly summary of the actual amount of steel produced, using the Steel Production Report or its equivalent**.

(b) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the CEMS data for CO pursuant to 326 IAC 3-5-7.

~~These reports shall be submitted not later than thirty (30) calendar days following the end of each calendar quarter and in accordance with Condition C.20- General Reporting Requirements of this permit.~~

(c) ~~Pursuant to 40 CFR 60.276a, the Permittee shall comply with the following reporting requirements:~~
~~(i) The Permittee shall submit a semi-annual written report of exceedances of the control device opacity to IDEM, OAQ, and upon request, the U.S. EPA.~~
~~(ii) If applicable the Permittee shall submit semi-annually any values that exceed the furnace static pressure value established under 40 CFR 60.274a(g) and either values of control system fan motor amperes that exceed 15 percent of the value established under 40 CFR 60.274a(c) or values of flow rates lower than those established under 40 CFR 60.274a(c) to IDEM, OAQ, and upon request, the U.S. EPA.~~
~~(iii) The Permittee shall furnish to IDEM, OAQ, and the U.S. EPA a written report of the results of the compliance emission tests required aby 40 CFR Part 60. This report shall include the following information:~~

~~(A) Facility name and address;~~
~~(B) Plant representative~~

~~(C) Make and model of process, control device, and continuous monitoring equipment;~~
~~(D) Flow diagram of process and emissions capture equipment including other equipment or process(es) ducted to the same control device;~~
~~(E) Rated (design) capacity of process equipment;~~
~~(F) The following operating conditions:~~
~~(1) List of charge and tap weights and materials;~~
~~(2) Heat times and process log;~~
~~(3) Control device operation log; and~~
~~(4) Continuous monitor or Reference Method 9 data.~~

~~(G) Test dates and test times;~~
~~(H) Test company;~~
~~(I) Test company representative;~~
~~(J) Test observers from outside agency;~~
~~(K) Description of test methodology used, including any deviation from standard reference methods;~~
~~(L) Schematic of sampling location;~~
~~(M) Number of sampling points;~~
~~(N) Description of sampling equipment;~~
~~(O) Listing of sampling equipment calibrations and procedures;~~
~~(P) Field and Laboratory data sheets;~~
~~(Q) Description of sample recovery procedures;~~
~~(R) Sampling equipment leak check results;~~
~~(S) Description of quality assurance procedures;~~
~~(T) Description of analytical procedures;~~
~~(U) Notation of sample blank corrections; and~~
~~(V) Sample emission calculations.~~

**If the Permittee elects to operate a COMS under 40 CFR 60.273a, then the Permittee shall submit a quarterly excess emissions report, if applicable, based on the COMS data, pursuant to 326 IAC 3-5-7.**

**(d) When required, these reports shall be submitted not later than thirty (30) calendar days following the end of each calendar quarter. Section C – General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.**

**(e) These reports 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).**

## Outstanding Appeal Issues - Proposed Changes

The following issues submitted on March 9, 2009 are not part of the Appeals for PSD/SSM No. 183-18426-00030, issued on November 21, 2005; Part 70 Operating Permit No. 183-17160-00030, issued on July 3, 2007; SSM No. 183-23905-00030, issued on February 25, 2008; and SPM No. 183-24522-00030, issued on April 15, 2008, with CAUSE NO. 05-A-J-3636, consolidated with 07-A-J-3947, 08-A-J-4081 and 08-A-J-4100. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

*(a)* ***SDI Comment*** *- Testing under Condition D.1.19 has been previously arranged with the IDEM, Compliance Data Section to test by no later than May 15, 2009. SDI requested that the phrase "unless an extension is granted" be included, because SDI is unsure whether it will have enough steel orders to conduct testing by that date. Additionally, SDI requested the deletion of "as approved by the Commissioner" because Condition C.9, which requires that test protocol be submitted for IDEM's review prior to testing, already contains it; and "thereafter" has been inserted to clarify that the testing schedule hinges on the initial test date. Requested changes are as follows:*

D.1.19 Testing Requirements [326 IAC 2-1.1-11] [40 CFR 60.275a]

Pursuant to 326 IAC 2-1.1-11:

(a) NOx
The Permittee shall test for NOx on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) ~~within 60 days after achieving maximum capacity of the modification, but no later than 365 days after start up of the modification~~, **no later than May 15, 2009, unless an extension is granted** ~~utilizing methods as approved by the Commissioner.~~

This NOx test shall be repeated **thereafter** at least once every 2.5 years from the date of the last valid compliance demonstration.

(b) ~~Within 180 days after startup of~~ **By no later than May 15, 2009**, **unless an extension is granted** ~~the EAF Baghouse (following its modification permitted by PSD SSM 183-23905-00030~~), the Permittee shall perform PM/$PM_{10}$ testing on the stack emissions from the EAF Baghouse (stack 1) in order to demonstrate compliance with the PM/$PM_{10}$ limits established by 326 IAC 2-2 and 40 CFR Part 60. ~~These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration~~. $PM_{10}$ includes filterable and condensable $PM_{10}$ for the purpose of determining compliance with 326 IAC 2-2. ~~Testing shall be completed using methods approved by the Commissioner and conducted in accordance with Section C - Performance Testing.~~

**These tests shall be repeated thereafter at least once every five (5) years from the date of this valid compliance demonstration.**

(c) ~~Within 180 days after startup of~~ **By no later than May 15, 2009 unless an extension is granted** ~~LMS Baghouse,~~ the Permittee shall perform PM/$PM_{10}$ and opacity testing on the emissions from the LMS Baghouse (stack 43) in order to demonstrate compliance with the PM/$PM_{10}$ and opacity limits established by 326 IAC 2-2. ~~These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration~~. $PM_{10}$ includes filterable and condensable $PM_{10}$ for the purpose of determining compliance with 326 IAC 2-2. ~~Testing shall be completed using methods approved by the Commissioner and conducted in accordance with Section C - Performance Testing.~~

**These tests shall be repeated thereafter at least once every five (5) years from the date of this valid compliance demonstration.**

(d) Lead
The Permittee shall stack test for lead on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), utilizing Method 12 and a method detection level which is below the emission limit, ~~within 60 days after achieving maximum capacity of the modification, but no later than 365 days after start up of the modification~~ **by no later than May 15, 2009 unless an extension is granted**, ~~utilizing methods as approved by the Commissioner~~.

This lead test shall be repeated **thereafter** at least once every year from the date of the last valid compliance demonstration.

(e) $SO_2$
The Permittee shall test for $SO_2$ on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) ~~within 60 days after achieving maximum capacity of the modification, but no later than 365 days after start up of the modification~~ **by no later than May 15, 2009**, **unless an extension is granted** ~~utilizing methods as approved by the Commissioner.~~

This $SO_2$ test shall be repeated **thereafter** at least once every 2.5 years from the date of the last valid compliance demonstration.

(f) Mercury
The Permittee shall test for mercury on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) ~~within 60 days after achieving maximum capacity of the modification, but no later than 365 days after start up of the modification~~ **by no later than May 15, 2009**, **unless an extension is granted** ~~utilizing methods as approved by the Commissioner.~~

This mercury test shall be repeated **thereafter** at least once every year from the date of the last valid compliance demonstration.

(g) Fluorides
The Permittee shall test for fluorides on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) ~~within 60 days after achieving maximum capacity of the modification, but no later than 365 days after start up of the modification~~ **by no later than May 15, 2009**, **unless an extension is granted** ~~utilizing methods as approved by the Commissioner.~~

This fluorides test shall be repeated **thereafter** at least once every five (5) years from the date of the last valid compliance demonstration.

(h) Manganese
The Permittee shall test for manganese on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) ~~within 60 days after achieving maximum capacity of the modification, but no later than 365 days after start up of the modification~~ **by no later than May 15, 2009 unless an extension is granted**, ~~utilizing methods as approved by the Commissioner.~~

This manganese test shall be repeated **thereafter** at least once every five (5) years from the date of the last valid compliance demonstration.

**(i) VOC**
**The Permittee shall test for VOC on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43) by no later than May 15, 2009**, **unless an extension is granted**.

(~~i~~ **j**) All testing shall be conducted in accordance with C.9 - Performance Testing.

***Response*** *- IDEM, OAQ has modified Condition D.1.19. However, the phrase "utilizing methods as approved by the Commissioner" will remain in Condition D.1.19 because Section D Conditions are specific to emission units in those Sections, while Section C Conditions are general conditions that apply to the entire source. It is not necessary to include the phrase "unless an extension is granted", because if testing is not possible at the date set, SDI can request an extension to IDEM, Compliance Data Section.*

*Revisions to Condition D.1.19, now D.1.18, are as follows:*

**D.1.18 Testing Requirements [326 IAC 2-1.1-11] [40 CFR 60.275a]**

**(a) Within 2.5 years after the most recent valid compliance demonstration, the Permittee shall perform NOx testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for the purposes of determining compliance with Condition D.1.2, 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 NOx test shall be repeated thereafter at least once every 2.5 years from the date of the most recent valid compliance demonstration.**

**(b) Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform PM/$PM_{10}$ testing on the stack emissions from the EAF Baghouse (stack 1), for purposes of determining compliance with Condition D.1.3 and 40 CFR Part 60, 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. PM includes filterable particulate matter only. $PM_{10}$ includes filterable and condensable PM.**

**These tests shall be repeated thereafter at least once every 5 years from the date of the most recent valid compliance demonstration.**

**(c) Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform PM/$PM_{10}$ and opacity testing on the LMS Baghouse (stack 43), for purposes of determining compliance with Condition D.1.15, 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. PM includes filterable particulate matter only. $PM_{10}$ includes filterable and condensable PM.**

**These tests shall be repeated thereafter at least once every 5 years from the most recent valid compliance demonstration.**

**(d) Within 1 year after the most recent valid compliance demonstration, the Permittee shall perform Lead testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.8 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 Lead test shall be repeated thereafter at least once every year from the most recent valid compliance demonstration.**

**(e) Within 2.5 years after the most recent valid compliance demonstration, the Permittee shall perform $SO_2$ testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.4, 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 $SO_2$ test shall be repeated thereafter at least once every 2.5 years from the most recent valid compliance demonstration.**

**(f) Within 1 year after the most recent valid compliance demonstration, the Permittee shall perform Mercury testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.9, 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 Mercury test shall be repeated thereafter at least once every year from the most recent valid compliance demonstration.**

**(g) Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform Fluorides testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.10, 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 Fluorides test shall be repeated thereafter at least once every 5 years from the most recent valid compliance demonstration.**

**(h) Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform Manganese testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.11, 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.**

**The Manganese test shall be repeated thereafter at least once every 5 years from the most recent valid compliance demonstration.**

**(i) Within 5 years after the most recent valid compliance demonstration, the Permittee shall perform for VOC testing on the EAFs Baghouse stack (Stack 1) and the LMS Baghouse stack (Stack 43), for purposes of determining compliance with Condition D.1.7, 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 VOC test shall be repeated thereafter at least once every 5 years from the most recent valid compliance demonstration.**

*(c)* ***SDI Comment*** *- SDI requested that the requirement to monitor post construction ambient ozone be removed from its Part 70 Operating permit, since this requirement was not originally included in the initial construction of the source permitted under PSD 183-10097-00030, issued on July 7, 1999. Instead, this requirement was included in the Significant Source Modification 183-18426-00030, issued November 21, 2005.*

***IDEM Response*** *- IDEM agrees that there is no need to continue ozone monitoring, based on the following reasons:*

*(1) The Ft. Wayne area meets the current ozone (0.08 ppm) standard.*

*(2) Additionally, all monitors operated by IDEM in the area meet the 2008 ozone standard of 0.075 ppm.*

*(3) Given the amount of ozone data available from other monitors in the area for the past several years, the monitoring network as currently configured is satisfactory for assessing ozone trends for the area.*

*(5) Based on the actual VOC emissions data from the facility, SDI emits no more than 50 tons per year.*

*Therefore, Condition C.22 has been deleted; subsequent conditions have been re-numbered accordingly:*

~~**Post Construction Ambient Monitoring**~~

~~C.22 Post Construction Ambient Monitoring [326 IAC 2-2-4]~~

~~Pursuant to SSM183-18426-00030, issued November 21, 2005 and 326 IAC 2-2-4, the two (2) ambient monitoring sites established at locations approved by IDEM, OAQ under PSD Permits CP183-10097-00030 and SSM183-12692-00030 shall continue to operate for an additional 36 months from the initial start of the modification permitted in SSM 183-23905-00030:~~

~~(a) A downwind monitoring site near the maximum impact area (Annual Maximum Impact Area: UTM East 639300 and UTM North 4553700) shall measure $PM_{10}$, ozone, and the following meteorological parameters:~~

~~- wind speed,~~

~~- - wind direction, and~~
~~- - outdoor temperature.~~

~~After the 36-month period, the Permittee may petition IDEM, OAQ, to cease the monitoring activities and the department shall grant such petition no later than 45 days after receipt of the petition if it is established that the $PM_{10}$ and ozone levels continue to comply with the NAAQS and that the plant has minimal impact on air quality.~~

~~(b) A monitoring site upwind from the maximum impact area shall measure $PM_{10}$.~~

~~After the 36-month period, the Permittee may petition IDEM, OAQ, to cease the monitoring activities and the department shall grant such petition no later than 45 days after receipt of the petition if it is established that the $PM_{10}$ levels continue to comply with the NAAQS and that the plant has minimal impact on air quality.~~

~~(c) The monitors shall meet the operating and maintenance criteria contained in the Indiana Department of Environmental Management, Office of Air Quality, Quality Assurance Manual. Additionally, a monitoring QA plan must be submitted and approved by IDEM, OAQ, if there are any changes to the QA plan.~~

~~(d) Ambient data along with precision and accuracy data from the monitors shall be submitted on a quarterly basis in a format approved by the Commissioner no later than sixty (60) days after the end of the quarter being reported.~~

## Conclusion and Recommendation

The seven (7) cooling towers and three (3) material storage silos/bins shall be subject to the conditions of the attached proposed Significant Source Modification/Prevention of Significant Deterioration No.183-27145-00030 and Significant Permit Modification No. 183-27483-00030. The staff recommends to the Commissioner that the Significant Source Modification/Prevention of Significant Deterioration No.183-27145-00030 and Significant Permit Modification No.183-27483-00030 shall be approved.

## IDEM Contact

(a) Questions regarding this proposed permit can be directed to Aida DeGuzman at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) *233*-4972 or toll free at 1-800-451-6027 extension *(*3-4972*)*.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

| Cooling Tower ID | Cooling Tower ID | Control ID | Circulation Rate | Total Dissolved Solids (TDS) | | Drift Loss | PM/PM10/PM2.5 PTE |
|---|---|---|---|---|---|---|---|
| | | | (gallon/min) | (milligram/liter) | (pound/gallon) | (%) | (tons/year) |
| Rolling Mill (Contact) | 1 | Mist/Drift Eliminators | 4,000 | 5,438 | 0.045 | 0.001 | 0.48 |
| Rolling Mill (contact) | 2 | Mist/Drift Eliminators | 81,250 | 3,460 | 0.029 | 0.001 | 6.16 |
| #1 Cast (Contact) | 3 | Mist/Drift Eliminators | 5,000 | 5,215 | 0.044 | 0.001 | 0.57 |
| Rolling Mill/Caster (Non-contact) | 4 | Mist/Drift Eliminators | 18,000 | 5,438 | 0.045 | 0.003 | 6.44 |
| Caster Sprays (Contact) | 5 | Mist/Drift Eliminators | 3,500 | 5,438 | 0.045 | 0.001 | 0.42 |
| Rolling Mill (Contact) | 6 | Mist/Drift Eliminators | 8,000 | 5,438 | 0.045 | 0.001 | 0.95 |
| LVD Boiler (Contact) | 7 | Mist/Drift Eliminators | 2,500 | 5,438 | 0.045 | 0.005 | 1.49 |
| **TOTAL PTE (tons/year)** | | | | | | | **16.52** |

Methodology:

TDS in lb/gal = TDS, mg/l * 1 gram/1000 mg * 3.785 l/gal * lb/453.6 grams

PM/PM10/PM2.5 PTE, tons/yr = circulation rate, gal/min * 60 min/hr * 8760 hrs/yr *TDS, lbs/gal * drift loss, %/100 * ton/2000 lbs

# Appendix B

## CONTROL TECHNOLOGY / PSD BACT ANALYSIS

## Steel Dynamics, Inc. - Structural and Rail Division

**Source Background and Description**

| | |
|---|---|
| **Source Location:** | **2601 County Road 700 East, Columbia City, Indiana 46725** |
| **County:** | **Whitley** |
| **SIC Code:** | **3312** |
| **Part 70 Operating Permit No.:** | **T183-17160-00030** |
| **SSM/PSD No.:** | **183-27145-00030** |
| **SPM No.:** | **183-27483-00030** |
| **Permit Reviewer:** | **Aida De Guzman** |

Steel Dynamics submitted a permit application on November 20, 2008 under IDEM's Self-Disclosure and Environmental Audit Policy, A-002-OE-06-P-R1, Enforcement # 0005 (Effective July 13, 2007) for the following emission units constructed at the plant without a proper permit:

(a) Seven (7) Cooling Towers:

| Facility ID | Flow Rate (gallon/minute) |
|---|---|
| Rolling Mill (contact) | 4,000 |
| Rolling Mill (non-contact) | 81,250 |
| #1 Cast (contact) | 5,000 |
| Rolling mill/Caster (contact) | 18,000 |
| Caster Sprays (contact) | 3,500 |
| Rolling Mill (contact) | 8,000 |
| LVD Boiler (contact) | 2,500 |

(b) Three (3) Material Storage Bins/Silos (ID#12a - ID#12c)

These emission units are subject to PSD review, not because of the levels of emissions, but because these emission units were part of the original PSD application (183-10097-00030), and they were constructed without a proper air permit. These emission units emit PM/PM10/PM2.5 and are subject to PSD review for these pollutants. Therefore, a PSD BACT analysis is required under 326 IAC 2-2-3(2) (PSD Rule: Control Technology Review Requirements) for these pollutants.

The BACT analysis submitted by SDI, which has been reviewed and analyzed by IDEM, OAQ, is based on the draft “Top-Down Approach: BACT Guidance” published by USEPA, Office of Air Quality Planning Standards, March 15, 1990. The BACT analysis has been based on the following sources of information which have been reviewed or contacted:

(a) Downloadable USEPA RACT/BACT/LAER Clearinghouse (RBLC) System;
(b) USEPA/State/Local Air Quality Permits;
(c) Federal/State/Local Permit Engineers;
(d) Control Technology Vendors; and
(e) Inspection/Performance Test Reports.
(f) OAQPS Control Cost Manual.

## BACT Definition and Applicability

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by the regulation or the permit, or the controls achieved in practice. The highest level of the control is then evaluated for technical feasibility.

The five basic steps of a top-down BACT analysis are listed below:

**Step 1: Identify Potential Control Technologies**

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies and controls applied to similar source categories.

**Step 2: Eliminate Technically Infeasible Options**

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering and source-specific factors related to safe and successful use of the controls.

**Step 3: Rank Remaining Control Technologies by Control Effectiveness**

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

**Step 4: Evaluate Most Effective Controls and Document Results**

The fourth step entails an evaluation of energy, environmental and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

**Step 5: Select BACT**

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

**BACT for Particulate Emissions (PM and PM10/PM2.5)**

The following emission units affected by the modification are required to apply Best Available Control Technology (BACT):

(a) Seven (7) Cooling Towers:

| Facility ID | Flow Rate (gallon/minute) |
|---|---|
| Rolling Mill (contact) | 4,000 |
| Rolling Mill (non-contact) | 81,250 |
| #1 Cast (contact) | 5,000 |
| Rolling mill/Caster (contact) | 18,000 |
| Caster Sprays (contact) | 3,500 |
| Rolling Mill (contact) | 8,000 |
| LVD Boiler (contact) | 2,500 |

(b) Three (3) Material Storage Bins/Silos (ID#12a - ID#12c)

The seven (7) cooling towers and three (3) material storage bins/silos (ID#12a - ID#12c) are subject to PSD under IDEM's Self-Disclosure and Environmental Audit Policy, A-002-OE-06-P-R1, Enforcement # 0005 (Effective July 13, 2007).

**Seven (7) Cooling Towers**

A cooling tower is a heat rejection device that transfers waste heat to the atmosphere through the cooling of the water stream to a lower temperature. The type of heat rejection in a cooling tower is termed "evaporative" in that it allows a small portion of the water being cooled to evaporate into a moving air stream to provide significant cooling to the rest of that water stream. As the water circulates through the tower, water droplets/mist containing dissolved solids become airborne and create particulate emissions. Drift droplets have the same concentration of impurities as the water entering the tower.

**Step 1 – Identify Control Options**

The following control technologies were identified to control PM and PM10/PM2.5 emissions:

(a) Drift/Mist Eliminator (including Water Treatment and TDS Removal System)
(b) Total Reduced Solids (TDS) Removal System
(c) Combination of (a) through (c)
(d) Fabric Filters (i.e., baghouses)
(e) Electrostatic Precipitator (ESP)
(f) Scrubbers
(g) Cyclones

**Step 2 – Eliminate Technically Infeasible Control Options, Step 3 – Rank Remaining Control Technologies by Control Effectiveness, Step 4 – Evaluate the Most Effective Controls and Document Results**

(a) Drift/Mist Eliminator with TDS removal System - Drift/Mist Eliminators configuration include cellular or honeycomb, wave form and herringbone (blade type designs), which are made from various materials such as wood installed formed into closely spaced slats, sheets, honeycomb assemblies, or tiles, ceramics fiberglass, metal and plastic. Drift/mist eliminators utilize inertial separation caused by airflow direction changes to remove water droplets/mist from the air stream, like cooling towers.

In conjunction with the drift/mist eliminator the water being recirculated into the cooling tower is demineralized using softener and ion exchange beds for total dissolved solids removal. This option will be further evaluated for control of particulate emissions from cooling tower.

(b) Fabric Filters - Fabric filters, also referred to as baghouses, are used to control emissions of particulate matter and are capable of achieving the highest particulate removal efficiencies of all the particulate control devices. Fabric filters consist of several filtering elements (“bags”), a bag cleaning system, and dust hoppers contained in a main shell structure. Fabric filters remove dust from a gas stream by passing the stream through a porous fabric. The fabric does some of the filtering, but plays a more important role by acting as a support medium for the layer of dust that quickly accumulates on it. The dust layer (“cake”) is responsible for the highly efficient filtering of small particles, but also increases the resistance to gas. They do not have a declining collection effectiveness for smaller particles compared to other control devices. There were no instances identified where this control option was in use for particulate emissions control on cooling towers. In addition, a cooling tower operates by maximizing the interface between the air and water streams, which makes the collection of drifting particles impractical since it would require a collection structure larger than the cooling tower. Therefore, any add-on control device that collects already formed drifting particles is technically infeasible and not considered further as part of this BACT.

(c) ESPs - use an electrostatic field to charge particulate matter contained in the gas stream and then attract and collect the particles on a collection surface of opposite charge and have a very high removal efficiency (99% or better). There were no instances identified where this control option was in use for particulate emissions control on cooling towers. In addition, a cooling tower operates by maximizing the interface between the air and water streams, which makes the collection of drifting particles impractical since it would require a collection structure larger than the cooling tower. Therefore, any add-on control device that collects already formed drifting particles is technically infeasible and not considered further as part of this BACT.

(d) Scrubbers - Wet scrubbers/Wet PM scrubbers remove particles from gas by capturing the particles in liquid droplets (usually water) and separating the droplets from the gas stream. Wet PM scrubbers are configured to create a closely packed dispersion of fine droplets to act as targets for particle capture. The goal is to cause the tiny pollutant particle to be lodged inside the collecting droplet and then to remove the larger droplet from the gas stream. In general, the smaller the target droplet, the smaller the size of particulate that can be captured and the more densely the droplets are packed, the better the probability of capture. These systems have a particulate collection efficiency of 90% or better. There were no instances identified where this control option was in use for particulate emissions control on cooling towers. In addition, a cooling tower operates by maximizing the interface between the air and water streams, which makes the collection of drifting particles impractical since it would require a collection structure larger than the cooling tower.

Therefore, any add-on control device that collects already formed drifting particles is technically infeasible and not considered further as part of this BACT.

(e) Cyclones - Particulate removal in cyclone collectors is achieved through the action of inertial forces, especially centrifugal. As the gas stream enters the top of the cyclone, a vortex is induced as it is forced to travel a circular path. Centrifugal forces cause the heavier particles to concentrate near the outer wall of the cyclone and particle of lesser mass to remain closer to the center of the vortex. Frictional and gravitational forces then act on the particles closest to the wall, causing them to fall toward the bottom of the cyclone, where they are collected in a hopper. Within the lower segment of the cyclone, the direction of the gas-flow vortex is reversed, and an inner ascending vortex is formed. The inner vortex consists of comparatively particulate-free air, which is collected through an outlet duct at the top of the cyclone. Cyclones achieve the lowest particulate removal efficiency of less than 90% of all particulate control devices. There were no instances identified where this control option was in use for particulate emissions control on cooling towers. In addition, a cooling tower operates by maximizing the interface between the air and water streams, which makes the collection of drifting particles impractical since it would require a collection structure larger than the cooling tower. Therefore, any add-on control device that collects already formed drifting particles is technically infeasible and not considered further as part of this BACT.

Although baghouses, ESPs, scrubbers and cyclones are control technologies that are technically feasible to control PM/PM10/PM2.5 emissions from processes, their application in the control of cooling tower particulate emissions have not been demonstrated.

Drift/mist eliminators with TDS removal System are the only technically feasible and only known control for cooling towers to control particulate emissions caused by evaporation of water droplets/mist that contain(s) dissolved solids.

**Step 5 – Select BACT**

A review of USEPA's RACT/BACT/LAER Clearinghouse, Indiana air permits and sources permitted by other states agencies, identified the following with respect to Contact and Non Contact Cooling Towers:

| Plant | Cooling Tower Type | Capacity (gpm) | PM and PM10 Limits (Drift Rate Limit (%)) | Control | Compliance Status | RBLC ID/ Permit No.<br><br>Permitted Date |
|---|---|---|---|---|---|---|
| **SDI, Columbia City Proposed BACT** | | | | | | |
| | Rolling Mill (contact) | 4,000 | PM/PM10 = 0.001 | Drift Eliminator | | Proposed |
| | Rolling Mill (non-contact) | 81,250 | PM/PM10 = 0.001 | Drift Eliminator | | Proposed |
| | #1 Cast (contact) | 5,000 | PM/PM10 = 0.001 | Drift Eliminator | | Proposed |
| | Rolling mill/Caster (contact) | 18,000 | PM/PM10 = 0.003 | Drift Eliminator | | Proposed |
| | Caster Sprays (contact) | 3,500 | PM/PM10 = 0.001 | Drift Eliminator | | Proposed |
| | Rolling Mill (contact) | 8,000 | PM/PM10 = 0.001 | Drift Eliminator | | Proposed |
| | LVD Boiler (contact) | 2,500 | PM/PM10 = 0.005 | Drift Eliminator | | Proposed |
| | | | | | | |
| Competitive Power Ventures, Inc./CPV Maryland, LLC | | | PM/PM10/PM2.5 Limit = 0.0005 | Drift Eliminator | | MD-0040<br>11/12/2008 |
| Ohio River Clean Fuels | | | PM/PM10 Limit = 0.0005 | Drift Eliminator | | OH-0317<br>11/20/2008 |

| Plant | Cooling Tower Type | Capacity (gpm) | PM and PM10 Limits (Drift Rate Limit (%)) | Control | Compliance Status | RBLC ID/ Permit No.<br><br>Permitted Date |
|---|---|---|---|---|---|---|
| | | | Visible Emission = 10% (6-minute average) | | | |
| Aventine - Nebraska | | | PM = 0.0005 | Mist Eliminator | | NE-4006<br>9/27/2007 |
| Great River Energy-North Dakota | Non-contact (cooling boiler water | 80,000 | PM = 0.0005 | Drift Eliminator | Manufacturer's Guarantee | ND-0024<br>9/14/2007 |
| Homeland Energy Solution- Iowa | | 50,000 | PM/PM10 = 0.0005 | Drift Eliminator | | IA-0089<br>8/8/2007 |
| Progress Energy, Florida | | 342,306 | PM = 0.0005 | not indicated | | FL-0294<br>10/12/2007 |
| Archer Daniels Midland, Iowa | | 150,000 | PM/PM10 = 0.0005 | Drift Eliminator | | IA-0088<br>6/29/2007 |
| Progress Energy- Florida | | 660,000 | PM = 0.0005 | Drift Eliminator | | FL-0293<br>4/4/2006 |
| Public Service of Colorado | | 140,650 | PM/PM10 = 0.0005 | Drift Eliminator | | CO -0057<br>7/5/2005 |
| Newmont Nevada Energy | | | PM/PM10 = 0.0005 | Drift Eliminator | | NV-0036<br>5/5/2005 |
| Trigen- Nassau Energy, New York | | | PM/PM10 = 0.0005 | Drift Eliminator | | NY-0093<br>3/31/2005 |
| Dome Valley Energy, Arizona | | 170,000<br>6 cells | PM/PM10 = 0.0005<br><br>VE = 5% | Drift Eliminator | | AZ-0047<br>2/1/2004 |
| Dept. of Solid Waste Mgmt. | | | PM/PM10 = 0.001 | Drift Eliminator | | FL-0284<br>11/3/2006 |
| Ventures Lease | | | PM/PM10 = 0.005 | Drift Eliminator | | LA-0136<br>12/26/2001 |
| Minnesota Steel | | | PM/PM10= 0.005<br>VE = 20%<br>(6-minute average) | Drift Eliminator | | MN-0070<br>9/7/2007 |
| Marathon Garyville Refinery | | 1 @ 30,000<br>1 @ 96,000<br>1 @ 2,500 | PM/PM10 = 0.005 | Drift Eliminator | | LA-0211<br>12/12/2006 |
| Structural Metals | Caster mold cooling tower<br><br>Rolling mill<br><br>Caster spray | | PM/PM10 = 0.20 lb/hr<br><br>PM/PM10 = 0.018 lb/hr<br><br>PM/PM10 = 0.32 lb/hr | Drift Eliminator | | TX-0445<br>1/28/2004 |
| South Texas Elec. Coop. | | | PM/PM10= 0.84 lb/hr | | | TX-0295<br>1/17/2002 |
| Nucor Steel - NC | | | PM =0.008 | | | NC-0113<br>11/23/2004 |
| Nucor, Indiana | Meltshop noncontact<br>Meltshop contact | | PM = 0.005% | | | PSD/SSM 107-16823-00038<br>11/21/2003<br><br>PSD/SSM 107-21359-00038<br>4/27/2006 |

None of the sources in the above table have proposed or successfully implemented any controls besides drift/mist eliminator. The majority of the entries in the above table that are the most stringent BACT limit for PM/PM10 at 0.0005% drift rate are from utilities and biofuel companies. Utilties and biofuel companies are cooling non-process water with lower TDS, which are generally called noncontact cooling towers, while SDI cooling towers are all contact cooling towers except for

one. The high TDS values on SDI's process water is due to its hard groundwater source and partly because it comes in contact with the steel making operations. Therefore, all the BACT limits from the utilities and biofuel companies are not comparable with the SDI cooling towers and have been eliminated from BACT consideration.

Nucor Steel, Indiana is the only steel mill identified with both noncontact and contact type cooling towers. Both types of cooling towers have a BACT limit of 0.005%.

The SDI-proposed BACT limits, ranging from 0.001% to 0.005%, are more stringent or comparable with Nucor. Therefore, SDI's BACT for the cooling towers is as follows:

(a) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2) (PSD Rule: Control Technology Review Requirements), the Permittee shall comply with the following limits and particulate control associated with the cooling towers:

| Cooling Tower ID | BACT PM and PM10 Limits (Drift Rate Limit (%)) | BACT Control |
|---|---|---|
| Rolling Mill (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling Mill (non-contact) | PM/PM10 = 0.001 | Drift Eliminator |
| #1 Cast (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling mill/Caster (contact) | PM/PM10 = 0.003 | Drift Eliminator |
| Caster Sprays (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| Rolling Mill (contact) | PM/PM10 = 0.001 | Drift Eliminator |
| LVD Boiler (contact) | PM/PM10 = 0.005 | Drift Eliminator |

To demonstrate compliance with this BACT requirement, the Permittee shall submit to IDEM, OAQ any available the design specifications of the drift eliminators associated with the cooling towers not later than 180 days after issuance of this permit SSM/PSD 183-27145-00030.

(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2) (PSD Rule: Control Technology Review Requirements), the Permittee shall not use chromium-based water treatment chemicals in any of the cooling towers:

## Material Storage Bins/Silos

The bins/silos are used for storage of the various materials needed in the steel processing.

### Step 1 – Identify Control Options

The following control technologies were identified to control PM/PM10/PM2.5 emissions:

(a) Fabric Filters (i.e., baghouses)
(b) Scrubbers
(c) Cyclones
(d) Electrostatic Precipitator (ESP)

### Step 2 – Eliminate Technically Infeasible Control Options

The test for technical feasibility of any control option is whether it is both available and applicable to reducing PM/PM10/PM2.5 emissions from the material storage bins/silos. The previously listed information resources were consulted to determine the extent of applicability of each identified control alternative.

(a) Fabric Filters - Fabric filters, also referred to as baghouses, are used to control emissions of particulate matter and are capable of achieving the highest particulate removal efficiencies of all the particulate control devices. Fabric filters consists of several filtering elements ("bags"), a bag cleaning system, and dust hoppers contained in a main shell structure. Fabric filters remove dust from a gas stream by passing the stream through a porous fabric. The fabric does some of the filtering, but plays a more important role by acting as a support medium for the layer of dust that quickly accumulates on it. The dust layer ("cake") is responsible for the highly efficient filtering of small particles, but also increases the resistance to gas. They do not have a declining collection effectiveness for smaller particles compared to other control devices. SDI's material storage bin/silos are controlled by bin vent filters, which are smaller type baghouses.

(b) Scrubbers - Wet scrubbers/Wet PM scrubbers remove particles from gas by capturing the particles in liquid droplets (usually water) and separating the droplets from the gas stream. Wet PM scrubbers are configured to create a closely packed dispersion of fine droplets to act as targets for particle capture. The goal is to cause the tiny pollutant particle to be lodged inside the collecting droplet and then to remove the larger droplet from the gas stream. In general, the smaller the target droplet, the smaller the size of particulate that can be captured and the more densely the droplets are packed, the better the probability of capture. This control technology has a particulate collection efficiency of 90% or better. Although this control technology is technically feasible for the storage bins/silos, bin vent filters are considered more efficient than this control technology.

(c) Cyclones - Particulate removal in cyclone collectors is achieved through the action of inertial forces, especially centrifugal. As the gas stream enters the top of the cyclone, a vortex is induced as it is forced to travel a circular path. Centrifugal forces cause the heavier particles to concentrate near the outer wall of the cyclone and particle of lesser mass to remain closer to the center of the vortex. Frictional and gravitational forces then act on the particles closest to the wall, causing them to fall toward the bottom of the cyclone, where they are collected in a hopper. Within the lower segment of the cyclone, the direction of the gas-flow vortex is reversed, and an inner ascending vortex is formed. The inner vortex consists of comparatively particulate-free air, which is collected through an outlet duct at the top of the cyclone. Cyclone collectors are considered technically feasible. Cyclones achieve the lowest particulate removal efficiency of less than 90% of all particulate control devices. Although this control technology is technically feasible for the storage bins/silos, bin vent filters are considered more efficient than this control technology.

(d) ESPs – ESPs use an electrostatic field to charge particulate matter contained in the gas stream, then attract and collect the particles on a collection surface of opposite charge. ESPs have a very high removal efficiency (99% or better). This control technology is not technically feasible for the storage bins/silos because of the low gas stream and the intermittent nature of the emissions. Therefore, no further evaluation will be made on this control technology.

**Step 3 – Rank Remaining Control Technologies by Control Effectiveness**

The following remaining control options are in order of descending control effectiveness:

(a) Fabric filters or baghouses or bin vent filters- 99.9%

(b) Scrubbers - 90% or more

(c) Cyclones - 50 to 90%

**Step 4 – Evaluate the Most Effective Controls and Document Results**

Fabric filtration or bin vent filters is the predominant control option for abatement of particulate emissions from storage bins/silos due to their effectiveness. ESPs, scrubbers and cyclones are not considered as effective as fabric filters or baghouses or bin vent filters for controlling particulate emissions from storage bins/silos.

**Step 5 – Select BACT**

A review of USEPA's RACT/BACT/LAER Clearinghouse, Indiana air permits and sources permitted by other states agencies, identified the following with respect to storage bins/silos:

| Company | Bins/Silos | Capacity | PM/PM10 Limit (gr/dscf) | RBLC ID / Permit No.<br><br>Permitted Date |
|---|---|---|---|---|
| SDI, Columbia City Proposed BACT | | | | |
| | North Hi Cal lime silo | 275,000 | 0.01 (each) | Proposed |
| | North Dolo Lime silo | 250,000 | | |
| | North Proslag silo | 325,000 | | |
| | North Charge carbon silo | 200,000 | | |
| | Dolo lime fines silo | 250,000 | | |
| | LMF/Hi Cal Lime silo | 250,000 | | |
| | Injection carbon silo | 270,000 | | |
| | South charge carbon silo | 200,000 | | |
| | South Hi Cal lime silo | 275,000 | | |
| | South Dolo lime silo | 250,000 | | |
| | South Proslag silo | 375,000 | | |
| | EAF dust silo | 196.4 cu.ft. | | |
| Minnesota Steel | Dri pellet silos<br>Limestone storage silo<br>Ore storage silos | | 0.0025<br>(3-hour average)<br><br>Opacity = 5%<br>(6-minute average)<br><br>each silo | MN-0070<br>9/7/2007 |
| Nucor Corporation, Nucor Steel Arkansas | Hydrated Lime silo | | 0.003 | 12/12/2007 |
| Nucor Arkansas | Carbon silo | | 0.01 | 6/9/2003 |
| Great River Energy - North Dakota | Coal silo<br>Lime silo<br>Recycled ash<br>Waste ash | | 0.005 each | ND-0024<br>9/14/2007 |
| MidAmerican Energy - Iowa | Flyash silo<br>Activated carbon silo<br>Lime silo | | 0.005<br>0.005<br><br>0.01 | 6/17/2003 |
| University of | Ash silo | 12 tons/hr | 0.005 | 5/3/2007 |

| Company | Bins/Silos | Capacity | PM/PM10 Limit (gr/dscf) | RBLC ID / Permit No.<br><br>Permitted Date |
|---|---|---|---|---|
| Northern Iowa | | | | |
| Homeland Energy Solution - Iowa | Coal storage silo | 5,000 tons/hr | 0.005 | IA-0089<br>8/8/2007 |
| Tate & Lyle - Iowa | Lime silo<br><br>Salt silo | 1000 tons<br><br>1,000 $ft^3$ | 0.005 | 9/19/2008 |
| Ohio River Clean Fuels | Coal silos<br><br>Biomass silos (woodchips, sawdust) | | 0.005 | OH-0317<br>11/20/2008 |
| Omaha Public Power | Activated carbon silo | | 0.01 | 3/9/2005 |
| SDI, Columbia City | 9 material storage silos | | 0.01 each<br><br>Opacity = 3% | PSD 183-10097-00030<br>7/7/1999 |
| Arkansas Lime Company | Lime storage silo | | 0.015 | 8/30/2005 |
| Manitowac Public Utility | Ash storage silo | | 0.02 | |
| Newmont Nevada Energy | Ash silo<br>Lime silo<br>Carbon silo | | 0.02 each | NV-0036<br>5/5/2005 |
| Nucor North Carolina | Raw materials silo | | 0.01 | NC-0113<br>11/23/2004 |
| Nucor - Indiana | LMS baghouse silo<br>Blasting media silo | | 0.01 each | IN-0090<br>1/19/2001 |
| Nucor Texas | Lime and dolomite silo | | 0.09 lb/hr | 5/5/2000 |
| Chaparral Steel-Texas | Fine and coarse sand silo | | 0.14 ton/yr | TX-0332<br>4/24/2000 |

**Conclusion:**

Based on the RBLC entries, older BACTs were less stringent than those bins/silos permitted recently. Nucor Corporation, Nucor Steel - Blytheville, Arkansas has a carbon silo permitted on June 9, 2003 with a PM/PM10 BACT limit of 0.02 grain per dry standard cubic foot (gr/dscf). Later, its hydrated lime silo was permitted with a more stringent PM/PM10 BACT limit of 0.003 gr/dscf. These silos are ducted to the EAF Baghouse.

Minnesota Steel has the most stringent PM/PM10 BACT limit for Dri pellet silo of 0.0025 gr/dscf using a baghouse as control with opacity limited to 5% based on a six (6) minute average. Although this BACT has not had a compliance demonstration yet, its requirement as the most stringent BACT limit for a storage silo is considered presumptive BACT for this type of facility.

SDI, Columbia City, Indiana's existing material storage bins/silos have a PM/PM10 BACT limit of 0.01 gr/dscf and visible emissions limited to 3% opacity based on a six (6) minute average. SDI has the most stringent opacity requirement.

Ducting SDI's three (3) material storage bins/silos (ID#12a-ID#12c) into the Meltshop EAF Baghouse or installing a separate baghouse to meet the Nucor Steel, Blytheville, Arkansas BACT or the Minessota Steel BACT will be cost prohibitive due to the low particulate emissions from these bins/silos.

Therefore, the BACT for SDI's three (3) material storage bins/silos (ID#12a-ID#12c) is the following:

(a) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the PM/PM10/PM2.5 emissions from each of the three (3) material storage bins/silos (ID#12a-ID#12c) shall be limited to 0.01 grain per dry standard cubic foot (gr/dscf).

(b) Pursuant to SSM/PSD 183-27145-00030 and 326 IAC 2-2-3(2), (PSD Rule: Control Technology Review Requirements), the visible emissions from each of the of the three (3) material storage bins/silos (ID#12a-ID#12c) shall not exceed three percent (3%) opacity based on a six (6) minute average.

# Air Quality Analysis - Appendix C

# Steel Dynamics Incorporated (SDI)

# Columbia City, Indiana (Whitley County)

**SSM/PSD: 183-27145-00030**

**SPM: 183-27483-00030**

## Proposed Project

Steel Dynamics, Inc. (SDI), the Structural and Rail Division, has submitted a request for a significant source modification of its facility in Columbia City, Indiana. An increase in the Particulate Matter less than 10 microns ($PM_{10}$) emissions of 16.52 tons will result from this modification. The increase in $PM_{10}$ emissions will result from the seven (7) cooling towers and the three (3) material storage silos.

Keramida Environmental, Inc., in Indianapolis, Indiana, prepared the Prevention of Significant Deterioration (PSD) permit application for SDI. The Modeling Section in the Office of Air Quality (QAQ) received the permit application on November 13, 2008. This technical support document provides the air quality analysis review of the permit application.

## Analysis Summary

Based on the potential emissions after controls, a Prevention of Significant Deterioration (PSD) air quality analysis was triggered for $PM_{10}$. The significant impact analysis determined that modeling concentrations for $PM_{10}$ did not exceed the significant impact levels. Based on the modeling results, the proposed modification will not have a significant impact upon federal air quality standards.

## Air Quality Impact Objectives

The purpose of the air quality impact analysis in the permit application is to accomplish the following objectives. Each objective is individually addressed in this document in each section outlined below.

A. Establish which pollutants require an air quality analysis based on PSD significant emission rates.

B. Provide analyses of actual stack heights with respect to Good Engineering Practice (GEP), the meteorological data used, a description of the model used in the analysis, and the receptor grid utilized for the analyses.

C. Determine the significant impact level and the area impacted by the source's emissions.

D. Summarize the Air Quality Analysis

## Section A - Pollutants Analyzed for Air Quality Impact

### Applicability

The PSD requirements, 326 IAC 2-2, apply in attainment and unclassifiable areas and require an air quality impact analysis of each regulated pollutant emitted in significant amounts by a major stationary

source or modification. Significant emission levels for each pollutant are defined in 326 IAC 2-2-1 and in the Code of Federal Regulations (CFR) 52.21(b)(23)(i).

### Proposed Project Emissions

Particulate Matter less than 10 microns ($PM_{10}$), Carbon Monoxide, Nitrogen Dioxide ($NO_2$), and Sulfur Dioxide ($SO_2$) are the pollutants that will be emitted from the revision of Steel Dynamics emission limits. An air quality analysis is required for the pollutant $PM_{10}$ because potential emissions after controls exceed the significant emission rate as shown in Table 1:

**TABLE 1**
**Significant Emission Rates for PSD**

| POLLUTANT | POTENTIAL EMISSION RATE (Source Totals) | SIGNIFICANT EMISSION RATE | PRELIMINARY AQ ANALYSIS REQUIRED |
|---|---|---|---|
| | (tons/year) | (tons/year) | |
| $PM_{10}$ | 16.52 | 15 | Yes |

## Section B – Good Engineering Practice (GEP), Met Data, Model Used, Receptor Grid

### Stack Height Compliance with Good Engineering Practice (GEP)

#### Applicability

Stacks should comply with GEP requirements established in 326 IAC 1-7-4. If stacks are lower than GEP, excessive ambient concentrations due to aerodynamic downwash may occur. Dispersion modeling credit for stacks taller than 65 meters (213 feet) is limited to GEP for the purpose of establishing emission limitations. The GEP stack height takes into account the distance and dimensions of nearby structures, which affect the downwind wake of the stack. The downwind wake is considered to extend five times the lesser of the structure's height or width. A GEP stack height is determined for each nearby structure by the following formula:

$$Hg = H + 1.5L$$

Where: Hg is the GEP stack height
H is the structure height
L is the structure's lesser dimension (height or width)

### Existing Stack

Since the existing stack height of the unit for which the modification is proposed is below GEP stack height, the effect of aerodynamic downwash will be accounted for in the air quality analysis for the project.

**Meteorological Data**

The meteorological data used in the American Meteorological Society Environmental Protection Agency Regulatory Model (AERMOD) consisted of 1988 through 1992 surface data from the Fort Wayne, Indiana National Weather Service (NWS) station merged with the upper air data from the Dayton, Ohio NWS station. The meteorological data was preprocessed into AERMOD ready format by the Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) using U.S.EPA's AERMET.

**Model Description**

Keramida Environmental Inc. used AERMOD, Version 07026. OAQ used the same model version to determine maximum off-property concentrations or impacts for each pollutant. All regulatory default options were utilized in the U.S. EPA approved model, as listed in the 40 Code of Federal Register Part 51, Appendix W "Guideline on Air Quality Models".

**Receptor Grid**

The receptor grid extended to approximately 10 kilometers from the plant. Fence line receptors were closely spaced at 30 to 50 meters along the plant fence line and 100 meters out to a distance of 600 meters from the plant property lines to identify the influence of aerodynamic building downwash. A total of 1286 discrete receptors were used in the modeling analysis.

## Section C - Significant Impact Level/Area (SIA) and Background Air Quality Levels

A significant impact analysis was conducted to determine if the source exceeded the PSD significant impact levels (concentrations). If the source's concentrations exceed these levels, further air quality analysis is required. Refined modeling for $PM_{10}$ was not required because the results did not exceed significant impact levels. Significant impact levels are defined by the following time periods in Table 2 below with all maximum-modeled concentrations from the worst case operating scenarios.

**TABLE 2**
**Significant Impact Analysis**

| POLLUTANT | TIME AVERAGING PERIOD | MAXIMUM MODELED IMPACTS (ug/m$^3$) | SIGNIFICANT IMPACT LEVEL (ug/m$^3$) | REFINED AQ ANALYSIS REQUIRED |
|---|---|---|---|---|
| $PM_{10}$ | 24 Hour | 3.6 | 5 | No |
| $PM_{10}$ | Annual | 0.6 | 1 | No |

**Pre-construction Monitoring Analysis**

**Applicability**

The PSD requirements, 326 IAC 2-2-4, require an air quality analysis of the new source or the major modification to determine if the pre-construction monitoring threshold is triggered. In most cases, post

construction monitoring can satisfy this requirement if the pre-construction monitoring threshold has been exceeded.

**Modeling Results**

The modeling results were compared to the PSD preconstruction monitoring thresholds. The modeling results are listed in Table 3 below.

**TABLE 3**
**Preconstruction Monitoring Analysis**

| POLLUTANT | TIME AVERAGING PERIOD | MAXIMUM MODELED IMPACTS (ug/m$^3$) | DEMINIMIS LEVEL (ug/m3) | ABOVE DE MINIMIS LEVEL |
|---|---|---|---|---|
| $PM_{10}$ | 24 Hour | 3.6 | 13 | No |

The criteria pollutant, $PM_{10}$, did not trigger the preconstruction monitoring requirement. As a result, no preconstruction monitoring requirement for $PM_{10}$ is required for this PSD major modification.

## Part D - Summary of Air Quality Analysis

Steel Dynamics Incorporated has applied for a modification of their facility with an increase of their $PM_{10}$ emissions. Keramida Environmental Inc. of Indianapolis, Indiana prepared the PSD application. Whitley County is designated as attainment for all criteria pollutants. $PM_{10}$ emission rates associated with the proposed facility exceeded the respective significant emission rates. Modeling results taken from the latest version of the AERMOD model showed $PM_{10}$ impacts were predicted to be less than the significant impact levels. The proposed modification will have no significant impact.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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*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**


**SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

TO: Bill Bougher
Steel Dynamics, Inc
26001 S 700 E
Columbia City, IN 46725

DATE: January 9, 2013

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

SUBJECT: Final Decision
Significant Permit Modification
183-27483-00030

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:
John Nolan (Vice President & General Manager)
Keramida Environmental, Inc
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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**Commissioner**

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


January 9, 2013

TO: Peabody Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Steel Dynamics, Inc**
**Permit Number: 183-27483-00030**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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


TO: Interested Parties / Applicant

DATE: January 9, 2013

RE: Steel Dynamics/ 183-27483-00030

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