



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

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

TO: Interested Parties / Applicant  
DATE: January 7, 2009  
RE: Steel Dynamics, Inc. / 063 - 20969 - 00037  
FROM: Matthew Stuckey, Deputy Branch Chief  
Permits Branch  
Office of Air Quality

### Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, 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 impracticable 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.



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100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

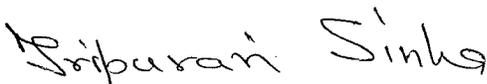
## Part 70 Operating Permit OFFICE OF AIR QUALITY

**Steel Dynamics, Inc. – Engineered Bar Products Division  
8000 North County Road 225 East  
Pittsboro, Indiana 46167**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

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

Operation Permit No.: T063-20969-00037	
Issued by:  Tripurari P. Sinha, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: January 7, 2009  January 7, 2014

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## 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(15)][326 IAC 2-7-1(22)]

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

Source Address:	8000 North County Road 225 East, Pittsboro, IN 46167
Mailing Address:	8000 North County Road 225 East, Pittsboro, IN 46167
General Source Phone Number:	(317) 892-7000
SIC Code:	3312
County Location:	Hendricks
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Nonattainment NSR Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

- (a) One (1) batch mode EAF, with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted to be modified in 2004, utilizing a fourth hole duct or direct shell evacuation (DSE) system venting to a baghouse (EAF Baghouse) and a canopy hood for overhead roof exhaust. The EAF is equipped with a natural gas fired oxy-fuel burner. The EAF is an affected facility under 40 CFR 60, Subpart AAa and 40 CFR 63, Subpart YYYYYY.
- (b) One (1) Ladle Metallurgy station (LMS), with a nominal capacity of 125 tons/hour originally permitted in 1996 and permitted to be modified in 2004 and exhausting to its own baghouse (LMS Baghouse).  
  
Both the EAF Baghouse and LMS Baghouse exhaust to the same common stack 1. The meltshop does not have a roof monitor.
- (c) The EAF dust is conveyed from the EAF Baghouse to EAF Dust Silo #8 that vents through stack 3, identified as EAF Dust Handling System, originally permitted in 1996 and permitted to be modified in 2004. The silo is equipped with a bin vent filter. The EAF Dust Handling System is an affected facility under 40 CFR 60, Subpart AAa.
- (d) One (1) Continuous Caster with a nominal casting rate of 125 tons/hour originally permitted in 1996 and permitted to be modified in 2004. This Caster and the LMS are located in a separate room from the EAF and the tundish is covered with a lid. The Continuous Caster vents to stacks 6a and 6b and fugitive emissions exhaust to a roof monitor.

- (e) One (1) Reheat Furnace, permitted in 1996 and permitted to be modified in 2004 and 2008, with a nominal heat input capacity of 310 MMBtu/hr, equipped with low NO<sub>x</sub> burners, exhausting to stack 2.
- (f) Two (2) natural gas fueled low NO<sub>x</sub> Tundish Preheaters, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.
- (g) Five (5) natural gas fueled low NO<sub>x</sub> LMS Ladle Preheaters/Dryers, each with nominal capacity of 7.5 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.
- (h) Two (2) natural gas fueled low NO<sub>x</sub> Tundish Dryers, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.
- (i) Three (3) natural gas fueled low NO<sub>x</sub> Tundish Nozzle Preheaters, with nominal total capacity of 6 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.
- (j) One (1) vacuum tank degasser (VTD), nominally rated at 125 tons/hour, equipped with a 38.4 MMBTU/hour flare, permitted in 1996.
- (k) One (1) VTD Boiler (permitted in 2007), rated at a nominal capacity of 69.0 MMBTU/hr, equipped with natural gas fueled low NO<sub>x</sub> burners, and exhausting to stack 8. The VTD Boiler is an affected facility under 40 CFR 60, Subpart Dc.
- (l) Supporting operations consisting of:
  - (1) Caster cutting torches with nominal total capacity of 6.3 MMBtu/hour which use natural gas as fuel, with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted to be modified in 2004; and
  - (2) Sawing operations (bar cutting), venting to a baghouse at a nominal flow rate of 30,000 dscf/min that exhausts inside the building, with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted to be modified in 2004.
- (m) Eight (8) silos to store lime, carbon, and flux additives, originally permitted in 1996 and permitted to be modified in 2004, and identified as Silos #1 through 7 and 9. The silos vent through stacks 4a-4d and 5a-5d. Each silo is equipped with a bin vent filter.
- (n) Scrap material handling, lime handling, carbon handling originally permitted in 1996 and permitted to be modified in 2004.
- (o) Slag processing and handling consisting of slag handling, slag dumping, slag pots, slag crushing, slag screening, drop ball breaking, conveyors, and storage piles. The slag processing and handling was originally permitted in 1996 and permitted to be modified in 2004 and has a nominal rate of 300 tons/hour. The slag handling operations are performed by an on-site contractor.
- (p) Transportation on paved roadways, paved parking lots, unpaved roadways, and other unpaved areas around slag piles and steel scrap piles originally permitted in 1996 and permitted to be modified in 2004.
- (q) Contact and Non-Contact Cooling towers, with a nominal capacity of 44,000 gal/min originally permitted in 1996 and permitted to be modified in 2004:

Tower 1 -- Meltshop Non-Contact Cooling Tower nominal 26,700 gal/min,

Tower 2 -- VTD Contact Cooling Tower                      nominal 2,000 gal/min,  
Tower 3 -- Bar Mill Contact Cooling Tower                nominal 9,700 gal/min,  
Tower 4 -- Bar Mill Non-Contact Cooling Tower        nominal 5,600 gal/min,

- (r) Diesel fueled Emergency Generator(s), with total nominal capacity of 485 HP installed in 2004.
- (s) Five (5) natural gas fired heat treat furnaces, each furnace has a nominal heat input capacity of 11.6 MMBtu per hour and a nominal capacity of 20 tons of steel input per charge. The furnaces were permitted in 2006.

Heat Treat Furnace ID	Stack ID
HTF 1	HT1
	HT2
HTF 2	HT3
	HT4
HTF 3	HT5
	HT6
HTF 4	HT7
	HT8
HTF 5	HT9
	HT10

- (t) One (1) quench tank.

**A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(15)]**

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

1. Specifically regulated insignificant activities, as defined in 326 IAC 2-7-1(21); including the following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing, cutting torches, soldering, welding. [326 IAC 6-3-2]
2. Other Insignificant Activities
  - (a) Space heaters, process heaters, or boilers using the following fuels:
    - (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
    - (2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
  - (b) Fuel dispensing activities, including the following:
    - (1) 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.
    - (2) A petroleum fuel, other than gasoline dispensing facility having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

- (c) The following VOC and HAP storage containers:
  - (1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.
  - (2) Vessels storing lubricating oils.
- (d) Refractory storage not requiring air pollution control equipment.
- (e) Equipment used exclusively for filling drums, pails, or other packaging containers with the following: Lubricating oils, Waxes and Greases.
- (f) Cleaners and solvents characterized as: 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).
- (g) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
- (h) Noncontact cooling tower systems with the following: Forced and induced draft cooling tower system not regulated under a NESHAP.
- (i) Heat exchanger cleaning and repair.
- (j) Process vessel degassing and cleaning for internal repairs.
- (k) Paved and unpaved roads and parking lots with public access.
- (l) 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.
- (m) Coal bunker and coal scale exhausts and associated dust collector vents.
- (n) Purging of gas lines and vessels that are related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (o) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (p) Blowdown for the following: Sight glass; Boiler; Cooling tower; Compressors; and Pumps; and cooling towers.
- (q) Gasoline generators not exceeding 110 horsepower
- (r) Diesel generators not exceeding 1600 horsepower.

- (s) Insignificant supporting operations consisting of:
- (1) Water descaler, originally permitted in 1996 and permitted to be modified in 2004;
  - (2) Roughing mill, originally permitted in 1996 and permitted to be modified in 2004;
  - (3) Finishing mill, originally permitted in 1996 and permitted to be modified in 2004;
  - (4) Cooling bed, originally permitted in 1996 and permitted to be modified in 2004;
  - (5) Shipping originally permitted in 1996 and permitted to be modified in 2004; and
  - (6) Storage originally permitted in 1996 and permitted to be modified in 2004.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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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]**

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

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

- 
- (a) This permit, T063-20969-00037, 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]**

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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]**

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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)]**

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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)]**

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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)]**

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

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

- (a) Where specifically designated by this permit, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form or another form meeting the requirements of 326 IAC 2-7-4(f), with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

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

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

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

and

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

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

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

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

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) for each facility as described in 326 IAC 1-6-3. At a minimum, the PMP shall include:
- (1) Identification of the individual(s) (by job title or description) 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.

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to a violation of any limitation on emissions for that unit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 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]**

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- (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 Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

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

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

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

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

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

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- (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]**

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- (a) All terms and conditions of permits established prior to T063-20969-00037 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
  - (2) revised under 326 IAC 2-7-10.5, or
  - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

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

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

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

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

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

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

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

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

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

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

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

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
  - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

- (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the reasonable deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

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

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

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

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

and

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

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

(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).

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

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

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

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

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

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

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

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

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

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

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

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

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

#### C.1 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 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. 326 IAC 4-1-3 (a) (2) (A) and (B) are not federally enforceable.

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

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

#### C.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 included as Attachment B. The provisions of 326 IAC 6-5 are not federally enforceable.

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

The Permittee shall comply with 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]**

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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]**

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

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

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
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).
- (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. The extension request submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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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)]**

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

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

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

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

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

**C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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

**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]**

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on May 11, 2003.
- (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(12)] [40 CFR 68]**

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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]**

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- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

- (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; 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 maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

**C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, not later than thirty (30) days after receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

**C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]**

- (a) Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 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 the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

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

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- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented not later than ninety (90) days after permit issuance.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit at a major stationary source, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the method specified in 326 IAC 2-2-1(rr)(2)(A) and/or 326 IAC 2-3-1(mm)(2)(A), as applicable, for calculating “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
  - (1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain a record of the following information:
    - (A) A description of the project.
    - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
  - (i) Baseline actual emissions;
  - (ii) Projected actual emissions;
  - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
  - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the method specified in 326 IAC 2-2-1(rr)(2)(A) and/or 326 IAC 2-3-1(mm)(2)(A), as applicable for calculating “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
  - (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
  - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.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]

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent as set out at Condition B.15 – Deviations from Permit Requirements and Conditions.
- (b) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted no later than thirty (30) days after the end of the reporting period. Unless otherwise specified in this permit, all reports required in Section D do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria:
  - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and
  - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (g) Then the Permittee shall submit the report for a project at an existing emissions unit no later than sixty (60) days after the end of the year, which shall contain the following:
  - (1) The name, address, and telephone number of the major stationary source.
  - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
  - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
  - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

- (h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, 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**

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

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

## SECTION D.1

## EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) batch mode EAF, with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted to be modified in 2004, utilizing a fourth hole duct or direct shell evacuation (DSE) system venting to a baghouse (EAF Baghouse) and a canopy hood for overhead roof exhaust. The EAF is equipped with a natural gas fired oxy-fuel burner. The EAF is an affected facility under 40 CFR 60, Subpart AAa and 40 CFR 63, Subpart YYYYYY.
- (b) One (1) Ladle Metallurgy station (LMS), with a nominal capacity of 125 tons/hour originally permitted in 1996 and permitted to be modified in 2004 and exhausting to its own baghouse (LMS Baghouse).  
  
Both the EAF Baghouse and LMS Baghouse exhaust to the same common stack 1. The meltshop does not have a roof monitor.
- (c) The EAF dust is conveyed from the EAF Baghouse to EAF Dust Silo #8 that vents through stack 3, identified as EAF Dust Handling System, originally permitted in 1996 and permitted to be modified in 2004. The silo is equipped with a bin vent filter. The EAF Dust Handling System is an affected facility under 40 CFR 60, Subpart AAa.

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

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

#### D.1.1 EAF and LMS Limitations PSD BACT [326 IAC 2-2-3] [326 IAC 8-1-6]

Pursuant to PSD SSM 065-22329-00037 issued on March 21, 2007 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following BACT requirements:

- (a) Steel production shall not exceed a maximum production rate of 1,095,000 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
- (b) The sulfur dioxide (SO<sub>2</sub>) emissions from the EAF Baghouse/LMS Baghouse Stack shall not exceed 190 pounds per hour averaged over a 24-hour block period.
- (c) The EAF Baghouse and LMS Baghouse shall exhaust to a common stack.
- (d) Nitrogen oxide (NO<sub>x</sub>) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.35 pound per ton of steel produced and 43.75 pounds of NO<sub>x</sub> per hour.
- (e) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 2.0 pounds per ton of steel produced and 250 pounds of CO per hour, based on a 3-hour block average.
- (f) Volatile organic compound (VOC) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.09 pounds per ton of steel produced and 11.5 pounds of VOC per hour. This VOC limit also satisfies the requirements under 326 IAC 8-1-6.

- (g) Filterable particulate matter (PM) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.0018 grains per dry standard cubic foot (gr/dscf).
- (h) Filterable and condensable PM<sub>10</sub> emissions from the EAF Baghouse shall not exceed 0.0052 gr/dscf.
- (i) Visible emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 3% opacity, based on a 6-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).
- (j) Visible emissions from the EAF Dust Handling system shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (k) Fugitive emissions from the EAF shall not exceed 3% opacity when emitted from any building opening, based on a 6-minute average as determined in 326 IAC 5-1-4.

**D.1.2 PSD Minor Limits [326 IAC 2-2]**

Pursuant to PSD SSM 065-22329-00037 issued on March 21, 2007, the Permittee shall emit less than the following emission rates from the EAF Baghouse:

Pollutant	Emission Rate (lb/hr)	PSD Significant Level (tons/year)
Lead	0.134	0.6
Beryllium	5.75x10 <sup>-5</sup>	0.0004
Fluorides	0.68	3.0
Mercury	0.023	0.1

Compliance by the Permittee with these limitations makes the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

**D.1.3 PSD BACT Control and Work Practices [326 IAC 2-2-3]**

Pursuant to PSD SSM 065-22329-00037 issued on March 21, 2007 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) The EAF shall be equipped and operated with oxy fuel burners.
- (b) The EAF shall be controlled by a direct shell evacuation (DSE) system and canopy hood.
- (c) VOC emissions shall be controlled through a scrap management program. All grades of scrap shall contain no observable non-ferrous metals, or non-metallics, and shall be free of excessive dirt, oil, grease, and tin plate. Heavily oiled scrap shall not be used.

The Permittee shall implement the scrap management plan (SMP) attached to this permit (Attachment A - SMP).

- (d) Good working practices shall be observed.

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

A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these units and control devices.

## Compliance Determination Requirements

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

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- (a) Pursuant to PSD SSM063-22329-00037, issued March 21, 2007, 326 IAC 2-2 and 326 IAC 2-7-6(6), the EAF Baghouse for particulate control shall be in operation and control particulate emissions at all times that the EAF is in operation.
- (b) Pursuant to PSD SSM063-22329-00037, issued March 21, 2007; and 326 IAC 2-2, the LMS Baghouse for particulate control shall be in operation and control particulate emissions at all times that the LMS is in operation.
- (c) Pursuant to PSD SSM063-22329-00037, issued March 21, 2007 and 326 IAC 2-2, fugitive particulate emissions generated during EAF operations shall be captured by the roof canopies or contained and collected within the meltshop.
- (d) There shall be no roof monitor in the Meltshop.

### D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [326 IAC 2-2]

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- (a) Pursuant to 326 IAC 2-2, prior to October 20, 2009, the Permittee shall perform testing on the common EAF Baghouse/LMS Baghouse stack for the following:
  - (1) Filterable PM, and
  - (2) NO<sub>x</sub>
- (b) The Permittee shall perform PM<sub>2.5</sub> and PM<sub>10</sub> testing of the common EAF Baghouse/LMS Baghouse stack not later than 180 days after final promulgation of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. PM<sub>10</sub> and PM<sub>2.5</sub> includes filterable and condensable PM.
- (c) During an emissions test, any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures).
- (d) The PM and NO<sub>x</sub> tests shall be performed using methods as approved by the Commissioner.
- (e) The PM, PM<sub>10</sub>, and PM<sub>2.5</sub> tests shall be repeated at least once every 5 years, and NO<sub>x</sub> tests shall be repeated at least once every 2.5 years from the date of a valid compliance demonstration.
- (f) Section C - Performance Testing contains general performance testing requirements.

### D.1.7 CO and SO<sub>2</sub> Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5]

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- (a) Pursuant to PSD SSM 063-22329-00037 issued on March 21, 2007, 326 IAC 2-2 and 326 IAC 3-5-1(d), the Permittee shall calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring CO and SO<sub>2</sub> emissions rates in pounds per hour from the common EAF Baghouse/LMS Baghouse stack 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) and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

- (c) To satisfy the certification requirement in Condition D.1.7(a), the Permittee may choose to certify the SO<sub>2</sub> CEMS pursuant to Condition D.1.7(a) using either the RATA method or the method provided in 40 CFR Part 60, Appendix B: Performance Specification 2 – Specifications and Test Procedures for SO<sub>2</sub> and NO<sub>x</sub> Continuous Emission Monitoring Systems in Stationary Sources, Section 16. Compliance with Condition D.1.7(a) can be demonstrated by passing either method.

**D.1.8 Continuous Opacity Monitoring (COM) [326 IAC 3-5] [40 CFR 60.273a] [40 CFR 64]**

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

- (a) The Permittee shall calibrate, certify, operate, and maintain a continuous monitoring system and related equipment to measure opacity from the common EAF Baghouse/LMS Baghouse stack 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) and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.
- (c) Compliance with this condition and conditions D.1.11 and D.1.12 satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

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

**D.1.9 Total Hydrocarbon Continuous Emission Rate Monitoring Requirement**

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- (a) Pursuant to PSD SSM 063-22329-00037, issued on March 21, 2007, 326 IAC 2-2, and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain a continuous emissions monitoring system (CEMS) for measuring total hydrocarbons emissions rates in pounds per hour from the EAF Baghouse/LMS Baghouse stack, 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) and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.
- (c) The Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances whenever a 3-hour block average THC ppm reading is greater than the maximum THC ppm concentration measured during the most recent stack test.
- (d) The Permittee may certify the THC CEMS pursuant to Condition D.1.9(a) using either the RATA method or the method provided in 40 CFR Part 60, Appendix B: Performance Specification 8A – Specifications and Test Procedures for Total Hydrocarbon Continuous Monitoring Systems in Stationary Sources. Compliance with the certification requirement in Condition D.1.9(a) can be demonstrated by passing either the RATA method or the method provided in 40 CFR Part 60, Appendix B: Performance Specification 8A.

**D.1.10 Maintenance of CEMS [326 IAC 2-7-5(3) (A) (iii)]**

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- (a) In the event that a breakdown of the CO or SO<sub>2</sub> continuous emission monitoring system (CEMS) occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

- (b) Whenever the CO CEMS is malfunctioning or will be down for calibration, maintenance or repairs for a period of more than twenty-four (24) hours, the Permittee shall perform once per day operational status inspections of the fourth hole duct or direct shell evacuation (DSE) 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.
- (c) Whenever the SO<sub>2</sub> CEMS is malfunctioning or will be down for calibration, maintenance, or repairs for a period of more than twenty-four (24) hours, the Permittee shall monitor and record the sulfur content of the charge carbon and injection carbon added to the EAF. Vendor certifications or analyses may be used to verify the sulfur content of the charge carbon and injection carbon.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2 and 326 IAC 3-5.

D.1.11 Maintenance of COMS [326 IAC 2-7-5(3) (A) (iii)] [326 IAC 3-5] [40 CFR 60.273a] [40 CFR 64]

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

- (a) 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.
- (b) In the event that a breakdown of the COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (c) Whenever the COMS is malfunctioning or down for maintenance, or repairs for more than twenty-four (24) hours, the Permittee shall provide a certified opacity reader to take visible emission readings from the combined EAF/LMS stack.
  - (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 COMS 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 the COMS is placed back in service.
  - (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 in accordance with Section C – Response to Excursions or Exceedances. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.
  - (5) Any opacity Exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a COM system pursuant to 326 IAC 2-2, 326 IAC 3-5, and 40 CFR 60.273a.
- (e) Compliance with this condition and conditions D.1.8 and D.1.12 satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

**D.1.12 Bag Leak Detection System (BLDS) [40 CFR 60.273a] [40 CFR 64]**

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

- (a) The Permittee shall install and operate a continuous bag leak detection system (BLDS).
- (b) The BLDS shall meet the following requirements:
  - (1) The bag leak detection system 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 bag leak detection system sensor must provide output of relative particulate matter loading.
  - (3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loading is detected over a preset level established or verified during a stack test.
  - (4) The bag leak detection system shall be installed and 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 installation, 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.
- (c) Compliance with this condition and conditions D.1.8 and D.1.11 satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

**D.1.13 EAF Baghouse**

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The Permittee shall convey the collected materials from the EAF Baghouse in an enclosed loading area.

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

**D.1.14 Record Keeping Requirements [40 CFR 64] [40 CFR 60.276a]**

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- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) To document compliance with Condition D.1.1 (a), the Permittee shall maintain records of the amount of steel produced per twelve (12) consecutive month period.
- (c) To document compliance with Condition D.1.7 and D.1.9, the Permittee shall maintain records of the readings of the CO, SO<sub>2</sub> and total hydrocarbons CEMS.

- (d) If the Permittee elects to operate a COMS under 40 CFR 60.273a, then to document compliance with condition D.1.8, the Permittee shall maintain records of the readings of the COM.
- (e) To document compliance with condition D.1.10(c), when applicable the Permittee shall maintain records of the verification of sulfur content of charge carbon, and injection carbon added into the EAF and make available upon request to IDEM, OAQ, and the U.S. EPA.
- (f) If the Permittee elects to operate a BLDS under 40 CFR 60.273a, then to document compliance with condition D.1.12, 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.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.
- (h) Records necessary to demonstrate compliance shall be available no later than 30 days after the end of each compliance period.

#### D.1.15 Reporting Requirements [326 IAC 2-1.1-11]

- (a) The Permittee shall submit a quarterly report of the actual amount of steel produced and the specific allocations of the bars, using the Quarterly Production Report, or equivalent.
- (b) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for CO, SO<sub>2</sub> and total hydrocarbons, and continuous opacity monitor (COM) data, 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 - General Reporting Requirements of this permit.
- (c) 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.
- (d) These reports do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

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

#### D.1.16 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart AAa]

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the above listed facilities except as otherwise specified in 40 CFR Part 60, Subpart AAa.
- (b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:  
  
Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204

D.1.17 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]

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

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

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

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

D.1.19 National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities [40 CFR Part 63, Subpart YYYYYY]

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The Permittee shall comply with the following provisions of 40 CFR 63, Subpart YYYYYY (included as Attachment D):

- (1) 40 CFR 63.10680(a), (b)(1), (c) and (d)
- (2) 40 CFR 63.10681(a) and (b)
- (3) 40 CFR 63.10685
- (4) 40 CFR 63.10686(a), (b), (d)(1) – (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 YYYYYY

## SECTION D.2

## FACILITY OPERATION CONDITIONS

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

- (d) One (1) Continuous Caster with a nominal casting rate of 125 tons/hour originally permitted in 1996 and permitted to be modified in 2004. This Caster and the LMS are located in a separate room from the EAF and the tundish is covered with a lid. The Continuous Caster vents to stacks 6a and 6b and fugitive emissions exhaust to a roof monitor.

(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 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following requirements:

- (a) The PM and PM<sub>10</sub> emissions before control from the Caster shall not exceed 0.07 pound per ton of steel produced.
- (b) The tundish shall be covered by lid to control fugitive emissions.
- (c) Visible emissions from the Caster roof monitor shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

#### D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this unit and its control device.

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

#### D.2.3 Fugitive Emissions Control [326 IAC 2-2]

Pursuant to 326 IAC 2-2, the tundish shall be covered by a lid to control fugitive emissions exhausting to the roof monitor.

## SECTION D.3

## FACILITY OPERATION CONDITIONS

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

- (e) One (1) Reheat Furnace, permitted in 1996 and permitted to be modified in 2004 and 2008, with a nominal heat input capacity of 310 MMBtu/hr, equipped with low NO<sub>x</sub> burners, exhausting to stack 2.

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

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

#### D.3.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to PSD SSM 063-25379-00037, issued on May 27, 2008, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) The NO<sub>x</sub> emissions from the Reheat Furnace shall not exceed 0.08 lb/MMBtu.
- (b) The SO<sub>2</sub> emissions from the Reheat Furnace shall not exceed 0.0006 lb/MMBtu.
- (c) The CO emissions from the Reheat Furnace shall not exceed 0.084 lb/MMBtu.
- (d) The VOC emissions from the Reheat Furnace shall not exceed 0.0055 lb/MMBtu.
- (e) The PM (filterable) emissions from the Reheat Furnace shall not exceed 0.0019 lb/MMBtu.
- (f) The PM<sub>10</sub> (filterable and condensable) emissions from the Reheat Furnace shall not exceed 0.0076 lb/MMBtu.
- (g) Visible emissions from the Reheat Furnace shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (h) The Reheat Furnace shall be equipped and operated with natural gas fueled low NO<sub>x</sub> burners.
- (i) Proper combustion operation of the Reheat Furnace shall be followed.
- (j) The Permittee shall use pipeline natural gas as fuel in the Reheat Furnace.

Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

#### D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the Reheat Furnace.

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

### **D.3.3 Testing Requirements [326 IAC 2-7-6(1), (6)]**

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Not later than one hundred and eighty (180) days after startup of the modification permitted by SSM 063-25379-00037, issued on May 27, 2008, the Permittee shall perform NO<sub>x</sub> testing of the Reheat Furnace in order to demonstrate compliance with Condition D.3.1(a). These tests shall be conducted utilizing methods approved by the Commissioner and repeated thereafter at least once every five (5) years from the date of valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

## SECTION D.4

## FACILITY OPERATION CONDITIONS

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

- (f) Two (2) natural gas fueled low NO<sub>x</sub> Tundish Preheaters, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.
- (g) Five (5) natural gas fueled low NO<sub>x</sub> LMS Ladle Preheaters/Dryers, each with nominal capacity of 7.5 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.
- (h) Two (2) natural gas fueled low NO<sub>x</sub> Tundish Dryers, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.
- (i) Three (3) natural gas fueled low NO<sub>x</sub> Tundish Nozzle Preheaters, with nominal total capacity of 6 MMBtu/hour and originally permitted in 1996 and permitted to be modified in 2004.

(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 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) The NO<sub>x</sub> emissions from each preheater and dryer shall not exceed 0.050 lb/MMBtu.
- (b) The CO emissions from each preheater and dryer shall not exceed 0.084 lb/MMBtu.
- (c) The VOC emissions from each preheater and dryer shall not exceed 0.0055 lb/MMBtu.
- (d) The SO<sub>2</sub> emissions from each preheater and dryer shall not exceed 0.0006 lb/MMBtu.
- (e) The PM (filterable) emissions from each preheater and dryer shall not exceed 0.0019 lb/MMBtu.
- (f) The PM<sub>10</sub> (filterable and condensable) emissions from each preheater and dryer shall not exceed 0.0076 lb/MMBtu.
- (g) The Permittee shall equip and operate each preheater and dryer with natural gas fueled low NO<sub>x</sub> burners.
- (h) Good combustion shall be practiced.
- (i) The Permittee shall use pipeline natural gas. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

## SECTION D.5 FACILITY OPERATION CONDITIONS

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

- (j) One (1) vacuum tank degasser (VTD), rated at 125 tons/hour, equipped with a 38.4 MMBTU/hour flare, permitted in 1996.
- (k) One (1) VTD Boiler (permitted in 2007), rated at a nominal capacity of 69.0 MMBTU/hr, equipped with natural gas fueled low NO<sub>x</sub> burners, and exhausting to stack 8. The VTD Boiler is an affected facility under 40 CFR 60, Subpart Dc.

(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 [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the particulate emissions from the 69.0 MMBtu per hour heat input VTD boiler shall be limited to 0.36 pound per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per MMBtu of heat input

Q = The total source maximum operating capacity rating for indirect heating units = 69.0

#### D.5.2 VTD Flare [326 IAC 2-2-3]

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall operate the VTD flare, with the temperature not less than 1,300<sup>o</sup>F, except during start up and shutdown, to control CO emissions at all times that the VTD is in operation.

#### D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the VTD boiler and the VTD flare.

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

#### D.5.4 Record Keeping Requirements

- (a) To document compliance with Condition D.5.2, the Permittee shall maintain records of the temperature of the VTD flare and make available upon request to IDEM, OAQ and the US EPA. The Permittee shall include in its records when a temperature reading was not taken and the reason for the lack of a temperature reading (e.g. the process did not operate that day).
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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

#### **D.5.5 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart Dc]**

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(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the above listed facilities except as otherwise specified in 40 CFR Part 60, Subpart Dc.

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

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

#### **D.5.6 New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc] [326 IAC 12]**

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

- (1) 60.40c(a), (b)
- (2) 60.41c
- (3) 60.48c(a)(1), (3)
- (4) 60.48c(g)(1), (2)
- (5) 60.48c(i)
- (6) 60.48c(j)

## SECTION D.6 FACILITY OPERATION CONDITIONS

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

- (l) Supporting operations consisting of:
- (1) Caster cutting torches with nominal total capacity of 6.3 MMBtu/hour which use natural gas as fuel, with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted to be modified in 2004; and
  - (2) Sawing operations (bar cutting), venting to a baghouse at a nominal flow rate of 30,000 dscf/min that exhausts inside the building, with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted to be modified in 2004.

(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 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) The PM (filterable) emissions from the Sawing Operations (Bar Cutting operation) shall be controlled by a baghouse and shall not exceed 0.0052 gr/dscf.
- (b) Visible emissions from the Rolling Mill roof monitor shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (c) The Permittee shall use pipeline natural gas for the caster cutting torches. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

#### D.6.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the caster cutting torches shall not exceed 53.55 pounds per hour when operating at a process weight rate of 125 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

**D.6.3 Preventive Maintenance Plan [326 IAC 1-6-3]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the sawing operations baghouse.

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

**D.6.4 Particulate Matter (PM) Control [326 IAC 2-2]**

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Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2, the baghouse for particulate matter control shall be in operation and control emissions at all times that the Sawing Operations (Bar Cutting operations) are in operation.

## SECTION D.7

## FACILITY OPERATION CONDITIONS

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

- (m) Eight (8) silos to store lime, carbon, and flux additives, originally permitted in 1996 and permitted to be modified in 2004, and identified as Silos #1 through 7 and 9. The silos vent through stacks 4a-4d and 5a-5d. Each silo is equipped with a bin vent filter, at a nominal flow rate of 1,200 dscf/min.

(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 Emissions Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) The PM (filterable) emissions from each storage silo shall be each controlled by bin vent filter at an outlet grain loading of 0.01 grains per dry standard cubic feet.
- (b) The visible emissions from each storage silo bin vent shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

#### D.7.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the bin vent filters.

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

#### D.7.3 Particulate Matter (PM) [326 IAC 2-2]

Pursuant to PSD SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2, the bin vents filters for particulate control shall be in operation and control emissions at all times that the storage silos are being loaded.

**SECTION D.8 FACILITY OPERATION CONDITIONS**

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

- (n) Scrap material handling, lime handling, carbon handling originally permitted in 1996 and permitted to be modified in 2004.
- (o) Slag processing and handling consisting of slag handling, slag dumping, slag pots, slag crushing, slag screening, drop ball breaking, conveyors, and storage piles. The slag processing and handling was originally permitted in 1996 and permitted to be modified in 2004 and has a nominal rate of 300 tons/hour. The slag handling operations are performed by an on-site contractor.

(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 Emissions Limitations PSD BACT [326 IAC 2-2-3]**

Pursuant to PSD SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) The Permittee’s contractor shall not process more than 876,000 tons of slag per 12-consecutive month period with compliance demonstrated at the end of each month.  
  
The Permittee’s contractor shall not accept or process slag from other mills or outside sources. This provision does not apply to slag used solely for laydown areas, construction or similar on-site sources.
- (b) Visible emission from fugitive emissions from each process shall not exceed the specified opacity limit, based on a 6-minute average as determined in 326 IAC 5-1-4:

Table 4	
Slag Handling/Processing Operation	Opacity (%)
Transferring of skull slag to slag pot	10
Pouring of liquid slag from EAF or LMS to slag pots	3
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
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

- (c) The Permittee's contractor shall dump slag in a partially enclosed roof structure. The roof shall extend over the entire slag pit area and past the dump stations. The sides of the structure shall extend downward from the roof taking into account:
  - (1) Reduction of PM emissions during slag dumping and partial shielding of prevailing winds; and
  - (2) Dissipation of heat and consideration of safety concerns within the structure.
- (d) The Permittee shall comply with the following BACT requirements for the scrap handling and processing operations:
  - (1) Scrap cutting is not allowed outdoors.
  - (2) Good working practices shall be observed.
- (e) The Permittee's contractor shall comply with the following for fugitive PM emissions:
  - (1) The particulate emissions from the slag processing final transfer points and slag piles shall be controlled as needed by the application of water or chemical suppressant.
  - (2) The Permittee shall minimize drop heights, except during ball dropping.
  - (3) Good working practices shall be performed.

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

**D.8.2 Record Keeping Requirements**

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- (a) The Permittee shall maintain records of the amount of slag handled and processed and shall make the records available upon request to IDEM, OAQ and the U.S. EPA.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

## SECTION D.9 FACILITY OPERATION CONDITIONS

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

- (p) Transportation on paved roadways, paved parking lots, unpaved roadways, and other unpaved areas around slag piles and steel scrap piles originally permitted in 1996 and permitted to be modified in 2004.

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

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

#### D.9.1 Emission Limitations PSD BACT [326 IAC 2-2-3][326 IAC 6-5]

Pursuant to SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) Visible emissions from paved roadways and paved parking lots shall not exceed 10% opacity.
- (b) Visible emissions from unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall not exceed 10% opacity.
- (c) The Permittee shall maintain, update as needed, and implement its Fugitive Dust Plan (included as Attachment B).
  - (1) The silt loading on paved roads and paved parking lots shall be controlled by the use of vehicular vacuum sweeper or water flushing and shall be performed every 14 days, unless it is raining.
  - (2) Upon request by IDEM, OAQ, the Permittee shall sample surface material silt content and surface dust loadings in accordance with procedures approved by IDEM, OAQ. Road segments to be sampled shall be approved by IDEM, OAQ.
  - (3) The Permittee shall provide supplemental cleaning of paved roads found to exceed allowable silt loadings.

The requirements in paragraph (c) above will also satisfy the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations).

- (d) Upon request by IDEM, OAQ, opacity shall be determined as follows: The opacity from paved roadways and parking lots 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.
- (e) The three (3) opacity readings for each vehicle pass on paved roadways and parking lots shall be taken as follows:
  - (1) The first will be taken at the time of emission generation.
  - (2) The second will be taken five (5) seconds later.
  - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

- (f) Upon request by IDEM, OAQ, opacity shall be determined as follows: The opacity from unpaved roadways and unpaved areas around slag storage piles and steel scrap piles 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.
- (g) The three (3) opacity readings for each vehicle pass on unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall be taken as follows:
  - (1) The first will be taken at the time of emission generation.
  - (2) The second will be taken five (5) seconds later.
  - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.
- (h) The three (3) readings for paved roadways and parking lots and the three (3) readings for unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall be taken at the point of maximum opacity.
- (i) The readings shall be taken 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.
- (j) Each reading shall be taken approximately four (4) feet above the surface of the paved or unpaved roadway.

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

**D.9.2 Record Keeping Requirements**

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- (a) The Permittee shall maintain records of the activities required by the fugitive dust control plan and make available upon request to IDEM, OAQ and the US EPA.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

## SECTION D.10 FACILITY OPERATION CONDITIONS

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

- (q) Contact and Non-Contact Cooling towers, with nominal capacity of 44,000 gal/min, originally permitted in 1996 and permitted to be modified in 2004:

Tower 1 -- Meltshop Non-Contact Cooling Tower	nominal 26,700 gal/min
Tower 2 -- VTD Contact Cooling Tower	nominal 2,000 gal/min
Tower 3 -- Bar Mill Contact Cooling Tower	nominal 9,700 gal/min
Tower 4 -- Bar Mill Non-Contact Cooling Tower	nominal 5,600 gal/min

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

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

#### D.10.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

- 
- (a) Pursuant to SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the visible emissions from each cooling tower shall not exceed 20% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (b) Pursuant to 326 IAC 2-2, the drift rate from each cooling tower shall not exceed 0.0005%.

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

#### D.10.2 Drift Eliminators [326 IAC 2-2]

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Pursuant to 326 IAC 2-2, the drift eliminators for particulate control shall be in operation and control emissions at all times that one or more of the cooling towers are in operation.

## SECTION D.11 FACILITY OPERATION CONDITIONS

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

(r) Diesel fueled Emergency Generator(s), with total nominal capacity of 485 HP installed in 2004.

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

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

#### D.11.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) Each emergency generator shall be run solely to provide back up power when electric power is interrupted or for periodic maintenance of the generator itself.
- (b) Each emergency generator shall not operate more than 500 hours per 12-consecutive month period.
- (c) The sulfur content of the diesel fuel used shall not exceed 0.05 percent by weight.
- (d) Good combustion practices shall be performed.

**SECTION D.12 FACILITY OPERATION CONDITIONS**

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

- (s) Five (5) natural gas fired heat treat furnaces, each furnace has a nominal heat input capacity of 11.6 MMBtu per hour and a nominal capacity of 20 tons of steel input per charge. The furnaces were permitted in 2006.

Heat Treat Furnace ID	Stack ID
HTF 1	HT1
	HT2
HTF 2	HT3
	HT4
HTF 3	HT5
	HT6
HTF 4	HT7
	HT8
HTF 5	HT9
	HT10

- (t) One (1) quench tank.

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

**Compliance Determination Requirement**

**D.12.1 Natural Gas Usage PSD BACT [326 IAC 2-2-3]**

Pursuant to MSM 063-22033-00037, issued on December 13, 2005, amended by A063-22499-00037, issued on February 6, 2006, the five (5) heat treat furnaces shall use natural gas only.

## SECTION D.13 FACILITY OPERATION CONDITIONS

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

#### Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing, cutting torches, soldering, welding. [326 IAC 6-3-2]

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

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

#### D.13.1 Particulate [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. This limit applies to the following insignificant activities:

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division  
Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
Mailing Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
Part 70 Permit No.: T063-20969-00037

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division  
Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
Mailing Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
Part 70 Permit No.: T063-20969-00037

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) 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.

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

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

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

**Page 2 of 2**

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

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

### Part 70 Quarterly Report

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division  
 Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
 Mailing Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
 Part 70 Permit No.: T063-20969-00037  
 Facility: EAF  
 Parameter: Tons of Steel Production  
 Limit: 1,095,000 tons per 12 consecutive month period with compliance demonstrated at the end of each month.

YEAR: \_\_\_\_\_

Month	Steel Production		
	This month (tons)	Previous 11 Months (tons)	12 Month Total (tons)

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division  
Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
Mailing Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
Part 70 Permit No.: T063-20969-00037

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**Attachment A  
Part 70 Permit**

**Scrap Management Plan (SMP)**

**Source Background and Description**

Source Name:	Steel Dynamics, Inc. (SDI) – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, IN 46167
Mailing Address:	8000 North County Road 225 East, Pittsboro, IN 46167
General Telephone Number:	317/892-7000
Responsible Official:	Plant Manager
County:	Hendricks
SIC Code:	3312 (Steel Mill)
NAICS Code:	331211
Source Categories:	1 of 28 Listed Source Categories Major PSD Source Minor Source under Section 112 of the CAA
Operating Permit No. :	T063-20969-00037

**Specifications**

(1) GENERAL

(a) Unless specifically allowed, all grades of scrap shall be free of material that contains excessive amounts of:

- Non-ferrous materials;
- Oils or grease;
- Hazardous materials (e.g., asbestos, chemicals containers);
- Fuels and other liquid or gaseous chemicals; or
- Lead or tin.

These materials and those specifically specified in the following sections are hereby referred to as contaminated scrap.

- (b) All scrap material shall meet the specifications in this Scrap Management Program (SMP) and be acceptable to SDI or its scrap-processing agent.
- (c) Any material that deviates from the following specifications must be noted on the purchase order and agreed to prior to shipment.
- (d) Rejection of scrap material because it does not conform to the following specifications is a judgment decision on the part of those inspecting the scrap material. If they feel that the distribution of contaminants may be found elsewhere in the load because of positioning of the material or frequency of occurrence, the entire scrap load may be rejected.

- (2) HAZARDOUS MATERIAL  
Scrap received with evidence of hazardous material, or potentially hazardous material including, but not limited to, asbestos-containing materials, materials with heavy oils or grease, or chemical containers shall be rejected.
- (3) LEAD AND TIN  
Scrap containing excessive amounts of lead (e.g., babbitt, solder, or balancing weights) or tin (e.g., tin cans, solder, or other tin coated material) shall be rejected.
- (4) NON-FERROUS MATERIAL  
Non-ferrous scrap is generally nonmagnetic and also may contain elevated levels of undesirable contaminants.
- (5) RADIOACTIVE MATERIAL  
All grades of scrap must be free of radioactive materials or radiation sources. If any such material or sources are present, the load shall be rejected.
- (6) TANKS AND CYLINDERS
  - (a) Tanks, cylinders, or sealed units may be included in shipments if the ends are cut open and prepared in a manner to insure that they are not sealed and will not retain contaminating fluids.
  - (b) These shall include, but are not limited to, torque converters, transmissions, rear ends, hydraulic cylinders, gas tanks, closed pipe compressors, capacitors, shock absorbers, and gear boxes.
  - (c) Visual presence of any of these items shall be cause for the material to be removed from the scrap or the load shall be rejected. However, coated gas tanks shall be rejected regardless of its condition or even if cut open.

### **Scrap Inspection Procedure**

At any point in the inspection process, SDI personnel or agents working on behalf of SDI have the option to issue warnings and accept loads with minor deficiencies or to reject loads that contain contaminated scrap.

- (1) SCRAP INSPECTORS  
The persons responsible for inspecting the loads for contaminated scrap are the SDI employees operating the railcar or truck scales, the scrap bay and unloading operators, and yard personnel (crane operators, sorters, supervisors, etc.), Environmental Department, the scrap broker, and other agents working on behalf of SDI.
- (2) ENTRY
  - (a) All scrap shall pass through the radiation detector when entering the scales. The inspection of scrap for radioactive materials or radiation sources will be conducted pursuant to requirements established by the Nuclear Regulatory Commission.
  - (b) The scale operator shall verify that the paperwork accompanying the load matches the load. If not, then the correct paper work shall be obtained before acceptance of the load or the load shall be rejected.
  - (c) The scale operator shall verify that the paperwork does not indicate the load contains contaminated scrap.

(3) SCRAP INSPECTION

- (a) The scrap bay and unloading operators or yard personnel shall inspect the top of the load to insure it complies with the specifications.
- (b) Yard personnel or scrap bay operators shall observe the load being dumped to make sure the load is consistent and contains no contaminated scrap.
- (c) If the scrap bay and unloading operator suspect top-dressing of the load, they may direct the load to be magged-off to inspect for load consistency.
- (d) Yard operators shall inspect the scrap during loading from stockpiles into railcars slated for delivery the scrap bay.
- (e) Scrap bay operators shall inspect the scrap during loading into the charge bucket.
- (f) Contaminated scrap found in the stockpile or scrap bay shall be removed and discarded in accordance with applicable rules and regulations.

(4) LOAD ACCEPTANCE

Loads that meet the scrap specifications in this SMP may be directed for unloading and melting.

(5) REJECTED LOADS

- (a) Loads that do not meet the specifications within this SMP shall be returned to the vendor or the contaminated scrap removed from the load.
- (b) Contaminated scrap that is removed from the load shall be returned to the vendor or disposed in accordance with applicable rules and regulations.

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

**Attachment B  
Part 70 Operating Permit**

**FUGITIVE DUST CONTROL PLAN**

**Source Background and Description**

Source Name:	Steel Dynamics, Inc. (SDI) – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, IN 46167
Mailing Address:	8000 North County Road 225 East, Pittsboro, IN 46167
General Telephone Number:	317/892-7000
Responsible Official:	Plant Manager
County:	Hendricks
SIC Code:	3312 (Steel Mill)
NAICS Code:	331211
Source Categories:	1 of 28 Listed Source Categories Major PSD Source Minor Source under Section 112 of the CAA

**Introduction**

The following control plan, when implemented, is designed to reduce fugitive dust, based on a PM10 mass emission basis from:

- (a) Paved roadways and parking lots - - down to 9.7 grams per square meter,
- (b) Unpaved areas within the slag processing area - - by 90 percent, and
- (c) The slag processing operations - - by 95 percent,

such that the silt loading limitation and visible emissions limitations specified in the permit are met.

The plan 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).

The name, title, and telephone number of the person who is responsible for implementing the plan will be supplied to the OAQ Compliance Section.

**Paved Roadways and Parking Lots**

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 at least once every 14 days.

Upon request of the OAQ Assistant Commissioner, SDI shall sample and provide to IDEM surface material silt content and surface dust loading 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. SDI shall provide supplemental cleaning of paved road sections found to exceed the controlled silt surface loading of 9.7 grams per square meter.

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

- (a) 0.1 or more inches of rain have accumulated during the 24-hour period prior to the scheduled cleaning.
- (b) The road segment is closed or abandoned. Abandoned roads will be barricaded to prevent vehicle access.
- (c) It is raining at the time of the scheduled cleaning.
- (d) Ambient air temperature is below 32 °F. The above dust control measures shall be performed such that the visible emission limitations of the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

### **Unpaved Areas within the Slag Processing Area and Scrap Yard**

Unpaved areas traveled about slag storage piles and steel scrap piles shall be treated with an IDEM-approved dust suppressant at the rate of 0.16 gallons per square yard, or another rate approved by the IDEM in order to meet compliance with the associated visible emissions limitations. Fugitive dust emissions shall be reduced by at least 90 percent instantaneous control on a PM10 mass emission basis.

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

- (a) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled treatment.
- (b) Unpaved areas are saturated with water such that chemical dust suppressants cannot be accepted by the surface.
- (c) Unpaved areas are frozen or covered by ice, snow, or standing water.
- (d) The area is closed or abandoned.
- (e) It is raining at the time of the scheduled treatment.

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

### **Wind Erosion from Open Slag Piles**

Slag piles shall be sprayed with water, on an as-needed basis to eliminate 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.

### **Slag Handling and Processing**

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

Pouring of liquid slag from the EAF 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 or LMF baghouse.

Emissions during the dumping of liquid slag from the slag pot to the slag pit shall be controlled by the use of skull slag such that the visible emission limitations in the permit are not exceeded.

Emissions from slag processing operations shall be controlled through the application of water and by limiting stacker to pile drop height to less than 48 inches and front-end loader batch drop height into trucks to less than 48 inches. Water application rate and frequency shall be sufficient to meet permit limitations. Water shall be applied on crushing, screening and conveyor transfer points using spray bars.

### **Vehicle Speed Control**

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

Speed limits on unpaved areas shall be 10 mph.

Upon violation, employees shall receive a written warning, followed by a one day suspension if a second violation occurs. Visitors to the plant shall be denied access if repeated violations occur.

### **Material Spill Control**

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

### **Monitoring and Recording Keeping**

Records shall be of the vacuum sweeping, wet sweeping, or water flushing and spill control activities, and dust suppressant application frequency and amount. Also, records shall contain the amount of water sprayed on the aggregate piles, the amount of water sprayed at the slag quench station, and the amount of water sprayed at the slag processing spray bars. The records shall be kept at the designated plant location for a minimum of five years and shall be available for inspection or copying upon request.

### **Compliance Schedule**

This plan shall be fully implemented when the plant commences operation.

**Attachment C, NSPS Subpart AAa  
Steel Dynamics, Inc. – Engineered Bar Products Division  
Permit No. T063-20969-00037**

## **Subpart AAa—Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983**

### **§ 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  $\pm 10$  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  $\pm 5$  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:

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

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  $\pm 15$  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 D, NESHAP Subpart YYYYY  
Steel Dynamics, Inc. – Engineered Bar Products Division  
Permit No. T063-20969-00037**

**Subpart YYYYYY—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:

$$E_p = \frac{C \times Q \times T}{P \times K} \quad (\text{Eq 1})$$

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.

(e) You must monitor the capture system and PM control device required by this subpart, maintain records, and submit reports according to the compliance assurance monitoring

requirements in 40 CFR part 64. The exemption in 40 CFR 64.2(b)(1)(i) for emissions limitations or standards proposed after November 15, 1990 under section 111 or 112 of the CAA does not apply. In lieu of the deadlines for submittal in 40 CFR 64.5, you must submit the monitoring information required by 40 CFR 64.4 to the applicable permitting authority for approval by no later than the compliance date for your affected source for this subpart and operate according to the approved plan by no later than 180 days after the date of approval by the permitting authority.

## **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 Requirements for Control Devices in §63.11	No	
§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 E, NSPS Subpart Dc  
Steel Dynamics, Inc. – Engineered Bar Products Division  
Permit No. T063-20969-00037**

## **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 paragraph (d) 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/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

(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<sub>2</sub>) 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) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

### **§ 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, 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.

*Cogeneration steam generating unit* means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

*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).

*Dry flue gas desulfurization technology* means a SO<sub>2</sub> 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<sub>2</sub> 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).

*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<sub>2</sub> 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 any other 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.

*Wet flue gas desulfurization technology* means an SO<sub>2</sub> 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<sub>2</sub>.

*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.

**§ 60.42c Standard for sulfur dioxide (SO<sub>2</sub>).**

(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<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO<sub>2</sub> emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> 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<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO<sub>2</sub> emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> 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<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO<sub>2</sub> emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> 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<sub>2</sub> emissions limit or the 90 percent SO<sub>2</sub> 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<sub>2</sub> emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 50 percent (0.50) of the potential SO<sub>2</sub> emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> 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/hr) 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.

(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<sub>2</sub> in excess of 215 ng/J (0.50 lb/MMBtu) heat input; 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<sub>2</sub> in excess of the following:

(1) The percent of potential SO<sub>2</sub> emission rate or numerical SO<sub>2</sub> 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/hr); 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<sub>2</sub> 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

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

(f) Reduction in the potential SO<sub>2</sub> 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<sub>2</sub> emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO<sub>2</sub> 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), or (3) 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 facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(i) The SO<sub>2</sub> 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) 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.

**§ 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/hr) 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/hr) 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/hr) 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.

(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/hr) 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/hr) 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) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility 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<sub>2</sub> emissions is not subject to the PM limit in this section.

#### **§ 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<sub>2</sub> 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<sub>2</sub> emission limits under §60.42c is based on the average percent reduction and the average SO<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> emission rate (E<sub>ho</sub>) and the 30-day average SO<sub>2</sub> emission rate (E<sub>ao</sub>). 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<sub>ao</sub> 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<sub>ho</sub> (E<sub>ho0</sub>) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E<sub>ao</sub> (E<sub>ao0</sub>). The E<sub>ho0</sub> is computed using the following formula:

$$E_{ho0} = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

E<sub>ho0</sub> = Adjusted E<sub>ho</sub>, ng/J (lb/MMBtu);

E<sub>ho</sub> = Hourly SO<sub>2</sub> emission rate, ng/J (lb/MMBtu);

E<sub>w</sub> = SO<sub>2</sub> 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<sub>w</sub> 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<sub>w</sub> if the owner or operator elects to assume E<sub>w</sub> = 0.

X<sub>k</sub> = 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<sub>w</sub> or X<sub>k</sub> 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<sub>2</sub> 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<sub>2</sub> 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<sub>s</sub> = Potential SO<sub>2</sub> emission rate, in percent;

%R<sub>g</sub> = SO<sub>2</sub> removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

%R<sub>f</sub> = SO<sub>2</sub> 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<sub>s</sub>, an adjusted %R<sub>g</sub> (%R<sub>g</sub>o) is computed from E<sub>ao</sub>o from paragraph (e)(1) of this section and an adjusted average SO<sub>2</sub> inlet rate (E<sub>ai</sub>o) using the following formula:

$$\%R_{g^o} = 100 \left( 1 - \frac{E_{ao}^o}{E_{ai}^o} \right)$$

Where:

%R<sub>g</sub>o = Adjusted %R<sub>g</sub>, in percent;

E<sub>ao</sub>o = Adjusted E<sub>ao</sub>, ng/J (lb/MMBtu); and

E<sub>ai</sub>o = Adjusted average SO<sub>2</sub> inlet rate, ng/J (lb/MMBtu).

(ii) To compute E<sub>ai</sub>o, an adjusted hourly SO<sub>2</sub> inlet rate (E<sub>hi</sub>o) is used. The E<sub>hi</sub>o is computed using the following formula:

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

Where:

E<sub>hi</sub>o = Adjusted E<sub>hi</sub>, ng/J (lb/MMBtu);

E<sub>hi</sub> = Hourly SO<sub>2</sub> inlet rate, ng/J (lb/MMBtu);

E<sub>w</sub> = SO<sub>2</sub> 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<sub>w</sub> 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<sub>w</sub> if the owner or operator elects to assume E<sub>w</sub> = 0; and

X<sub>k</sub> = 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<sub>2</sub> standards based on fuel supplier certification, the

performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO<sub>2</sub> 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<sub>2</sub> emissions data in calculating %P<sub>s</sub> and E<sub>h<sub>o</sub></sub> 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<sub>s</sub> or E<sub>h<sub>o</sub></sub> pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

**§ 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 3 of appendix A of this part shall be used for gas analysis when applying Method 5, 5B, or 17 of appendix A 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  $160 \pm 14$  °C ( $320 \pm 25$  °F).

(6) For determination of PM emissions, an oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) 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<sub>2</sub> or CO<sub>2</sub> 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 of this part (6-minute average of 24 observations) 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 EPA Reference Method 5, 5B, or 17 of appendix A 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 EPA Method 5, 5B, or 17 of appendix A of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(13) 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 (d)(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 (d)(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 (d)(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<sub>2</sub>(or CO<sub>2</sub>) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraph (d)(7)(i) of this section.

(i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.

(ii) For O<sub>2</sub>(or CO<sub>2</sub>), EPA reference Method 3, 3A, or 3B of appendix A 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.

(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/hr).

**§ 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<sub>2</sub> emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO<sub>2</sub> concentrations and either O<sub>2</sub> or CO<sub>2</sub> concentrations at the outlet of the SO<sub>2</sub> control device (or the outlet of the steam generating unit if no SO<sub>2</sub> 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<sub>2</sub> concentrations and either O<sub>2</sub> or CO<sub>2</sub> concentrations at both the inlet and outlet of the SO<sub>2</sub> control device.

(b) The 1-hour average SO<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> CEMS at the inlet to the SO<sub>2</sub> control device shall be 125 percent of the maximum estimated hourly potential SO<sub>2</sub> emission rate of the fuel combusted, and the span value of the SO<sub>2</sub> CEMS at the outlet from the SO<sub>2</sub> control device shall be 50 percent of the maximum estimated hourly potential SO<sub>2</sub> 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<sub>2</sub> CEMS at the outlet from the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) shall be 125 percent of the maximum estimated hourly potential SO<sub>2</sub> emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO<sub>2</sub> emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO<sub>2</sub> control device (or outlet of the steam generating unit if no SO<sub>2</sub> control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO<sub>2</sub> 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 to 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<sub>2</sub> 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<sub>2</sub> at the inlet or outlet of the SO<sub>2</sub> 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<sub>2</sub> and CO<sub>2</sub> 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<sub>2</sub> 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 COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All COMS for measuring opacity 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) 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 (0.06 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO<sub>2</sub> or PM emissions are not required to operate a CEMS for measuring opacity if they follow the applicable procedures under §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the

output of the system, for PM emissions discharged to the atmosphere as specified in §60.45c(d). The CEMS specified in paragraph §60.45c(d) 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) An affected facility that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO<sub>2</sub>, 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 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 for measuring opacity. 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.

(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. At least two data points per hour must be used to calculate each 1-hour average.

(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 affected facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the appropriate delegated permitting authority is not required to operate a COMS for measuring opacity. 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.

**§ 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<sub>2</sub> 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<sub>2</sub> 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) The owner or operator of each coal-fired, oil-fired, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.

(d) The owner or operator of each affected facility subject to the SO<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> or diluent (O<sub>2</sub> or CO<sub>2</sub>) 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 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 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 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<sub>2</sub> 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<sub>2</sub> 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.

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for a Part 70 Operating Permit

#### Source Description and Location

Source Name:	Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, Indiana 46167
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Permit Reviewer:	Trish Earls (ERG) and Kimberly Cottrell

#### Public Notice Information

On September 13, 2008, the Office of Air Quality (OAQ) had a notice published in the Hendricks County Flyer, Avon, Indiana, stating that Steel Dynamics, Inc. – Engineered Bar Products Division had applied for a Part 70 Operating Permit to operate a steel mini-mill. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

#### SDI Comments and IDEM's Responses

On October 14, 2008, David L. Hatchett of Hatchett & Hauck, LLP, submitted comments on behalf of Steel Dynamics Inc. - Engineered Bar Products Division (SDI). The summary of the comments and corresponding responses is as follows (additions in bold, deletions in ~~strikeout~~):

##### Comment 1

The correct company name is now Steel Dynamics, Inc. – Engineered Bar Products Division. Please change any remaining references to the old name in the permit documents to reflect this.

##### Response 1

While the permit and Technical Support Document do reflect the correct company name, Attachments A through E of the permit and the emission calculations in Appendix A of the Technical Support Document do not reflect the correct name. These documents have been revised as requested to reflect the company name as Steel Dynamics, Inc. – Engineered Bar Products Division. The revised emission calculations are included as Appendix A to this TSD Addendum.

##### Comment 2

The compliance paragraph on page one should be revised to reflect the fact that not all permit terms are enforceable; the second sentence should state that "Noncompliance with any **enforceable** provisions of this permit is grounds for enforcement action."

## Response 2

IDEM, OAQ believes that the cover page sufficiently describes the subject matter contained therein and should not be edited as proposed.

No changes were made to the permit as a result of this comment.

## Comment 3

SDI objects to the statements found throughout the draft permit which add duplicative requirements. By way of example and not limitation, statements in Section D conditions which provide that "All records shall be maintained in accordance with Section C – General Record Keeping Requirements of this permit" arguably add a requirement that entirely duplicates the obligation already contained in Condition C.18 to maintain records in accordance with that condition. SDI objects to any permit condition which requires that something shall be done "in accordance with" a previously-stated requirement in the Permit. SDI requests that these conditions be revised simply to note that the other permit provision contains requirements. The following is an example of suggested language that would remove duplicative requirements yet clearly point the Permittee to the related requirements that are located elsewhere in the Permit (the underlying language comes from Condition D.1.14(g)):

- (g) ~~All records shall be maintained in accordance with Section~~ **Condition C.18 - General Record Keeping Requirements contains general record keeping requirements of this permit.**

## Response 3

IDEM OAQ issues permits to all types of sources and facilities throughout the State of Indiana. Some facilities and their staff have a greater understanding and comprehension of permit requirements than others. As a result, the IDEM, OAQ believes that facilities benefit from limited reminders (i.e. redundancies) of Section C requirements.

While the inclusion of references to Condition C.18 may seem redundant, IDEM, OAQ believes that it does not subject facilities to double jeopardy or require multiple submissions for the same permit obligation.

By way of comparison, a permit containing language saying that "Pursuant to" or "In accordance with" some rule or portion of the Indiana Administrative Code would also "arguably add a requirement that entirely duplicates the obligation." IDEM, OAQ disagrees with this assessment.

No changes were made to the permit as a result of this comment.

## Comment 4

For clarification, SDI requests that in any sentence setting forth a time limit, the phrases "within...days of..." be replaced with "not later than...days after..."

## Response 4

Conditions B.11 and B.24 have not been revised because the text is taken directly from 326 IAC 2-7-16 and 326 IAC 2-7-19, respectively. Also, paragraph (b) of condition C.16 has not been revised. Condition C.19 is revised under Comment and Response 31; therefore, no changes to C.19 are shown for this comment. IDEM agrees to make this change to other conditions in the permit where applicable. The following conditions have been revised as a result:

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

---

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) ~~within~~ **not later than** ninety (90) days after issuance of this permit, including the following information on each facility:

\*\*\*

**C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, ~~within~~ **not later than** thirty (30) days ~~of~~ **after** receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) \*\*\*

\*\*\*

**D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [326 IAC 2-2]**

---

- (b) The Permittee shall perform PM2.5 and PM10 testing of the common EAF Baghouse/LMS Baghouse stack ~~within~~ **not later than** 180 days ~~of~~ **after** publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. PM10 and PM2.5 includes filterable and condensable PM.

\*\*\*

**D.3.3 Testing Requirements [326 IAC 2-7-6(1), (6)]**

---

~~Within~~ **Not later than** one hundred and eighty (180) days after startup of the modification permitted by SSM 063-25379-00037, issued on May 27, 2008, the Permittee shall perform NOx testing of the Reheat Furnace in order to demonstrate compliance with Condition D.3.1(a). These tests shall be conducted utilizing methods approved by the Commissioner and repeated thereafter at least once every five (5) years from the date of valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

### Comment 5

Conditions A.2 and A.3: SDI requests that the construction and modification dates be deleted. "Constructed in" or similar dates are unnecessary as the construction permits already provide a record of permitting for construction of equipment. Further, in some cases these dates are inaccurate or misleading, especially where construction spanned over more than one year or where a unit was built by a prior operator of the facility. If any date is to be included, then SDI requests that IDEM instead reference the permit number authorizing the unit and the year that permit was issued.

### Response 5

The equipment descriptions in sections A.2 and A.3 have been revised to include the year that each unit was permitted by IDEM to be constructed in and modified in where applicable.

### Comment 6

Condition A.2(c): The EAF Dust Handling System described in this provision is the equipment that conveys EAF dust from the air pollution control device (EAF Baghouse) to the dust silo. This equipment is not considered an affected facility under either the NSPS or NESHAP. The NESHAP and NSPS have requirements for the “capture system” which is defined in both standards as “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.” The capture system is described in Condition A.2(a) as part of the EAF, not in Condition A.2(c), and pursuant to the above definition, stops at the point of the EAF Baghouse. Thus, the references to NSPS Subpart AAa and NESHAP Subpart YYYYYY should be removed from this provision.

### Response 6

Pursuant to 40 CFR 60.270a(a), the affected facilities that are subject to the NSPS, Subpart AAa include electric arc furnaces, argon-oxygen decarburization vessels, and dust-handling systems. Pursuant to 40 CFR 60.271a, “dust-handling systems” are defined as 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. The EAF Dust Handling System meets the definition of a dust-handling system since it handles the particulate matter collected by the control device (EAF baghouse) and conveys it to the dust silo. Therefore, the EAF Dust Handling System is an affected facility under the NSPS, 40 CFR 60, Subpart AAa. However, the EAF Dust Handling System does not meet the definition of a “capture system” under the NESHAP, 40 CFR 63, Subpart YYYYYY and there are no applicable requirements in the NESHAP that apply to the EAF Dust Handling System. Therefore, the description for the EAF Dust Handling System in section A.2 and the corresponding description in section D.1 are further revised as follows:

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

---

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

\*\*\*

- (c) The EAF dust is conveyed **from the EAF Baghouse** to EAF Dust Silo #8 that vents through stack 3, identified as EAF Dust Handling System, originally permitted in 1996 and permitted to be modified in 2004. The silo is equipped with a bin vent filter. The EAF Dust Handling System is an affected facility under 40 CFR 60, Subpart AAa ~~and 40 CFR 63, Subpart YYYYYY.~~

### Comment 7

Revise Condition A.2(d) and the Section D equipment description as follows:

- (d) One (1) Continuous Caster with a nominal casting rate of 125 tons/hour originally ~~constructed~~ **permitted** in ~~1997~~ **1996** and modified in 2004. This Caster **and LMS are** is located in a separate room from the EAF ~~and LMS~~ and the tundish is covered with a lid. The Continuous Caster vents to stacks 6a and 6b and fugitive emissions exhaust to a roof monitor.

### Response 7

Section A.2(d) and the corresponding description in section D.2 have been revised accordingly.

### Comment 8

Revise Condition A.2(k) and the Section D equipment description as follows:

- (k) One (1) VTD Boiler (~~approved for construction~~ **permitted** in 2007), rated at a ~~maximum~~ **nominal** capacity of 69.0 MMBTU/hr, equipped with natural gas fueled low NO<sub>x</sub> burners, and exhausting to stack 8. The VTD Boiler is an affected facility under 40 CFR 60, Subpart Dc.

### Response 8

Section A.2(k) and the corresponding description in section D.5 are revised accordingly.

### Comment 9

Revise Condition A.2(l) and the Section D equipment description as follows:

- (l) Supporting operations consisting of:
  - (1) Caster cutting torches with nominal total capacity of 6.3 MMBtu/hour which use natural gas as fuel, ~~with a nominal capacity of 125 tons of steel per hour, originally constructed in 1997 and modified in 2004;~~ and
  - (2) Sawing operations (bar cutting), venting to a baghouse at a nominal flow rate of 30,000 dscf/min that exhausts inside the building, ~~with a nominal capacity of 125 tons of steel per hour, originally constructed in 1997 and modified in 2004.~~

### Response 9

The metal throughput capacity was added to these descriptions in this Title V renewal because it is necessary to identify the maximum metal throughput to these operations to preserve the integrity of the potential emission calculations that were used to determine rule applicability and compliance with applicable emission limits. Although the description is not enforceable, the maximum throughput is helpful to both the source and IDEM inspectors in determining whether modifications have triggered any new state or federal requirements.

### Comment 10

Revise Condition A.3(c) as follows:

- (c) The following VOC and HAP storage containers:
  - (1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve **thousand** (12,000) gallons.
  - (2) Vessels storing lubricating oils.

### Response 10

Section A.3(c) has been revised accordingly.

### Comment 11

Revise Condition A.4 as follows:

**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).

Condition A.4 – Part 70 Permit Applicability: 326 IAC 2-7-3 specifically provides that it is not a violation of 326 IAC 2-7 to operate without a Part 70 permit if a timely and complete application has been submitted. Thus, while 326 IAC 2-7-2 sets out the applicability of the permit requirements of 326 IAC 2-7, 326 IAC 2-7-3 sets out an important exception to the requirement to have a permit. SDI requests that this exception be included in this condition.

**Response 11**

Section A.4 contains the information to determine if the Part 70 Operating Permit Program applies to a source. Since 326 IAC 2-7-3 does state that the source's failure to have a Part 70 permit is not a violation of this rule until the commissioner takes final action on a Part 70 permit application, the language will be added as requested. Section A.4 is revised accordingly.

**Comment 12**

Comment on Condition B.3(a) to remove reference to Title I of the CAA because the reference to Title I of the CAA is not consistent with the rule language and incorrectly suggests that New Source Review or permanent removal from operation are the only means to supersede a permit term.

**Response 12**

IDEM agrees to change this condition as follows:

**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.

**Comment 13**

Revise Condition B.8(a), Certification, as follows:

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

---

- (a) ~~Where specifically designated by this permit or required by an applicable requirement,~~ any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

This condition should not impose compliance statements for other unspecified requirements that may exist outside of this permit and were not identified by IDEM.

### Response 13

IDEM has agreed to make this change. Condition B.8(a) has been revised accordingly.

### Comment 14

Revise Condition B.9(c) as follows:

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

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\*\*\*

- (c) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). **Certification by the slag processor may be submitted for the units listed in Section D.8 in lieu of the certification by the Permittee.**

### Response 14

SDI is required to submit a Slag Production Quarterly Report to show Compliance with the slag limit in Condition D.8.1. Since the slag handling operation does not have a separate administrative Title V permit, this requirement applies to SDI, Pittsboro. The annual compliance certification for the slag handling must be part of the SDI annual compliance certification. The certification form for the slag handling may be certified by a "responsible official" as defined by 326 IAC 2-7-1(34) for the slag handling operation. A certification form, Emergency Occurrence Report and Quarterly Deviation and Compliance Monitoring Report for the slag handling operation are included at the end of the permit.

### Comment 15

Revise condition B.10 as follows:

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

---

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) ~~within ninety (90) days after issuance of this permit, including the following information on~~ **for each facility as described in 326 IAC 1-6-3. At a minimum, the PMP shall include:**
- (1) Identification **by jobs or titles** of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

~~Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2254~~

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to ~~an exceedance~~ **a violation** of any limitation on emissions or potential to emit **for that unit**. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 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.

The change to paragraph (a) is requested to be consistent with the Joint Stipulation for Stay agreed upon by IDEM and SDI in OEA Cause No. 03-A-J-3183. The change to paragraph (a)(1) is requested because this phrase is included in SSM 063-16628-00037, issued on August 29, 2003 and SSM 063-25379-00037, issued on May 27, 2008.

## Response 15

Paragraph (a) of condition B.10 has been revised as requested. Condition B.10(a)(1) is also revised as requested to reflect changes included in the previous SSMs referenced.

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

- 
- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) ~~not later than ninety (90) days after issuance of this permit, including the following information on~~ **for each facility as described in 326 IAC 1-6-3. At a minimum, the PMP shall include:**
    - (1) Identification of the individual(s) **(by job title or description)** responsible for inspecting, maintaining, and repairing emission control devices;
    - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

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

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

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

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to ~~an exceedance~~ **a violation** of any limitation on emissions ~~or potential to emit for that unit~~. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 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.

No other changes have been made to this condition.

#### **Comment 16**

Comment to add "except as otherwise provided in 326 IAC 2-7-16" in paragraph (a) and remove paragraph (h) from condition B.11, Emergency Provisions, to be consistent with the requirements in Condition B.15(a) and because 326 IAC 2-7-16 does not contain this requirement.

#### **Response 16**

Paragraph (a) of condition B.11 has been revised accordingly.

The OAQ does not believe Condition B.11(h) is inconsistent with the provisions of B.15(a). Condition B.11(h) requires that the Permittee include emergencies on the Quarterly Deviation and Compliance Monitoring form. Condition B.15(a) requires that Deviations be reported in the same manner. Emergencies may require additional reporting requirements and are therefore addressed as a separate condition from the section pertaining to all deviations.

Paragraph (h) of condition B.11 was not revised as a result of this comment.

#### **Comment 17**

Revise Condition B.13 as follows:

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

- (a) All terms and conditions of permits established prior to T063-20969-00037 and issued pursuant to permitting programs approved into the state implementation plan have been either:

- (1) incorporated as originally stated,
  - (2) revised ~~under 326 IAC 2-7-10.5~~, or
  - (3) deleted ~~under 326 IAC 2-7-10.5~~.
- (b) ~~Provided that all terms and conditions are accurately reflected in this permit, a~~All previous registrations and permits are superseded by this Part 70 operating permit.

The proposed language is not consistent with the cited regulations.

### Response 17

The preamble to the Part 70 Operating Permit Program final rule makes clear that it is the responsibility of the source to turn in a complete application and that the application "must contain information which identifies a source, its applicable air pollution control requirements, the current compliance status of the source, the source's intended operating regime and emission levels, and must be certified as to their truth, accuracy and completeness by a responsible official after making reasonable inquiry." *Emphasis added*, 56FR 32250. The responsibility of a Part 70 permit applicant is also made clear by the language in 40 CFR 70.5(b) that states that , "[a]n applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application, but prior to release of a draft permit". The responsibility of the applicant to provide IDEM with applicable requirements is borne out also by the language in 40 CFR 70.5(c)(8) which requires the applicant to provide the permitting agency with a "description of the compliance status of the source with respect to all applicable requirements. "

Further, the language SDI wants to delete was added to Title V permits at the request of U.S. EPA, Region V. No changes have been made to the permit as a result of this comment.

### Comment 18

Revise Condition B.15, Deviations from Permit Requirements and Conditions, as follows:

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

- (a) Deviations from any permit requirements **for any deviation for which a report is specifically required under Section D** (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

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

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

- (b) **A Except as otherwise provided in this permit, a** deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

The change to the first paragraph of section (a) is requested because IDEM specifically states in the D sections when a deviation is required to be included in this report; this change merely clarifies that.

The change to the second paragraph of section (a) is requested because this change is from the cited regulation 326 IAC 2-7-5.

The change to section (b) is requested because this change is necessary to reflect the emergency and other exculpatory provisions that provide when an event may not be considered a deviation.

### Response 18

IDEM has agreed to revise the first paragraph of section (a) of condition B.15 as requested. The condition is revised accordingly.

The language is not added to Condition B.15(b), because Condition B.11 Emergency Provisions in this permit addresses the requirements for reporting emergencies.

### Comment 19

Revise condition B.19(a), Permit Revision Under Economic Incentives and Other Programs, as follows:

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

---

- (a) No Part 70 permit revision **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.

### Response 19

The language “or notice” is not added to Condition B.19(a). The language used in this condition is the same as in 326 IAC 2-7-5(8). Since this rule does not address notification requirements and other state or federal rules may include specific notification requirements, no changes have been made to the permit as a result of this comment.

### Comment 20

Delete the language in Condition B.20(a)(2), Operational Flexibility, "Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained" because the language is not found in the cited regulation.

### Response 20

IDEM agrees to revise condition B.20 as requested. Paragraph (a) of condition B.20 is revised as follows:

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

---

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) ~~Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;~~

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

~~(4)~~**(3)** The Permittee notifies the:

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

and

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

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

~~(5)~~**(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).

### Comment 21

Revise condition B.21, Source Modification Requirement, as follows:

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

---

(a) A modification, construction, or reconstruction is governed by the **applicable** 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.~~

Condition B.21(b) should be removed because this condition is not consistent with the applicable rules governing modifications.

### Response 21

IDEM has agreed to revise the permit as requested. Condition B.21 is revised accordingly.

### Comment 22

Revise Condition B.22, Inspection and Entry, as follows:

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

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to **any legal privilege and** 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 **regulated under this permit** 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.

**Response 22**

This condition outlines the inspection and entry requirements necessary for IDEM, OAQ and the U.S. EPA to ensure the Permittee is in compliance with both the Part 70 permit requirements and other provisions of the Clean Air Act. Therefore, the permit condition B.22 is not revised as a result of this comment.

**Comment 23**

Revise Condition C.2, Opacity, as follows:

**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 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.

326 IAC 5-1-1 provides limits on the opacity rule, such as the exclusion of condensed water vapor, and needs to be cited along with 326 IAC 5-1-3.

### Response 23

Condition C.2 has been revised accordingly.

### Comment 24

Revise condition C.8, Asbestos Abatement Projects, as follows:

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.**

### Response 24

Condition C.8 has been revised accordingly.

### Comment 25

Revise condition C.9, Performance Testing, as follows:

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 **applicable** procedures approved by IDEM, OAQ.  
\*\*\*  
(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. **The extension request submitted by the Permittee does not require certification by the “responsible official” as defined by 326 IAC 2-7-1(34).**

### Response 25

The addition of the word “applicable” has not been added to Condition C.9(a); however, the statement above has been added to condition C.9(c), since this change is consistent with state and federal rules and has been included in other SDI permits.

C.9 Performance Testing [326 IAC 3-6]  
\*\*\*  
(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. **The extension request submitted by the Permittee does not require certification by the “responsible official” as defined by 326 IAC 2-7-1(34).**

### Comment 26

Revise Condition C.11, Compliance Monitoring, as follows:

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 not later than ninety (90) days after permit

issuance. The Permittee shall be responsible for installing any equipment described in Section D and initiating any required monitoring related to that equipment. If due to circumstances beyond its **reasonable** control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

\*\*\*

### Response 26

IDEM agrees and the first paragraph of Condition C.11 has been changed accordingly.

### Comment 27

Revise Condition C.12, Monitoring Methods, as follows:

#### C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

---

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

### Response 27

IDEM agrees and has revised the condition accordingly.

### Comment 28

Revise Condition C.15, Response to Excursions or Exceedances, as follows:

#### C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

---

**Upon detecting an excursion or an exceedance of any compliance monitoring condition specified in Section D of this permit:**

- (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, **or, in the case of an excursion, determine that an exceedance is not occurring despite the excursion**, 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 **necessarily** limited to, the following:
- (1) initial inspection and evaluation;
  - (2) recording that operations **are 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; 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 maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

### Response 28

Condition C.15 already covers what to do if exceedances or excursions occur. IDEM cannot anticipate and include every excursion or exceedance scenario. Good air pollution control practices are used to minimize all emissions not just excess emissions. The permit is not revised as a result of this comment.

### Comment 29

Revise condition C.16, Actions Related to Noncompliance Demonstrated by a Stack Test, as follows:

#### C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, ~~within~~ **no later than** thirty (30) days ~~of~~ **after** receipt of the test results. The Permittee shall take ~~appropriate action~~ **reasonable steps** to ~~minimize~~ **reduce** excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed ~~within~~ **no later than** one hundred twenty (120) days ~~of~~ **after** receipt of the original test results **are submitted to IDEM**. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) **The Permittee is not required to follow the specific procedures set out in (a) and (b) above if it and IDEM, OAQ agree to a different schedule of activities to address a noncompliant stack test result.**
- (d) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

These changes clarify the timeframes as requested elsewhere in these comments and also clarify that IDEM and the Permittee can agree to a different set of activities to address noncompliant stack tests.

### Response 29

The Condition C.16, Actions Related to Noncompliance Demonstrated by a Stack Test, covers all noncompliant stack tests (not situations). Each instance of a noncompliance stack test is different and this condition covers the steps the Permittee must follow if stack test results are found to be noncompliant, which require the source to “take appropriate actions to minimize excess emissions” and to retest within 120 days of the date on which the source receives the test results. These requirements apply to all Title V sources and are included in all Title V permits issued by IDEM. Other than the changes to the timeframes in paragraph (a) as indicated in Response 4 above, the condition is not revised as a result of this comment.

### Comment 30

Revise condition C.17(a), Emission Statement, as follows:

- C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]
- (a) Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 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:~~
- (2) ~~(1)~~ ~~indicate estimated actual emissions of all pollutants listed with~~ **emission limits identified in 326 IAC 2-6-4(a) Section D;**
- (3) ~~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 cited regulation does not require the reporting in provision (2) automatically.

### Response 30

The reference to 326 IAC 2-6-4(a) is not deleted, because pursuant to 326 IAC 2-6-1, SDI is required to submit an emission statement that reports the actual estimated emissions generated on an annual basis, of each pollutant listed in 326 IAC 2-6-4(a). This includes all emissions, not just those for which limits have been included in Section D. Also, pursuant to 326 IAC 2-7-5(3)(C) and 326 IAC 2-7-19(c), the Permittee is required to submit any additional annual emission data that may be required for the purpose of assessing the annual emission fees. The condition is not revised as a result of this comment.

### Comment 31

Revise Condition C.19, General Reporting Requirements, as follows:

- 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 **as set out at Condition B.15 – Deviations from Permit Requirements and Conditions.** ~~Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted not later than thirty (30) days after the end of the~~

~~reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

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

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

\*\*\*

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted no later than thirty (30) days after the end of the reporting period. ~~All~~ **Unless otherwise specified in this permit, all** reports required in Section D do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

\*\*\*

- (g) Then the Permittee shall submit the report for a project at an existing emissions unit no later than sixty (60) days after the end of the year, **which shall** ~~and~~ contain the following:

- (1) The name, address, and telephone number of the major stationary source.
- (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
- (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
- (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

\*\*\*

The requirement in paragraph (a) is duplicative of Condition B.15. A reference to Condition B.15 is all that is necessary. The change in paragraph (d) is needed to reflect, for example, the emergency submittal that does not require a certification.

### Response 31

IDEM agrees and the condition is revised accordingly.

### Comment 32

Revise condition C.20, Compliance with 40 CFR 82 and 326 IAC 22-1, as follows:

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

---

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

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

**Response 32**

The language is not deleted, because it clarifies what requirements are applicable to persons and equipment when performing maintenance, service, repair or disposal of appliances that contain stratospheric ozone depleting substances. The Part 70 permit must include all applicable requirements. The permit is not revised as a result of this comment.

**Comment 33**

Revise condition D.1.1(k) as follows:

D.1.1 EAF and LMS Limitations PSD BACT [326 IAC 2-2-3] [326 IAC 8-1-6]

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\*\*\*

- (k) Fugitive emissions ~~generated at each from the EAF during each complete cycle from tap to tap~~ shall not exceed 3% opacity when emitted from any ~~roof monitor or building~~ opening, based on a 6-minute average as determined in 326 IAC 5-1-4.

This provision is confusing because there is only one EAF and there is no roof monitor. SDI requests that this provision be changed accordingly.

**Response 33**

IDEM agrees and Condition D.1.1(k) has been revised accordingly.

**Comment 34**

Revise Condition D.1.3, PSD BACT Control and Work Practices, as follows:

D.1.3 PSD BACT Control and Work Practices [326 IAC 2-2-3]

---

Pursuant to PSD SSM 065-22329-00037 issued on March 21, 2007 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) The EAF shall be equipped and operated with oxy fuel burners.
- (b) The EAF shall be controlled by a direct shell evacuation (DSE) system and canopy hood.
- (c) VOC emissions shall be controlled through a scrap management program. ~~All grades of scrap shall contain no observable non-ferrous metals, or non-metallics, and shall be free of excessive dirt, oil, grease, and tin plate. Heavily oiled scrap shall not be used.~~

The Permittee shall implement the scrap management plan (SMP) attached to this permit (Attachment A - SMP).

(d) ~~Good working practices shall be observed.~~

The change to paragraph (c) is requested because the plan itself addresses what is required for scrap management. Paragraph (d) is requested to be deleted because SDI is not sure how one annually certifies compliance with such a vague standard. Also, this requirement does not add anything substantive beyond the requirements of the SMP.

#### Response 34

The VOCs are being controlled by using the types of scrap listed in D.1.3(c), therefore the types of scrap listed cannot be deleted.

Condition D.1.3(d) is not deleted, because the inspection and separation of scrap that contains VOC emitting materials and not processing them in the EAF is a good work practice for SDI to meet the VOC emissions limit for the EAF. Nonrule Policy Document "Guidelines for Submittal and Review of Annual Compliance Certification under the Federally Enforceable State Operating Permit (FESOP) and Part 70 Permit Programs (AIR 007 NPD)" provides guidance on compliance certification.

Also, the above requirements are BACT requirements that were part of the original BACT determination for the EAF and cannot be changed without a new BACT review.

#### Comment 35

Revise condition D.1.5, Particulate Matter Control, as follows:

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

- 
- (a) Pursuant to PSD SSM 063-~~16628~~**22329**-00037 issued on ~~August 29, 2003~~**March 21, 2007**, 326 IAC 2-2 and 326 IAC 2-7-6(6), the EAF Baghouse for particulate control shall be in operation and control **filterable** particulate emissions at all times that the EAF is in operation.
- (b) Pursuant to PSD SSM 063-~~16628~~**22329**-00037 issued on ~~August 29, 2003~~**March 21, 2007**; and 326 IAC 2-2, the LMS Baghouse for particulate control shall be in operation and control **filterable** particulate emissions at all times that the LMS is in operation.
- (c) Pursuant to PSD SSM 063-~~16628~~**22329**-00037 issued on ~~August 29, 2003~~**March 21, 2007** and 326 IAC 2-2, ~~fugitive~~ particulate emissions generated during EAF operations shall be captured by the roof canopies or contained and collected within the meltshop.
- (d) There shall be no roof monitor in the Meltshop.

These changes are requested to clarify the condition and make it consistent with the opacity limits already in the permit; to change the language could be read to imply no fugitive emissions, which is not consistent with the permit; and to request that IDEM include in the Permit Shield provision a finding that Condition D.1.7(c) in the above-mentioned PSD permit (SSM 063-22329-00037) was unclear and therefore not applicable. SSM 22329 superseded Section D.1 of SSM 16628, so the references to SSM 16628 should be removed. Baghouses control filterable emissions; therefore, the condition should be clarified accordingly.

#### Response 35

The permit reference throughout condition D.1.5 is revised to include the most recent significant source

modification PSD/SSM 063-22329-00037, issued March 21, 2007. The Permit Shield Condition B.12 is not revised as requested, since the permit shield will apply to the revised permit language when this draft permit T063-20969-00037 review and decision are final.

Since the EAF baghouse also controls condensable material other than "filterable particulate", the phrase "filterable particulate" cannot be added.

The EAF operations are housed in the EAF building or meltshop and the fugitive emissions not captured by the EAF baghouse are captured by the meltshop roof canopies or contained and collected within the meltshop. Any particulate emissions that escape through a meltshop opening are not controlled and considered fugitive.

The condition is revised as follows:

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

- (a) Pursuant to PSD ~~SSM 063-16628-00037 issued on August 29, 2003~~ **SSM063-22329-00037, issued March 21, 2007**, 326 IAC 2-2 and 326 IAC 2-7-6(6), the EAF Baghouse for particulate control shall be in operation and control particulate emissions at all times that the EAF is in operation.
- (b) Pursuant to PSD ~~SSM 063-16628-00037 issued on August 29, 2003;~~ **SSM063-22329-00037, issued March 21, 2007** and 326 IAC 2-2, the LMS Baghouse for particulate control shall be in operation and control particulate emissions at all times that the LMS is in operation.
- (c) Pursuant to PSD ~~SSM 063-16628-00037 issued on August 29, 2003~~ **SSM063-22329-00037, issued March 21, 2007** and 326 IAC 2-2, fugitive particulate emissions generated during EAF operations shall be captured by the roof canopies or contained and collected within the meltshop.
- (d) There shall be no roof monitor in the Meltshop.

**Comment 36**

Revise Condition D.1.6, Testing Requirements, as follows:

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [326 IAC 2-2]

- \*\*\*
- (b) The Permittee shall perform PM<sub>2.5</sub> and PM<sub>10</sub> testing of the common EAF Baghouse/LMS Baghouse stack within 180 days of ~~publication~~ **final promulgation** of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. PM<sub>10</sub> and PM<sub>2.5</sub> includes filterable and condensable PM.
- (c) During an emissions test, any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures).
- (d) The PM and NO<sub>x</sub> tests shall be performed using methods as approved by the Commissioner.
- (e) The PM, PM<sub>10</sub>, **and PM<sub>2.5</sub> tests shall be repeated at least once every 5 years**, and NO<sub>x</sub> tests shall be repeated at least once every 2.5 years from the date of a valid

compliance demonstration.

- (f) ~~Testing shall be conducted in accordance with Section C - Performance Testing~~  
**contains general performance testing requirements.**

The change to paragraph (b) is requested because any new or revised test method would not be final until it is promulgated as a final rule – “final promulgation” more clearly states this. SDI requests that provisions such as that in paragraph (f) be changed as requested throughout the permit.

### Response 36

Paragraph (b) has been revised as requested since it does reflect language in the Federal Register notice of the U.S. EPA’s Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5). IDEM has agreed to make the changes to paragraphs (e) and (f) also as requested. The condition has been revised accordingly.

### Comment 37

Revise paragraph (a) of Condition D.1.7, CO and SO<sub>2</sub> Continuous Emission Rate Monitoring Requirement, as follows:

D.1.7 CO and SO<sub>2</sub> Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5]

- (a) Pursuant to PSD SSM 063-46628-~~22329~~-00037 issued on ~~August 29, 2003~~ **March 21, 2007**, 326 IAC 2-2 and 326 IAC 3-5-1(d), the Permittee shall calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring CO and SO<sub>2</sub> emissions rates in pounds per hour from the common EAF Baghouse/LMS Baghouse stack in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

\*\*\*

### Response 37

The permit reference in paragraph (a) of Condition D.1.7 is revised accordingly.

### Comment 38

Remove the rule cite for 326 IAC 2-2 (PSD) from the title of Condition D.1.8, Continuous Opacity Monitoring (COM).

### Response 38

Since use of a COMS is not a specific PSD BACT requirement, the title of Condition D.1.8 is revised as requested.

D.1.8 Continuous Opacity Monitoring (COM) [326 IAC 2-2] [326 IAC 3-5] [40 CFR 60.273a] [40 CFR 64]

\*\*\*

### Comment 39

Revise Condition D.1.10, Maintenance of CEMS, as follows:

D.1.10 Maintenance of CEMS [326 IAC 2-7-5(3) (A) (iii)]

- (a) In the event that a breakdown of the CO or SO<sub>2</sub> continuous emission monitoring system (CEMS) occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

- (b) Whenever the CO CEMS is malfunctioning or will be down for calibration, maintenance or repairs for a period of **more than twenty-four (24) hours or more**, the Permittee shall perform once per ~~shift~~ **day** operational status inspections of the fourth hole duct or direct shell evacuation (DSE) 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.
- (c) Whenever the SO<sub>2</sub> CEMS is malfunctioning or will be down for calibration, maintenance, or repairs for a period of **more than twenty-four (24) hours or more**, the Permittee shall monitor and record the sulfur content of the charge carbon and injection carbon added to the EAF. Vendor certifications or analyses may be used to verify the sulfur content of the charge carbon and injection carbon.
- (d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2 and 326 IAC 3-5.

### Response 39

IDEM agrees and Condition D.1.10 has been revised accordingly.

### Comment 40

Revise the title of Condition D.1.11, Maintenance of COMS, as follows:

D.1.11 Maintenance of COMS [326 IAC ~~2-7-5(3) (A) (iii)~~ **3-5**] [40 CFR 60.273a] [40 CFR 64]

### Response 40

The rule cites for 326 IAC 3-5 and 40 CFR 60.273a have been added to the title of Condition D.1.11 as requested since they are referenced in the condition. However, the rule cite for 326 IAC 2-7-5(3)(A)(iii) is not removed since it refers to monitoring requirements for Part 70 sources.

The title of the condition is revised as follows:

D.1.11 Maintenance of COMS [326 IAC 2-7-5(3) (A) (iii)] [326 IAC 3-5] [40 CFR 60.273a] [40 CFR 64]

\*\*\*

### Comment 41

Revise the title of Condition D.1.12, Bag Leak Detection System (BLDS), to include 40 CFR 60.273a.

### Response 41

The rule cite for 40 CFR 60.273a has been added to the title of Condition D.1.12 as requested since it is referenced in the condition as follows:

D.1.12 Bag Leak Detection System (BLDS) [40 CFR 60.273a] [40 CFR 64]

\*\*\*

### Comment 42

Revise the title of Condition D.1.14, Record Keeping Requirements, to include 40 CFR 60.276a.

## Response 42

The rule cite for 40 CFR 60.276a has been added to the title of Condition D.1.14 as requested since paragraphs (d) and (f) refer to the recordkeeping requirements that would apply under 40 CFR 60.276a of the NSPS are referred to. The title of the condition is revised as follows:

### D.1.14 Record Keeping Requirements [40 CFR 64] **[40 CFR 60.276a]**

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\*\*\*

## Comment 43

Revise Condition D.1.15, Reporting Requirements, as follows:

### D.1.15 Reporting Requirements [326 IAC 2-1.1-11]

---

- (a) The Permittee shall submit a quarterly report of the actual amount of steel produced and the specific allocations of the bars, using the Quarterly Production Report, or equivalent.
- (b) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for CO<sub>2</sub> and SO<sub>2</sub> and total hydrocarbons. **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 and** continuous opacity monitor (COM) data, 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 - General Reporting Requirements of this permit.

- (c) ~~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.~~
- (d) These reports do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

The changes to paragraph (b) are requested because total hydrocarbons does not have an emission limit, so excess emissions cannot be reported. SDI requests the reporting requirement in paragraph (c) be removed because it is redundant. The revised paragraph (b) already requires quarterly excess opacity reports.

## Response 43

IDEM does not agree to remove total hydrocarbons from paragraph (b). Condition D.1.9(b) contains a requirement to record the total hydrocarbons output for the CEMs that measures the total hydrocarbon rates in pounds per hour and perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7. Therefore, the reporting requirement is not change as result of this comment.

The semiannual reporting requirement in Condition D.1.15(c) is not deleted, because this requirement is a federal requirement pursuant to 40 CFR 60.276a. Submitting quarterly reports will also satisfy the semiannual reporting requirements.

No changes have been made as a result of this comment.

## Comment 44

Revise Conditions D.1.16 through D.1.19 as follows:

D.1.16 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart AAa]

---

(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 as 326 IAC 12-1 for the above listed facilities except as otherwise specified in 40 CFR Part 60, Subpart AAa.

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

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

D.1.17 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~~ **applicable** provisions of 40 CFR Part 60, Subpart AAa (included as Attachment C), which are incorporated by reference as 326 IAC 12:

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

---

(a) Pursuant to 40 CFR 63.10690, 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 YYYYYY in accordance with schedule in 40 CFR 63 Subpart YYYYYY.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

D.1.19 National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities [40 CFR Part 63, Subpart YYYYYY]

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The Permittee shall comply with the ~~following~~ **applicable** provisions of 40 CFR 63, Subpart YYYYYY (included as Attachment D):

- (1) ~~40 CFR 63.10680(a), (b)(1), (c) and (d)~~
- (2) ~~40 CFR 63.10681(a) and (b)~~
- (3) ~~40 CFR 63.10685~~
- (4) ~~40 CFR 63.10686(a), (b), (d)(1) – (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~~

Rather than attempting to list out which NSPS and NESHAP provisions will be applicable to the Permittee, SDI requests that these conditions be revised merely to require compliance with the “applicable” provisions. This reduces the chance that the lists will contain errors and SDI will miss an otherwise-applicable requirement.

#### **Response 44**

The requested changes have not been made. In order to ensure that the compliance staff, Permittees, and the public are aware of which portions of the federal rules are applicable, IDEM only identifies the applicable portions of the federal rules in the permit conditions.

#### **Comment 45**

SDI requests the PM and PM10 limits be removed from condition D.2.1, Emission Limitations PSD BACT, because SDI is not sure how to certify compliance with these limits. There is no way to determine what emissions would have been but for controls, and there is no discrete stack that could be tested for this purpose.

#### **Response 45**

The BACT determination for the Continuous Caster that was included in SSM 065-16628-00037 established the PM and PM10 limits in lb/ton included in condition D.2.1. These limits are based on the emission factor used to calculate PM and PM10 emissions from these operations. All applicable requirements must be included in the Part 70 permit and changes to a PSD BACT limit require a reopening of BACT. Since the compliance determination requirements in section D.2 only require that “the tundish shall be covered by a lid to control fugitive emissions exhausting to the roof monitor”, it is assumed that as long as SDI complies with this requirement, they will be in compliance with the PSD BACT limits. No changes were made as a result of this comment.

#### **Comment 46**

Delete condition D.2.2 requiring a Preventive Maintenance Plan for the continuous caster and tundish lid because there is no need to have a PMP for the tundish lid, and there is no practical preventive maintenance for the caster that would affect emissions. SDI also requests that IDEM include in the Permit Shield provision a finding that Condition D.2.2 in the PSD permit is not applicable.

#### **Response 46**

The Preventive Maintenance Plan requirement must be included in every applicable Title V permit pursuant to 326 IAC 2-7-5(13). This rule refers back to the Preventive Maintenance Plan requirement as described in 326 IAC 1-6-3. This Preventive Maintenance Plan rule sets out the requirements for:

- (1) Identification of the individuals responsible for inspecting, maintaining and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),
- (2) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and

- (3) The identification and quantification of the replacement parts for the facility which the Permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(3)).

It is clear from the structure of the wording in 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Only 326 IAC 1-6-3(a)(1) is limited, in that it requires identification of the personnel in charge of only the emission control equipment, and not any other facility equipment. 326 IAC 1-6-3(b) provides that "...as deemed necessary by the commissioner, any person operating a facility shall comply with the requirements of subsection (a) of this section."

Many types of facilities require maintenance in order to prevent excess emissions. In addition to preventive maintenance performed on the control devices, preventive maintenance should be performed on the emission units themselves because lack of proper maintenance can result in increased emissions.

No evidence has been provided from the manufacturer of the continuous caster indicating that there is no preventive maintenance which can be performed to prevent excess emissions.

Therefore, Condition D.2.2 will remain unchanged.

#### **Comment 47**

SDI requests the SO<sub>2</sub>, VOC, PM and PM10 limits be removed from conditions D.3.1 and D.4.1 because these limits are governed by the use of natural gas and the source has no reasonable way of certifying compliance. Also, there is no legal authority for a separate filterable PM emissions limit.

Also, remove the requirement for proper combustion operation of the reheat furnace in paragraph (i) of condition D.3.1 since vague requirements such as this cannot be clearly certified.

#### **Response 47**

The BACT determinations for the Reheat Furnace and for the preheaters and dryer that were included in SSM 065-16628-00037 established both a pound per MMBtu limit and a pound per hour limit for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, PM (filterable) and PM10 (filterable and condensable) emissions for these units. The SO<sub>2</sub>, VOC, PM and PM10 emission limits are based on the U.S. EPA's AP-42 emission factor for similar combustion units (AP-42, Chapter 1.4, Tables 1.4-1 and 1.4-2). All applicable requirements must be included in the Part 70 permit and changes to a PSD BACT limit require a reopening of BACT.

According to 326 IAC 2-2-1(i), BACT means emissions limitation based on the maximum degree of reduction for *each regulated NSR pollutant* that would be emitted from the major stationary source. PM and PM10 are both regulated NSR pollutants. IDEM distinguishes between the filterable PM and filterable plus condensable PM10, therefore separate limits have to be specified.

The emissions from the reheat furnace are due to the combustion of natural gas. SDI is accountable for training personnel to properly operate and maintain the unit, providing guidelines or checklists, maintaining manufacturer's operating specifications and work practices. SDI will practice proactive safety first, followed by minimizing the use of fuels. This would be considered proper combustion operation. Compliance is sufficiently demonstrated by using pipeline natural gas as fuel in the reheat furnace.

Compliance can be certified for the preheaters and dryer emission limits by using pipeline natural gas in the preheaters and dryers.

No changes have been made as a result of this comment.

#### **Comment 48**

Revise condition D.5.2 as follows:

#### D.5.2 VTD Flare [326 IAC 2-2-3]

---

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall operate the VTD flare, with the temperature not less than ~~1,300~~**1,100**<sup>0</sup>F, except during start up and shutdown, to control CO emissions at all times that the VTD is in operation.

This temperature requirement is a BACT requirement resulting from the BACT analysis conducted for SSM 16628. IDEM cannot change a BACT requirement in a Title V permit.

#### Response 48

IDEM has determined that the minimum temperature at which a flare must operate to control CO emissions is 1,300°F. Therefore, the minimum temperature for the VTD flare has been changed to 1,300°F in the Part 70 permit because CO is controlled by being combusted at a temperature of at least 1,300°F.

There was no formal BACT analysis performed in SSM 16628 for the vacuum tank degasser (VTD) since use of the VTD flare to control CO emissions from the VTD was determined to be BACT based on review of other BACT determinations for similar degassers. The BACT determination did not include a minimum operating temperature for the flare so changing the minimum required temperature for the flare is not considered revising a BACT requirement.

No changes have been made as a result of this comment.

#### Comment 49

Revise Condition D.5.3 as follows:

#### D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

---

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~the VTD boiler and~~ the VTD flare.

A PMP is not necessary for the VTD boiler and was not required in the underlying permit for this unit.

#### Response 49

Since the VTD boiler is a large unit (69 MMBtu per hour) which could significantly contribute to emissions of air pollutants such as NO<sub>x</sub> and CO if not operating correctly and it is subject to the NSPS, 40 CFR 60, Subpart Dc, IDEM requires a PMP for the VTD boiler. No changes have been made as a result of this comment.

#### Comment 50

Revise Condition D.5.4(a) as follows:

#### D.5.4 Record Keeping Requirements

---

- (a) To document compliance with Condition D.5.2, the Permittee shall maintain records of the temperature of the VTD flare and make available upon request to IDEM, OAQ and the US EPA. ~~The Permittee shall include in its records when a temperature reading was not taken and the reason for the lack of a temperature reading (e.g. the process did not operate that day).~~

It is overly burdensome and not necessary to include this information; this information is already required in the quarterly deviation reports.

## Response 50

IDEM does not agree that this requirement is overly burdensome. In order to ensure that the lack of a temperature reading is not a failure to comply with this requirement, the Permittee is required to record the reason for a reading not being taken. No changes have been made to this condition.

## Comment 51

Revise Conditions D.5.5 and D.5.6 as follows:

### D.5.5 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart Dc]

---

(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 as 326 IAC 12-1 for the above listed facilities except as otherwise specified in 40 CFR Part 60, Subpart Dc.

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

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

### D.5.6 New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc] [326 IAC 12]

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The Permittee shall comply with the ~~following~~ **applicable** provisions of 40 CFR Part 60, Subpart Dc (included as Attachment E), which are incorporated by reference as 326 IAC 12:

- (1) ~~60.40c(a), (b)~~
- (2) ~~60.41e~~
- (3) ~~60.48c(a)(1), (3)~~
- (4) ~~60.48c(g)(1), (2)~~
- (5) ~~60.48c(i)~~
- (6) ~~60.48c(j)~~

## Response 51

The requested changes have not been made. In order to ensure that the compliance staff, Permittees, and the public are aware of which portions of the federal rules are applicable, IDEM only identifies the applicable portions of the federal rules in the permit conditions.

## Comment 52

Delete Condition D.6.2 which includes the PM limit pursuant to 326 IAC 6-3-2 for the caster cutting torches because it was not required in any prior permit, and there is no basis for the throughput limits added in the draft Title V.

## Response 52

Pursuant to 326 IAC 6-3-1, the rule applies to particulate emissions from manufacturing processes. Pursuant to 326 IAC 6-3-1.5, manufacturing process means any single or series of actions, operations, or treatments in which a mechanical, physical, or chemical transformation of material occurs that emits, or

has the potential to emit, particulate in the production of the product. Since the caster cutting torches meet the definition of manufacturing process and emit particulate matter at a rate of greater than 0.551 pounds per hour, they are subject to the rule. Also, since there were no particulate matter limits established pursuant to 326 IAC 2-2 (PSD) for the caster cutting torches, they are subject to this rule. Based on the emission calculations received from Mike Brooks of SDI in November, 2007, the maximum metal throughput to the caster cutting torches is 125 tons per hour.

There is a provision in the rule which exempts torch cutting, provided that less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less is cut. IDEM included this limit to allow SDI the flexibility to cut more than 3,400 inches per hour of stock. Therefore, the limit pursuant to 326 IAC 6-3-2 will remain in the permit.

### Comment 53

Delete paragraphs (d)(2) and (e)(3) from condition D.8.1 as shown below. SDI believes it cannot certify annual compliance with this vague, nondescript standard.

#### D.8.1 Emissions Limitations PSD BACT [326 IAC 2-2-3]

---

Pursuant to PSD SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

\*\*\*

- (d) The Permittee shall comply with the following BACT requirements for the scrap handling and processing operations:
  - (1) Scrap cutting is not allowed outdoors.
  - ~~(2) Good working practices shall be observed.~~
- (e) The Permittee's contractor shall comply with the following for fugitive PM emissions:
  - (1) The particulate emissions from the slag processing final transfer points and slag piles shall be controlled as needed by the application of water or chemical suppressant.
  - (2) The Permittee shall minimize drop heights, except during ball dropping.
  - ~~(3) Good working practices shall be performed.~~

### Response 53

The PM and PM10 emissions from the scrap and slag handling are due to the processing of the scrap and slag. SDI and the on-site contractor are accountable for training personnel to properly operate and maintain the equipment used to process the scrap and slag and as work practices, SDI and the on-site contractor will practice proper techniques for processing the scrap and slag by processing the scrap inside the building and operating the slag handling equipment in a manner that minimizes emissions. Nonrule Policy Document "Guidelines for Submittal and Review of Annual Compliance Certification under the Federally Enforceable State Operating Permit (FESOP) and Part 70 Permit Programs (AIR 007 NPD)" provides guidance. No changes have been made to this condition as a result of this comment.

### Comment 54

Revise Condition D.9.1 as follows:

#### D.9.1 Emission Limitations PSD BACT [326 IAC 2-2-3] [326 IAC 6-5]

---

Pursuant to SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT),

the Permittee shall comply with the following:

\*\*\*

- (c) The Permittee shall maintain, update **as needed**, ~~comply with~~, and implement its Fugitive Dust Plan (included as Attachment B).
- (1) The silt loading on paved roads and paved parking lots shall be controlled by the use of vehicular vacuum sweeper or water flushing and shall be performed every 14 days, unless it is raining.
  - (2) Upon request by IDEM, OAQ, the Permittee shall sample surface material silt content and surface dust loadings in accordance with procedures approved by IDEM, OAQ. Road segments to be sampled shall be approved by IDEM, OAQ.
  - (3) The Permittee shall provide supplemental cleaning of paved roads found to exceed allowable silt loadings.

The requirements in paragraph (c) above will also satisfy the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations).

- (d) **Upon request by IDEM, OAQ, opacity shall be determined as follows:** The opacity from paved roadways and parking lots 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.

\*\*\*

- (f) **Upon request by IDEM, OAQ, opacity shall be determined as follows:** The opacity from unpaved roadways and unpaved areas around slag storage piles and steel scrap piles 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 change in paragraph (c) is requested because “comply with” is repetitive of the requirement to “implement” the Fugitive Dust Plan. It is not necessary to state both. The changes in paragraphs (d) and (f) are requested because these changes clarify the frequency for making an opacity determination, which is not otherwise stated in this condition.

#### Response 54

IDEM agrees and Condition D.9.1 has been revised accordingly.

#### Comment 55

Revise condition D.10.1 and delete condition D.10.2 as follows:

##### D.10.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

- 
- (a) Pursuant to SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the visible emissions from each cooling tower shall not exceed 20% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (b) ~~Pursuant to 326 IAC 2-2, the drift rate from each cooling tower shall not exceed 0.0005%.~~

##### ~~Compliance Determination Requirements [326 IAC 2-1.1-11]~~

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~~D.10.2 Drift Eliminators [326 IAC 2-2]~~

---

~~Pursuant to 326 IAC 2-2, the drift eliminators for particulate control shall be in operation and control emissions at all times that one or more of the cooling towers are in operation.~~

The change to condition D.10.1 is requested because the limit is impossible to certify, especially for a cooling tower with pre-existing drift eliminators.

Condition D.10.2 should be deleted because drift eliminators are built into each cooling tower. This condition implies they are subject to some level of operational control each time the tower is operated, which is not the case.

### Response 55

The PSD BACT limit of 0.0005% in Condition D.10.1(b) is not deleted, because it is the PSD BACT limit established during the BACT Analysis for the Cooling Towers. To demonstrate compliance with this limit, SDI will follow the work practices plan submitted to IDEM. Also, to certify compliance SDI can refer to the Nonrule Policy Document "Guidelines for Submittal and Review of Annual Compliance Certification under the Federally Enforceable State Operating Permit (FESOP) and Part 70 Permit Programs (AIR 007 NPD)" provides guidance.

IDEM acknowledges that the drift eliminators are built into each cooling tower, but according to January 1995 AP-42 Chapter 13.4.2 Wet Cooling Towers, Emissions and Control, excessive water flow, excessive airflow, and water bypassing the tower drift eliminators can promote and/or increase drift emissions. Therefore, the drift eliminators must be in operation and be able to control emissions at all times the cooling towers are in operation. The permit is not changed as result of this comment.

### Comment 56

Revise Condition D.11.1 as follows:

~~D.11.1 Emission Limitations PSD BACT [326 IAC 2-2-3]~~

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~~Pursuant to SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:~~

- ~~(a) Each emergency generator shall **be run** solely **to** provide back up power when electric power is interrupted **or for periodic maintenance of the generator itself**.~~
- ~~(b) Each emergency generator shall not operate more than 500 hours per 12-consecutive month period, ~~with compliance determined at the end of each month.~~~~
- ~~(c) The sulfur content of the diesel fuel used shall not exceed 0.05 percent by weight.~~
- ~~(d) ~~Good combustion practices shall be performed.~~~~

The changes to paragraph (a) are requested to clarify when the emergency generator can operate. The change to paragraph (b) is requested because the requirement to demonstrate compliance at the end of each month is overly burdensome for such a small unit used for back-up purposes only. The deletion of paragraph (d) is requested because SDI cannot certify annual compliance with this vague standard.

### Response 56

The addition of the requested language in Condition D.11.1 (a) and (b) will clarify when SDI operates the emergency generators. The condition is revised as shown below.

The emissions from the emergency generator are due to the combustion of diesel fuel. SDI is accountable for training personnel to properly operate and maintain the unit, providing guidelines or checklists, maintaining manufacturer's operating specifications and as work practices, SDI will practice proactive safety first, followed by minimizing the use of fuels. This would be considered good combustion practices. No changes have been made to condition D.11.1(d) as a result of this comment.

#### D.11.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) Each emergency generator shall **be run solely to provide back up power when electric power is interrupted or for periodic maintenance of the generator itself.**
- (b) Each emergency generator shall not operate more than 500 hours per 12-consecutive month period, ~~with compliance determined at the end of each month.~~

\*\*\*

#### Comment 57

Request to revise the first paragraph of the Quarterly Deviation and Compliance Monitoring Report as follows:

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

#### Response 57

IDEM has the authority to require reports of deviations under 326 IAC 2-7-5(3), Permit Content, and 326 IAC 2-7-5(3)(C) to require quarterly deviation reports as an applicable requirement in the Part 70 permit. 326 IAC 2-7-5(3)(C)(ii) states "Notwithstanding requirements in this section [326 IAC 2-7-5 Permit Content], the reporting of deviations required by an applicable requirement shall follow the schedule stated in the applicable requirement." If the applicable requirement is also a Part 70 permit requirement, then deviations from that requirement would have to be included in the report. If there is another applicable requirement that is not a Part 70 permit requirement, then deviations from that applicable requirement would be reported according to the schedule stated in the applicable requirement and would not need to be included in this report. No changes have been made as a result of this comment.

### General Comments and IDEM's Responses

On October 9, 2008, OAQ received comments from Lois Hoffman, a citizen of Lizton, Indiana. The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

#### Comment 58

The draft permit represents large increases in all emissions at this site. The air pollution impact on those living and working in this area has the potential to be a serious health hazard. Comparing emissions estimated in this draft permit to the emissions in 2004, the increases are estimated as follows: PM<sub>2.5</sub>

emissions are 6 times higher; PM<sub>10</sub> emissions are 3.5 times higher; SO<sub>2</sub> emissions are 9.5 times higher; VOC emissions are 4.6 times higher; CO emissions are 2.2 times higher; and NO<sub>x</sub> emissions are 3.4 times higher.

### Response 58

The following information was reported in the technical support document for the draft permit:

<b>Pollutant</b>	<b>2004 Reported Actual Emissions (tons/yr)</b>	<b>Maximum Potential to Emit (tons/yr)</b>
PM	-	107.68
PM <sub>2.5</sub>	26.8	161.48
PM <sub>10</sub>	46.1	161.48
SO <sub>2</sub>	87.4	833.91
VOC	13.6	62.83
CO	598.5	1,298.24
NO <sub>x</sub>	97.8	339.02
Pb	0.00018	-

The actual emissions values represent the summation of the estimated emissions based on the actual throughput and hours of operation for each process at the facility. The potential to emit values are the summation of the maximum potential emissions for each process at the facility considering theoretical continuous operation of each process and enforceable limitations on the process emissions.

Applicability of Federal and State regulations is determined using the values for the maximum potential to emit. Actual emissions data is provided in the technical support documentation to provide a perspective on how much of each pollutant is emitted as well as to document that the maximum allowed emissions rates have not been exceeded.

The draft permit requires the Permittee to demonstrate compliance with the limitations established in the permit, including federal and state regulations that are applicable to the emission units. IDEM does not have the authority to require additional controls beyond those necessary to meet the limits included and established in this permit.

### Comment 59

Steel Dynamics is located half a mile from Pittsboro Elementary School which is filled with approximately 400 students during the school day. There are 126,000 schools located near facilities that are major sources of air pollution. The current amount of air pollution emissions from Steel Dynamics has placed Pittsboro Elementary students as one of the schools receiving the highest amount of air pollution. Pittsboro ranks 16th out of these 126,000 schools.

### Response 59

Recent news articles suggest that certain Indiana schools may be unsafe. IDEM does not believe this to be true. The U.S. EPA screening tool used for the recent reports is sufficient to identify areas of concern, but it is not accurate enough to determine the risk presented to human health or our environment. The data used does not represent the air children breathe at school throughout the course of a year or even one day. Many of the conclusions reached by these reports are based on health protective modeling that often overestimates the true risk posed by air pollutants. This is why the recent USA TODAY articles state that their monitoring found concentrations hundreds of thousands of times lower than what the screening tool predicted. IDEM does not see an immediate risk to children in schools based on the minimal information presented in the articles.

### **Comment 60**

The November 8, 2007, temporary emergency rule redesignated Hendricks County to attainment for the eight-hour ozone standard. Since there has not been a permanent revision to 326 IAC 1-4-1, this draft should not be considered.

### **Response 60**

On March 26, 2007, IDEM submitted a request for EPA approval of a redesignation of Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby Counties (the Central Indiana Area) to attainment of the 8-hour ozone National Ambient Air Quality Standard (NAAQS). Effective October 19, 2007, EPA made a determination that the Central Indiana Area, including Hendricks County, had attained the 8-hour ozone NAAQS.

The emergency rule for the 8-hour ozone designations was in effect while the rulemaking for the permanent rule revision to 326 IAC 1-4-1 was in progress; therefore, there was no time gap during rulemaking for the ozone redesignations. Since there was never a time gap between these two rules, the Central Indiana Area, including Hendricks County, is classified as attainment for the 8-hour ozone NAAQS, effective October 19, 2007.

### **Comment 61**

In the draft permit, Steel Dynamics should be required to place monitoring devices in the community, school, and surrounding areas within a 3-mile radius of the plant. These monitor sites should be maintained and reported for the life of the emitting facility.

### **Response 61**

All monitoring that IDEM can legally require under the Part 70 and PSD rules has been incorporated into the operating permit.

Air quality monitoring is conducted across the state of Indiana for a variety of programs; National Ambient Air Quality Standards (NAAQS) compliance, air quality trends, Air Quality Index (AQI), air quality mapping (AIRNow), special monitoring projects, and others. The Network Description ([http://www.in.gov/idem/files/ambient\\_network\\_description.xls](http://www.in.gov/idem/files/ambient_network_description.xls)) lists the current sites and the parameters monitored at each site.

A Network Review is conducted annually to determine any changes to be made to the network. A review of Indiana's Ambient Air Monitoring Network is to be conducted as per 40 CFR Part 58 Subpart B 58.10. The review is to assess the current air monitoring network and determine if any changes are necessary to meet the monitoring goals and monitoring projects across the state. All criteria pollutant monitoring networks, carbon monoxide, lead, nitrogen dioxide, ozone, PM<sub>10</sub>, PM<sub>2.5</sub>, and sulfur dioxide, are evaluated. Other networks such as toxics, PM<sub>2.5</sub> speciation, metals, carbonyls, and meteorology are evaluated as well. Any network modifications become part of the 2009 Network Plan.

<b>IDEM Contact</b>
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Questions regarding this proposed permit can be directed to:

Kimberly Cottrell  
Indiana Department Environmental Management  
Office of Air Quality  
100 North Senate Avenue  
MC 61-53, Room 1003  
Indianapolis, Indiana 46204-2251  
Toll free (within Indiana): 1-800-451-6027 extension 3-0870  
Or dial directly: (317) 233-0870  
kcottrel@idem.in.gov

Please refer to Part 70 Operating Permit No.: T 063-20969-00037 in all correspondence.

Appendix A: Emission Calculations  
Steel Dynamics, Inc. - Engineered Bar Products Division  
Potential to Emit

**Company Name: Steel Dynamics, Inc. - Engineered Bar Products Division**  
**Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167**  
**Permit Number: T063-20969-00037**  
**Reviewer: ERG/TE**  
**Date: 02/27/08**

Emission Unit	Throughput (tons/year)	Pollutant	Emission Factor	Units	Source of EF	Capture Eff.	Control Eff.	PTE After Controls						
								PM (TPY)	PM-10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)	PB (TPY)
EAF Baghouse/LMS Baghouse Exhaust Flow Rate (dscf/min)	550,000	PM PM-10	0.0018 0.0052	gr/dscf gr/dscf	PSD Permit Limit PSD Permit Limit	- -	- -	37.17	107.37	-	-	-	-	-
EAF & LMS	1,095,000	SO2 NOx VOC CO Pb	190 0.35 0.09 2.0 0.134	lb/hr lb/ton lb/ton lb/ton lb/hr	PSD Permit Limit PSD Permit Limit PSD Permit Limit PSD Permit Limit PSD Permit Limit w/control	99.00% 99.00% 99.00% 99.00% 99.50%	0.00% 0.00% 0.00% 0.00% -	-	-	823.88	189.71	48.78	1084.05	0.59
EAF Fugitive Emissions	1,095,000	PM PM-10 SO2 NOx VOC CO Pb	1.4 1.4 190 0.35 0.09 2.0 0.134	lb/ton lb/ton lb/hr lb/ton lb/ton lb/ton lb/hr	AP-42, Table 12.5-1 AP-42, Table 12.5-1 PSD Permit Limit PSD Permit Limit PSD Permit Limit PSD Permit Limit PSD Permit Limit	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	3.83	3.83	8.32	1.92	0.49	10.95	2.93E-03
LMS Fugitive Emissions Assumes 99.5% captured, 0.5% is fugitive	1,095,000	PM PM-10	0.61 0.61	lb/ton lb/ton	EF based on previous permits EF based on previous permits	0.00% 0.00%	0.000% 0.000%	1.67	1.67	0.00	0.00	0.00	0.00	0.00
Continuous Caster Operation is covered with a tundish lid for control. Assumes 2% of emissions are uncontrolled and fugitive.	1,095,000	PM PM-10	0.07 0.07	lb/ton lb/ton	PSD Permit Limit PSD Permit Limit	0.00% 0.00%	0.00% 0.00%	0.77	0.77	0.00	0.00	0.00	0.00	0.00
Sawing Operations	1,095,000	PM PM-10	0.1 0.1	lb/ton* lb/ton*	AP-42, Table 12.5-1* AP-42, Table 12.5-1*	100.00% 100.00%	90.00% 90.00%	5.48	5.48	0.00	0.00	0.00	0.00	0.00
Storage Silos (9) Flow Rate for all 9 (dscf/min)	10,800 (dscf/min)	PM PM-10	0.01 0.01	gr/dscf gr/dscf	PSD Permit Limit PSD Permit Limit	- -	- -	4.05	4.05	0.00	0.00	0.00	0.00	0.00
Cutting Torches	1,095,000	PM PM-10	0.01 0.01	lb/ton** lb/ton**	AP-42, Table 12.5-1** AP-42, Table 12.5-1**	0.00% 0.00%	0.00% 0.00%	5.48	5.48	0.00	0.00	0.00	0.00	0.00
Cutting Torches (Natural Gas) 1 mmcf = 1,020 MMBtu	6.3 MMBtu/hr	PM PM-10 SO2 NOx VOC CO Pb	1.9 7.6 0.6 100 5.5 84 0.0005	lb/mmcf lb/mmcf lb/mmcf lb/mmcf lb/mmcf lb/mmcf lb/mmcf	AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	0.05	0.21	0.02	2.71	0.15	2.27	1.35E-05

Appendix A: Emission Calculations  
 Steel Dynamics, Inc. - Engineered Bar Products Division  
 Potential to Emit

Emission Unit	Throughput (tons/year)	Pollutant	Emission Factor	Units	Source of EF	Capture Eff.	Control Eff.	PTE After Controls						
								PM (TPY)	PM-10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)	PB (TPY)
Reheat Furnace  1 mmcf = 1,020 MMBtu	310 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	2.53	10.12	0.80	75.88	7.32	111.82	6.66E-04
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	57	lb/mmcf	October 2004 stack test	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
VTD Boiler and Flare  1 mmcf = 1,020 MMBtu	107.4 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.88	3.51	0.28	23.06	2.54	38.74	2.31E-04
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	50	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
LMS Ladle Preheaters and Dryers (5 heaters @ 7.5 MMBtu/hr) 1 mmcf = 1,020 MMBtu	37.5 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.31	1.22	0.10	8.05	0.89	13.53	8.05E-05
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	50	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
2 Tundish Preheaters (9 MMBtu/hr each) 3 Tundish Nozzle Preheaters (6 MMBtu/hr total) 2 Tundish Dryers (9 MMBtu/hr each)  1 mmcf = 1,020 MMBtu	42 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.34	1.37	0.11	9.02	0.99	15.15	9.02E-05
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	50	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
Heat Treat Furnaces  1 mmcf = 1,020 MMBtu	58 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.47	1.89	0.15	24.91	1.37	20.92	1.25E-04
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	100	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
Cooling Tower 1 Melt Shop Non-contact Concentration (ppm) = 3,000 Density (lb/gal) = 8.345	26,700 Gallons/min	PM	0.00001	unitless	Engineering Estimate (see example calcs below)	-	-	1.76	1.76	0.00	0.00	0.00	0.00	0.00
Cooling Tower 2 Vacuum Degasser Contact Concentration (ppm) = 2,000 Density (lb/gal) = 8.345	2,000 Gallons/min	PM	0.00002	unitless	Engineering Estimate (see example calcs below)	-	-	0.18	0.18	0.00	0.00	0.00	0.00	0.00
Cooling Tower 3 Bar Mill Contact Concentration (ppm) = 3,000 Density (lb/gal) = 8.345	9,700 Gallons/min	PM	0.00002	unitless	Engineering Estimate (see example calcs below)	-	-	1.28	1.28	0.00	0.00	0.00	0.00	0.00
Cooling Tower 4 Bar Mill Non-Contact Concentration (ppm) = 3,000 Density (lb/gal) = 8.345	5,600 Gallons/min	PM	0.00002	unitless	Engineering Estimate (see example calcs below)	-	-	0.74	0.74	0.00	0.00	0.00	0.00	0.00

Emission Unit	Throughput (tons/year)	Pollutant	Emission Factor	Units	Source of EF	Capture Eff.	Control Eff.	PTE After Controls						
								PM (TPY)	PM-10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)	PB (TPY)
Emergency Generators Usage based on 500 hours/year as emergency generators	485 Hp	PM	0.0022	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%	0.27	0.27	0.25	3.76	0.30	0.81	0.00
		PM-10	0.0022	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
		SO2	0.00205	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
		NOx	0.031	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
		VOC	0.0025141	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
CO	0.00668	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%									
Roads (See attached spreadsheets)		PM	-	-				36.34	8.16	0.00	0.00	0.00	0.00	0.00
		PM-10	-	-										
Crushing Plant - Grizzle Feeder	876,000	PM	0.0001	lb/ton	From PSD permit	0.00%	0.00%	0.04	0.02	0.00	0.00	0.00	0.00	0.00
		PM-10	0.000048	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant Conveyors 2, 2A, 2B, 3, 3A, 7, 8, 9, 10, 13, & 14	876,000	PM	0.0001	lb/ton	From PSD permit	0.00%	0.00%	0.04	0.02	0.00	0.00	0.00	0.00	0.00
		PM-10	0.000048	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant Conveyors 5'x12' Screen (2), 4'x8' Screen (1), & 6'x16' Screen (3)	876,000	PM	0.0018	lb/ton	From PSD permit	0.00%	0.00%	0.79	0.37	0.00	0.00	0.00	0.00	0.00
		PM-10	0.00084	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant Jaw Crusher and 5 1/2 Cone Crusher	613,200	PM	0.0012	lb/ton	From PSD permit	0.00%	0.00%	0.37	0.18	0.00	0.00	0.00	0.00	0.00
		PM-10	0.00059	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant 24" Stackers #S4, S5, and S1	876,000	PM	0.0001	lb/ton	From PSD permit	0.00%	0.00%	0.04	0.02	0.00	0.00	0.00	0.00	0.00
		PM-10	0.000048	lb/ton	From PSD permit	0.00%	0.00%							
Wind Erosion (See attached spreadsheets)	77,250	PM	-	-	AP-42, Section 13.2.5	0.00%	0.00%	2.05	1.03	0.00	0.00	0.00	0.00	0.00
		PM-10	-	-	AP-42, Section 13.2.5	0.00%	0.00%							
Bulk Loading	77,250	PM	0.0035	lb/ton	AP-42, Section 13.2.4	0.00%	0.00%	0.14	0.07	0.00	0.00	0.00	0.00	0.00
		PM-10	0.0017	lb/ton	AP-42, Section 13.2.4	0.00%	0.00%							
Pot Slagging	20,625	PM	0.026	lb/ton	From PSD permit	0.00%	0.00%	0.27	0.13	0.00	0.00	0.00	0.00	0.00
		PM-10	0.013	lb/ton	From PSD permit	0.00%	0.00%							
Pot Skulling	20,625	PM	0.026	lb/ton	From PSD permit	0.00%	0.00%	0.27	0.13	0.00	0.00	0.00	0.00	0.00
		PM-10	0.013	lb/ton	From PSD permit	0.00%	0.00%							
Pot Digging	75,000	PM	0.0018	lb/ton	From PSD permit	0.00%	0.00%	0.07	0.16	0.00	0.00	0.00	0.00	0.00
		PM-10	0.0043	lb/ton	From PSD permit	0.00%	0.00%							
<b>Total PTE</b>								<b>107.65</b>	<b>161.47</b>	<b>833.89</b>	<b>339.00</b>	<b>62.83</b>	<b>1,298.24</b>	<b>0.59</b>

**Notes:**

\* The sawing operations emission factors are from AP-42 Table 12.5-1 for uncontrolled scarfing operations

\*\* The caster cutting particulate emission factor is from the AP-42 Table 12.5-1 for uncontrolled scarfing operations multiplied by 10% escaping the building.

PSD Permit limits are from Permit #063-16628-00037

**Example Calculations**

Caster PM emissions = (throughput - tons/yr)\*(emission factor - lb/ton)\*(1 - control eff)\*(1 ton/2,000 lbs)

Caster PM emissions (tons/year) = (1,095,000 tons/yr)\*(0.07 lbs/ton)\*(1 - 0.98)/2000

Caster PM emissions = 0.7665 tons/year

EAF/LMS baghouse PM emissions = (grain loading - gr/dscf) \*(flow rate - dscf/min) \*(1 lb/7,000 grains)\*(60 min/hr)\*(8,760 hr/yr)\*(1 ton/2,000 lbs)

EAF/LMS baghouse PM emissions = (0.0018 gr/dscf)\*(550,000 dscf/min)\*(1 lb/7,000 grains)\*(60 min/hr)\*(8,760 hr/yr)\*(1 ton/2,000 lbs)

EAF/LMS baghouse PM emissions = 37.1674 tons/year

Based on the drift eliminators (emission factor), cooling tower emissions are computed by the following formula:

Cooling Tower 1 PM emissions = (flow rate - gal/min)\*(ppm concentration)\*(emission factor - no units)\*(density lb/gal)\*(60 min/1 hr)\*(8,760 hr/1 yr)\*(1 ton/2,000 lbs)

Cooling Tower 1 PM emissions = (26,700 gal/min)\*(3,000/1,000,000)\*(0.00001)(8.345 lb/gal)\*(60 min/hr)\*(8,760 hr/1 yr)\*(1 ton/2,000lbs)

Cooling Tower 1 PM emissions = 1.7566 tons/year

**Company Name:** Steel Dynamics, Inc. - Engineered Bar Products Division  
**Address City IN Zip:** 8000 North County Road 225 East, Pittsboro, Indiana 46167  
**Permit Number:** T063-2096  
**Reviewer:** ERG/TE  
**Date:** 02/27/08

**Roads**

**Shipping Out**

Emissions from traffic on paved roads used an equation from AP-42., Section 13.2.1.

$$E = (k) * (SL/2)^{0.65} * (W/3)^{1.5} \text{ lb/mi}$$

where: k = 0.082 for PM,

k = 0.016 for PM10,

SL = 9.7 (silt loading) Table 13.2.1-3, AP-42

W = 30 tons (average weight of trucks) (20 tons empty, 40 tons full)/2

$$\text{PM EF} = (0.082) * (9.7/2)^{0.65} * (30/3)^{1.5} = 7.24 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.016) * (9.7/2)^{0.65} * (30/3)^{1.5} = 1.41 \text{ lb/mi}$$

$$\text{trips per year} = (400,000 \text{ tons/year}) / (20 \text{ Tons/trip}) = 20,000 \text{ trips/yr}$$

$$\text{VMT} = (20,000 \text{ trips/yr}) * (1,950 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 14,773 \text{ mi/yr}$$

70% control assumed for watering/cleaning roads

$$\text{PM} = (7.24 \text{ lb/mi}) * (14,773 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 16.0 \text{ tpy}$$

$$\text{PM10} = (1.41 \text{ lb/mi}) * (14,773 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 3.1 \text{ tpy}$$

**Employee Parking Paved Roads**

W = 2 tons (average weight of vehicles)

$$\text{PM EF} = (0.082) * (9.7/2)^{0.65} * (2/3)^{1.5} = 0.12 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.016) * (9.7/2)^{0.65} * (2/3)^{1.5} = 0.02 \text{ lb/mi}$$

$$\text{VMT} = (250 \text{ trips/day}) * (365 \text{ days/yr}) * (500 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 17,282 \text{ mi/yr}$$

$$\text{PM} = (0.12 \text{ lb/mi}) * (17,282 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.3 \text{ tpy}$$

$$\text{PM10} = (0.02 \text{ lb/mi}) * (17,282 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.1 \text{ tpy}$$

**Scrap Delivered Direct - Paved Roads**

W = 30 tons (average weight of trucks)

$$\text{PM EF} = (0.082) * (9.7/2)^{0.65} * (30/3)^{1.5} = 7.24 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.016) * (9.7/2)^{0.65} * (30/3)^{1.5} = 1.41 \text{ lb/mi}$$

$$\text{VMT} = (10,500 \text{ trips/yr}) * (2,200 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 8,750 \text{ mi/yr}$$

$$\text{PM} = (7.24 \text{ lb/mi}) * (8,750 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 9.5 \text{ tpy}$$

$$\text{PM10} = (1.41 \text{ lb/mi}) * (8,750 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 1.9 \text{ tpy}$$

**Scrap Delivered Direct - Unpaved Roads**

Emissions from traffic on unpaved roads uses an equation from AP-42 Section 13.2.2.

$$E = (k) * (5.9) * (s/12) * (S/30) * (W/3)^{0.7} * (w/4)^{0.5} * ((365-p)/365)$$

where: k = particulate size multiplier, 0.8 for PM, 0.36 for PM10

s = silt content of road surface material (%) (6%)

S = mean vehicle speed (mph) (10)

W = mean vehicle weight (tons) (30)

w = mean number of wheels (18)

p = number of days per year with at least 0.01 inches of precipitation (110)

$$\text{PM EF} = (0.8) * (5.9) * (6/12) * (10/30) * (30/3)^{0.7} * (18/4)^{0.5} * ((365-110)/365) = 5.84 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.36) * (5.9) * (6/12) * (10/30) * (30/3)^{0.7} * (18/4)^{0.5} * ((365-110)/365) = 2.63 \text{ lb/mi}$$

$$\text{VMT} = (10,500 \text{ trips/yr}) * (200 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 795 \text{ mi/yr}$$

Assume 80% control watering/chemical application on unpaved roads

$$\text{PM} = (5.84 \text{ lb/mi}) * (795 \text{ mi/yr}) * (1-0.80) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.5 \text{ tpy}$$

$$\text{PM10} = (2.63 \text{ lb/mi}) * (795 \text{ mi/yr}) * (1-0.80) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.2 \text{ tpy}$$

**Company Name: Steel Dynamics, Inc. - Engineered Bar Products Division**  
**Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167**  
**Permit Number: T063-2096**  
**Reviewer: ERG/TE**  
**Date: 02/27/08**

**Scrap Delivered Yard - Paved Roads**

W = 30 tons (average weight of trucks)  
 PM EF =  $(0.082) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 7.24 \text{ lb/mi}$   
 PM10 EF =  $(0.016) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 1.41 \text{ lb/mi}$   
 VMT =  $(10,500 \text{ trips/yr}) \cdot (1,450 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 5,767 \text{ mi/yr}$   
 PM =  $(7.24 \text{ lb/mi}) \cdot (5,767 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 6.3 \text{ tpy}$   
 PM10 =  $(1.41 \text{ lb/mi}) \cdot (5,767 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 1.2 \text{ tpy}$

**Scrap Delivered Yard - Unpaved Roads**

S = 10 mph, W = 30 tons, w = 18 wheels  
 PM EF =  $(0.8) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 5.84 \text{ lb/mi}$   
 PM10 EF =  $(0.36) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 2.63 \text{ lb/mi}$   
 VMT =  $(10,500 \text{ trips/yr}) \cdot (1,500 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 5,966 \text{ mi/yr}$   
 Assume 80% control watering/chemical application on unpaved roads  
 PM =  $(5.84 \text{ lb/mi}) \cdot (5,966 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 3.5 \text{ tpy}$   
 PM10 =  $(2.63 \text{ lb/mi}) \cdot (5,966 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 1.6 \text{ tpy}$

**Alloy Delivery to Point 1 Paved Roads**

W = 30 tons (average weight of trucks)  
 PM EF =  $(0.082) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 7.24 \text{ lb/mi}$   
 PM10 EF =  $(0.016) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 1.41 \text{ lb/mi}$   
 VMT =  $(213 \text{ trips/yr}) \cdot (2,200 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 178 \text{ mi/yr}$   
 PM =  $(7.24 \text{ lb/mi}) \cdot (178 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.2 \text{ tpy}$   
 PM10 =  $(1.41 \text{ lb/mi}) \cdot (178 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.04 \text{ tpy}$

**Alloy Delivery to Point 2 - Unpaved Roads**

S = 10 mph, W = 30 tons, w = 18 wheels  
 PM EF =  $(0.8) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 5.84 \text{ lb/mi}$   
 PM10 EF =  $(0.36) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 2.63 \text{ lb/mi}$   
 VMT =  $(213 \text{ trips/yr}) \cdot (900 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 73 \text{ mi/yr}$   
 Assume 80% control watering/chemical application on unpaved roads  
 PM =  $(5.84 \text{ lb/mi}) \cdot (73 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.04 \text{ tpy}$   
 PM10 =  $(2.63 \text{ lb/mi}) \cdot (73 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.02 \text{ tpy}$

**Roads Emission Summary**

	Paved Roads		Unpaved Roads		Total	
	PM (TPY)	PM10 (TPY)	PM (TPY)	PM10 (TPY)	PM (TPY)	PM10 (TPY)
Shipping out	16.0	3.1	0.0	0.0	16.0	3.1
Employee Parking	0.3	0.1	0.0	0.0	0.3	0.1
Scrap - Direct	9.5	1.9	0.5	0.2	10.0	2.1
Scrap - Yard	6.3	1.2	3.5	1.6	9.8	2.8
Alloy Delivery Point 1	0.2	0.04	0.0	0.0	0.2	0.0
Alloy Delivery Point 2	0.0	0.0	0.04	0.02	0.04	0.02
<b>Total</b>	<b>32.3</b>	<b>6.34</b>	<b>4.04</b>	<b>1.82</b>	<b>36.34</b>	<b>8.16</b>

**Company Name:** Steel Dynamics, Inc. - Engineered Bar Products Division  
**Address City IN Zip:** 8000 North County Road 225 East, Pittsboro, Indiana 46167  
**Permit Number:** T063-20969-01  
**Reviewer:** ERG/TE  
**Date:** 02/27/08

### Wind Erosion

Wind erosion emissions from storage piles are estimated using procedures outlined in AP-42, Section 13.2.5. A year of meteorological data was reviewed (Indianapolis, 1994) to determine highest daily wind speeds to utilize in the calculations. The annual throughput is 77,250 tons so a 30 day supply would equal approximately 6,400 tons.

Assuming a density of calcined gypsum (55 lb/ft<sup>3</sup>), the volume of the pile would be:  
 $(6,400 \text{ tons})(2,000 \text{ lb/ton})/(55 \text{ lb/ft}^3) = 232,727 \text{ ft}^3$

The volume of a cone is equal to:  $V = (1/3)(\pi)(h)(r)^2$   
Assuming that the slope is 30 degrees, the height is equal to  $r \times \tan 30$  or  $0.577 r$ .  
Substituting this into the above equations results in  $V = (1/3)(\pi)(0.577r)(r)^2 = 232,727 \text{ ft}^3$

Solving for r and h:  
 $r = 72.8 \text{ ft}$                        $h = 42.0 \text{ ft}$ .

The surface area of a cone is equal to:  $S = (\pi)(r)(r^2 + h^2)^{0.5}$   
Substituting in the appropriate values results in an area of 19,222 ft<sup>2</sup> which is equivalent to 0.44 acres or 1786 square meters.

The subareas of the pile are:

0.2	$(1786 \text{ sq m})(0.40) = 714.4 \text{ sq m}$
0.6	$(1786 \text{ sq m})(0.48) = 857.3 \text{ sq m}$
0.9	$(1786 \text{ sq m})(0.12) = 214.3 \text{ sq m}$

Emissions are based upon emission factors determined from the frequency of the wind over critical threshold wind speeds.

0.2	$(714.4 \text{ sq m})(0 \text{ g/m}^2/\text{yr})(1 \text{ lb}/453.6 \text{ g})(1 \text{ ton}/2,000 \text{ lb}) = 0 \text{ tpy}$
0.6	$(857.3 \text{ sq m})(904.2 \text{ g/m}^2/\text{yr})(1 \text{ lb}/453.6 \text{ g})(1 \text{ ton}/2,000 \text{ lb}) = 0.85 \text{ tpy}$
0.9	$(214.3 \text{ sq m})(5,074 \text{ g/m}^2/\text{yr})(1 \text{ lb}/453.6 \text{ g})(1 \text{ ton}/2,000 \text{ lb}) = 1.2 \text{ tpy}$

**PM total = 2.05 tpy**

**PM10 Total = 1.03 tpy**                      (PM10 is one half of PM)

Company Name: Steel Dynamics, Inc. - Engineered Bar Products Division  
 Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
 Permit Number: T063-20969-00037  
 Reviewer: ERG/TE  
 Date: 02/27/08

<i>Emission Unit</i>	<i>Throughput</i>	<i>Pollutant</i>	<i>Emission Factor</i>	<i>Units</i>	<i>Capture Efficiency</i>	<i>PTE (TPY)</i>	
<b>EAF</b>  <b>Source of Emission Factors</b> EAF Dust Analysis (Emission factors assume 99% baghouse control of PM HAPs)  *Beryllium, Mercury & Fluoride emission factors are a PSD Limit.	1,095,000 Tons/year	Antimony	4.11E-05	lb/ton	0.995	0.02	
		Arsenic	3.08E-05	lb/ton	0.995	0.02	
		Beryllium*	5.75E-05	lb/hour	0.995	2.51E-04	
		Cadmium	1.48E-04	lb/ton	0.995	0.08	
		Chromium	1.26E-03	lb/ton	0.995	0.69	
		Cobalt	2.85E-05	lb/ton	0.995	0.02	
		Manganese	5.71E-03	lb/ton	0.995	3.11	
		Mercury*	2.30E-02	lb/hour	0.995	0.10	
		Nickel	1.83E-03	lb/ton	0.995	1.00	
		Selenium	4.11E-05	lb/ton	0.995	0.02	
		Fluoride*	6.80E-01	lb/hour	0.99	2.95	
		Hexane	5.95E-03	lb/ton	0.99	3.23	
		Toluene	7.27E-03	lb/ton	0.99	3.94	
		<b>TOTAL</b>					<b>15.17</b>
<b>EAF Fugitive</b>  <b>Source of Emission Factors</b> EAF Dust Analysis  *Beryllium, Mercury & Fluoride emission factors are a PSD Limit.	1,095,000 Tons/year	Antimony	4.11E-03	lb/ton	0.00	1.13E-02	
		Arsenic	3.08E-03	lb/ton	0.00	8.43E-03	
		Beryllium*	5.75E-05	lb/hour	0.00	1.26E-06	
		Cadmium	1.48E-02	lb/ton	0.00	4.05E-02	
		Chromium	1.26E-01	lb/ton	0.00	0.34	
		Cobalt	2.85E-03	lb/ton	0.00	7.80E-03	
		Manganese	5.71E-01	lb/ton	0.00	1.56	
		Mercury*	2.30E-02	lb/hour	0.00	5.04E-04	
		Nickel	1.83E-01	lb/ton	0.00	0.50	
		Selenium	4.11E-03	lb/ton	0.00	1.13E-02	
		Fluoride*	6.80E-01	lb/hour	0.00	2.98E-02	
		Hexane	5.95E-03	lb/ton	0.00	3.26E-02	
		Toluene	7.27E-03	lb/ton	0.00	3.98E-02	
		<b>TOTAL</b>					<b>2.59</b>
<b>Reheat Furnace</b>  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	310 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	2.85E-03	
		Cadmium	1.10E-03	lb/mmcf	0.00	1.49E-03	
		Chromium	1.40E-03	lb/mmcf	0.00	1.90E-03	
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	1.63E-03	
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.02E-01	
		Hexane	1.80E+00	lb/mmcf	0.00	2.44E+00	
		Manganese	3.80E-04	lb/mmcf	0.00	5.16E-04	
		Nickel	2.10E-03	lb/mmcf	0.00	2.85E-03	
		Toluene	3.40E-03	lb/mmcf	0.00	4.62E-03	
		<b>TOTAL</b>					<b>2.56</b>
		<b>VTD Boiler and Flare</b>  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	107.4 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00
Cadmium	1.10E-03			lb/mmcf	0.00	5.17E-04	
Chromium	1.40E-03			lb/mmcf	0.00	6.59E-04	
Dichlorobenzene	1.20E-03			lb/mmcf	0.00	5.64E-04	
Formaldehyde	7.50E-02			lb/mmcf	0.00	3.53E-02	
Hexane	1.80E+00			lb/mmcf	0.00	8.47E-01	
Manganese	3.80E-04			lb/mmcf	0.00	1.79E-04	
Nickel	2.10E-03			lb/mmcf	0.00	9.88E-04	
Toluene	3.40E-03			lb/mmcf	0.00	1.60E-03	
<b>TOTAL</b>							<b>0.89</b>

Company Name: **Steel Dynamics, Inc. - Engineered Bar Products Division**  
 Address City IN Zip: **8000 North County Road 225 East, Pittsboro, Indiana 46167**  
 Permit Number: **T063-20969-00037**  
 Reviewer: **ERG/TE**  
 Date: **02/27/08**

<b>Emission Unit</b>	<b>Throughput</b>	<b>Pollutant</b>	<b>Emission Factor</b>	<b>Units</b>	<b>Capture Efficiency</b>	<b>PTE (TPY)</b>
<b>LMS Ladle Preheaters and Dryers</b>  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	37.5 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	3.45E-04
		Cadmium	1.10E-03	lb/mmcf	0.00	1.81E-04
		Chromium	1.40E-03	lb/mmcf	0.00	2.30E-04
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	1.97E-04
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.23E-02
		Hexane	1.80E+00	lb/mmcf	0.00	2.96E-01
		Manganese	3.80E-04	lb/mmcf	0.00	6.24E-05
		Nickel	2.10E-03	lb/mmcf	0.00	3.45E-04
		Toluene	3.40E-03	lb/mmcf	0.00	5.58E-04
		<b>TOTAL</b>				

<b>Emission Unit</b>	<b>Throughput</b>	<b>Pollutant</b>	<b>Emission Factor</b>	<b>Units</b>	<b>Capture Efficiency</b>	<b>PTE (TPY)</b>
<b>Tundish Preheaters</b> <b>Tundish Nozzle Preheaters</b> <b>Tundish Dryers</b>  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	42 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	3.86E-04
		Cadmium	1.10E-03	lb/mmcf	0.00	2.02E-04
		Chromium	1.40E-03	lb/mmcf	0.00	2.58E-04
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	2.21E-04
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.38E-02
		Hexane	1.80E+00	lb/mmcf	0.00	3.31E-01
		Manganese	3.80E-04	lb/mmcf	0.00	6.99E-05
		Nickel	2.10E-03	lb/mmcf	0.00	3.86E-04
		Toluene	3.40E-03	lb/mmcf	0.00	6.25E-04
		<b>TOTAL</b>				

<b>Emission Unit</b>	<b>Throughput</b>	<b>Pollutant</b>	<b>Emission Factor</b>	<b>Units</b>	<b>Capture Efficiency</b>	<b>PTE (TPY)</b>
<b>Heat Treat (natural gas)</b>  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,020 MMBtu	58 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	5.33E-04
		Cadmium	1.10E-03	lb/mmcf	0.00	2.79E-04
		Chromium	1.40E-03	lb/mmcf	0.00	3.56E-04
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	3.05E-04
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.91E-02
		Hexane	1.80E+00	lb/mmcf	0.00	4.57E-01
		Manganese	3.80E-04	lb/mmcf	0.00	9.65E-05
		Nickel	2.10E-03	lb/mmcf	0.00	5.33E-04
		Toluene	3.40E-03	lb/mmcf	0.00	8.64E-04
		<b>TOTAL</b>				

<b>Emission Unit</b>	<b>Throughput</b>	<b>Pollutant</b>	<b>Emission Factor</b>	<b>Units</b>	<b>Capture Efficiency</b>	<b>PTE (TPY)</b>
<b>Cutting Torches (natural gas)</b>  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	6.3 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	5.79E-05
		Cadmium	1.10E-03	lb/mmcf	0.00	3.04E-05
		Chromium	1.40E-03	lb/mmcf	0.00	3.86E-05
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	3.31E-05
		Formaldehyde	7.50E-02	lb/mmcf	0.00	2.07E-03
		Hexane	1.80E+00	lb/mmcf	0.00	4.97E-02
		Manganese	3.80E-04	lb/mmcf	0.00	1.05E-05
		Nickel	2.10E-03	lb/mmcf	0.00	5.79E-05
		Toluene	3.40E-03	lb/mmcf	0.00	9.38E-05
		<b>TOTAL</b>				

Company Name: Steel Dynamics, Inc. - Engineered Bar Products Division  
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 Permit Number: T063-20969-00037  
 Reviewer: ERG/TE  
 Date: 02/27/08

Emission Unit	Throughput	Pollutant	Emission Factor	Units	Capture Efficiency	PTE (TPY)	
9 Storage Silos  Source of Emission Factors EAF dust analysis	4.0546 Tons of PM/year	Antimony	6.54E-04	lb/lb*	0.00	2.65E-03	
		Arsenic	4.90E-04	lb/lb*	0.00	1.99E-03	
		Beryllium	4.58E-06	lb/lb*	0.00	1.86E-05	
		Cadmium	2.36E-03	lb/lb*	0.00	9.57E-03	
		Chromium	2.00E-02	lb/lb*	0.00	8.11E-02	
		Cobalt	4.53E-04	lb/lb*	0.00	1.84E-03	
		Manganese	9.08E-02	lb/lb*	0.00	3.68E-01	
		Mercury	1.77E-03	lb/lb*	0.00	7.18E-03	
		Nickel	2.91E-02	lb/lb*	0.00	1.18E-01	
		Selenium	6.54E-04	lb/lb*	0.00	2.65E-03	
		Fluoride	5.41E-02	lb/lb*	0.00	2.19E-01	
		Hexane	9.46E-02	lb/lb*	0.00	3.84E-01	
		Toluene	1.16E-01	lb/lb*	0.00	4.70E-01	
		<b>TOTAL</b>					<b>1.67</b>

\* Pound of pollutant per pound particulate

**HAPs Summary**

Pollutant	Total PTE (tpy)
Antimony	0.04
Arsenic	0.03
Benzene	5.16E-03
Beryllium	2.70E-04
Cadmium	0.13
Chromium	1.12
Cobalt	0.03
Dichlorobenzene	2.95E-03
Fluoride	3.20
Formaldehyde	0.18
Hexane	8.07
Manganese	5.04
Mercury	0.11
Nickel	1.62
Selenium	0.04
Toluene	4.46
Lead	0.59
<b>Total HAPs</b>	<b>24.65</b>

Note:

- Not all HAPs were listed for natural gas combustion.  
(Only a sample of the top pollutants were selected for this calculation.)
- Lead calculations can be found on the Potential to Emit spreadsheet.
- The single worst case HAP is Hexane with PTE of 7.08 tpy, which is less than 10 tpy.
- The baghouse controlling the EAF is required to comply with the NSPS Subpart AAa and 326 IAC 2-2 (PSD), and is therefore federally enforceable so that the PTE of HAPs from the EAF is after control.

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

Technical Support Document (TSD) for a Part 70 Operating Permit

**Source Background and Description**

<b>Source Name:</b>	Steel Dynamics, Inc. – Engineered Bar Products Division
<b>Source Location:</b>	8000 North County Road 225 East, Pittsboro, Indiana 46167
<b>County:</b>	Hendricks
<b>SIC Code:</b>	3312
<b>Operation Permit No.:</b>	T063-20969-00037
<b>Permit Reviewer:</b>	ERG/TE

The Office of Air Quality (OAQ) has reviewed the operating permit application from Steel Dynamics, Inc. – Engineered Bar Products Division (SDI) relating to the operation of a steel mini-mill.

**History**

On March 15, 2005, Steel Dynamics, Inc. – Engineered Bar Products Division submitted an application to the OAQ requesting an operating permit. A draft of the Part 70 permit was originally on public notice from February 16, 2006 to March 18, 2006. Due to significant changes that were made to the source since the original Part 70 permit was on public notice, the Part 70 permit will be revised to include these changes and will be re-public noticed.

**Permitted Emission Units and Pollution Control Equipment**

- (a) One (1) batch mode EAF, with a nominal capacity of 125 tons of steel per hour, originally constructed in 1997 and modified in 2004, utilizing a fourth hole duct or direct shell evacuation (DSE) system venting to a baghouse (EAF Baghouse) and a canopy hood for overhead roof exhaust. The EAF is equipped with a natural gas fired oxy-fuel burner. The EAF is an affected facility under 40 CFR 60, Subpart AAa and 40 CFR 63, Subpart YYYYYY.
- (b) One (1) Ladle Metallurgy station (LMS), with a nominal capacity of 125 tons/hour originally constructed in 1997 and modified in 2004 and exhausting to its own baghouse (LMS Baghouse).  
  
Both the EAF Baghouse and LMS Baghouse exhaust to the same common stack 1. The meltshop does not have a roof monitor.
- (c) The EAF dust is conveyed to EAF Dust Silo #8 that vents through stack 3, identified as EAF Dust Handling System originally constructed in 1997 and modified in 2004. The silo is equipped with a bin vent filter. The EAF Dust Handling System is an affected facility under 40 CFR 60, Subpart AAa and 40 CFR 63, Subpart YYYYYY.
- (d) One (1) Continuous Caster with a nominal casting rate of 125 tons/hour originally constructed in 1997 and modified in 2004. This Caster is located in a separate room from the EAF and LMS and the tundish is covered with a lid. The Continuous Caster vents to stacks 6a and 6b and fugitive emissions exhaust to a roof monitor.
- (e) One (1) Reheat Furnace, constructed in 1996 and modified in 2004 and 2008, with a nominal heat input capacity of 310 MMBtu/hr, equipped with low NOx burners, exhausting to stack 2.

- (f) Two (2) natural gas fueled low NO<sub>x</sub> Tundish Preheaters, each with nominal capacity of 9 MMBtu/hour and originally constructed in 1997 and modified in 2004.
- (g) Five (5) natural gas fueled low NO<sub>x</sub> LMS Ladle Preheaters/Dryers, each with nominal capacity of 7.5 MMBtu/hour and originally constructed in 1997 and modified in 2004.
- (h) Two (2) natural gas fueled low NO<sub>x</sub> Tundish Dryers, each with nominal capacity of 9 MMBtu/hour and originally constructed in 1997 and modified in 2004.
- (i) Three (3) natural gas fueled low NO<sub>x</sub> Tundish Nozzle Preheaters, with nominal total capacity of 6 MMBtu/hour and originally constructed in 1997 and modified in 2004.
- (j) One (1) vacuum tank degasser (VTD), rated at 125 tons/hour, equipped with a 38.4 MMBTU/hour flare, constructed in 1997.
- (k) One (1) VTD Boiler (approved for construction in 2007), rated at a maximum capacity of 69.0 MMBTU/hr, equipped with natural gas fueled low NO<sub>x</sub> burners, and exhausting to stack 8. The VTD Boiler is an affected facility under 40 CFR 60, Subpart Dc.
- (l) Supporting operations consisting of:
  - (1) Caster cutting torches with nominal total capacity of 6.3 MMBtu/hour which use natural gas as fuel, with a nominal capacity of 125 tons of steel per hour, originally constructed in 1997 and modified in 2004; and
  - (2) Sawing operations (bar cutting), venting to a baghouse at a nominal flow rate of 30,000 dscf/min that exhausts inside the building, with a nominal capacity of 125 tons of steel per hour, originally constructed in 1997 and modified in 2004.
- (m) Eight (8) silos to store lime, carbon, and flux additives, originally constructed in 1997 and modified in 2004, and identified as Silos #1 through 7 and 9. The silos vent through stacks 4a-4d and 5a-5d. Each silo is equipped with a bin vent filter.
- (n) Scrap material handling, lime handling, carbon handling originally constructed in 1997 and modified in 2004.
- (o) Slag processing and handling consisting of slag handling, slag dumping, slag pots, slag crushing, slag screening, drop ball breaking, conveyors, and storage piles. The slag processing and handling was originally constructed in 1997 and modified in 2004 and has a nominal rate of 300 tons/hour. The slag handling operations are performed by an on-site contractor.
- (p) Transportation on paved roadways, paved parking lots, unpaved roadways, and other unpaved areas around slag piles and steel scrap piles originally constructed in 1997 and modified in 2004.
- (q) Contact and Non-Contact Cooling towers, with nominal capacity of 44,000 gal/min originally constructed in 1997 and modified in 2004:

Tower 1 -- Meltshop Non-Contact Cooling Tower	nominal 26,700 gal/min,
Tower 2 -- VTD Contact Cooling Tower	nominal 2,000 gal/min,
Tower 3 -- Bar Mill Contact Cooling Tower	nominal 9,700 gal/min,
Tower 4 -- Bar Mill Non-Contact Cooling Tower	nominal 5,600 gal/min,
- (r) Diesel fueled Emergency Generator(s), with total nominal capacity of 485 HP installed in 2004.

- (s) Five (5) natural gas fired heat treat furnaces, each furnace has a nominal heat input capacity of 11.6 MMBtu per hour and a nominal capacity of 20 tons of steel input per charge. The furnaces were constructed in 2006.

Heat Treat Furnace ID	Stack ID
HTF 1	HT1
	HT2
HTF 2	HT3
	HT4
HTF 3	HT5
	HT6
HTF 4	HT7
	HT8
HTF 5	HT9
	HT10

- (t) One (1) quench tank.

Note: The following emission unit and its associated baghouse have never been constructed and have been removed from the permit:

Scarfer venting to a baghouse and stack 9 at a nominal flow rate of 48,200 dscf/min, approved for construction in 1998.

### Insignificant Activities

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

1. Specifically regulated insignificant activities, as defined in 326 IAC 2-7-1(21); including the following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing, cutting torches, soldering, welding. [326 IAC 6-3-2]
2. Other Insignificant Activities
  - (a) Space heaters, process heaters, or boilers using the following fuels:
    - (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units (Btu) per hour.
    - (ii) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
  - (b) Fuel dispensing activities, including the following:
    - (i) 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.
    - (ii) A petroleum fuel, other than gasoline dispensing facility having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
  - (c) The following VOC and HAP storage containers:

- (i) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.
- (ii) Vessels storing lubricating oils.
- (d) Refractory storage not requiring air pollution control equipment.
- (e) Equipment used exclusively for filling drums, pails, or other packaging containers with the following: Lubricating oils, Waxes and Greases.
- (f) Cleaners and solvents characterized as: 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).
- (g) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
- (h) Noncontact cooling tower systems with the following: Forced and induced draft cooling tower system not regulated under a NESHAP.
- (i) Heat exchanger cleaning and repair.
- (j) Process vessel degassing and cleaning for internal repairs.
- (k) Paved and unpaved roads and parking lots with public access.
- (l) Conveyors as follows:
  - (i) Covered conveyors for coal or coke conveying of less than or equal to three hundred sixty (360) tons per day.
  - (ii) 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.
- (m) Coal bunker and coal scale exhausts and associated dust collector vents.
- (n) Purging of gas lines and vessels that are related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (o) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (p) Blowdown for the following: Sight glass; Boiler; Cooling tower; Compressors; and Pumps; and Cooling towers.
- (q) Gasoline generators not exceeding 110 horsepower
- (r) Diesel generators not exceeding 1600 horsepower.

- (s) Insignificant supporting operations consisting of:
  - (1) Water descaler, originally constructed in 1997 and modified in 2004;
  - (2) Roughing mill, originally constructed in 1997 and modified in 2004;
  - (3) Finishing mill, originally constructed in 1997 and modified in 2004;
  - (4) Cooling bed, originally constructed in 1997 and modified in 2004;
  - (5) Shipping originally constructed in 1997 and modified in 2004; and
  - (6) Storage originally constructed in 1997 and modified in 2004.

### Existing Approvals

The steel mill was previously owned and operated by Qualitech Steel Corporation SBQ LLC. The source was constructed and operated as a steel mini-mill recycling plant under the following previous approvals and was operated from July 1998 until the plant ceased operations in January 2001.

- (a) CP PSD 063-6093-00037, issued on October 31, 1996;
- (b) Administrative Amendment (AA) 063-7276-00037, issued on December 20, 1996; and
- (c) Administrative Amendment (AA) 063-8170-00037, issued on March 13, 1997.

The source (Steel Dynamics, Inc. – Engineered Bar Products Division (SDI)) purchased the mini-mill and submitted an application to modify the plant to increase efficiency and accommodate the manufacturing of various bar products. SDI began operations March 2004, operating under the following approvals:

- (d) PSD Significant Source Modification (SSM) 063-16628-00037, issued August 29, 2003;
- (e) Minor Source Modification (MSM) 063-22033-00037, issued December 13, 2005;
- (f) AA 063-22499-00037, issued February 9, 2006;
- (g) PSD SSM 063-22329-00037, issued March 21, 2007;
- (h) AA 063-24955-00037, issued June 29, 2007;
- (i) AA 063-25117-00037, issued August 10, 2007;
- (j) MSM 063-24956-00037, issued August 10, 2007; and
- (k) SSM 063-25379-00037, issued on May 27, 2008.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, these conditions were not incorporated into this Part 70 permit:

1. PSD SSM 063-16628-00037, condition C.15 has been removed from the permit. The Office of Air Quality (OAQ) received an application from SDI on March 15, 2007 requesting the suspension of ambient air quality monitoring requirements at the sites located at Tri-West High School, the SDI plant site, and Pittsboro Elementary School. Pursuant to Condition C.15 of the permit and 326 IAC 2-2-4(c)(5), SDI was required to establish three (3) ambient air monitoring sites. Each site was required to monitor PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and CO, with one site also required to monitor meteorological parameters. The permit required sixty (60) months of post-construction monitoring at the Pittsboro Elementary School site and thirty six (36) months of post-construction monitoring at each of the other two sites. Since the source has fulfilled their requirement to conduct monitoring for the time periods indicated and air quality data for 2004 through 2006 submitted by the source indicates that the measurements of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and CO pollutants are considerably lower than the federal National Ambient Air Quality Standards (NAAQS), the monitoring requirement can be removed.

~~C.15 — Post Construction Ambient Monitoring [326 IAC 2-2]~~

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~~Pursuant to 326 IAC 2-2-4(c)(5), the Permittee shall comply with the following:~~

- ~~(a) — The Permittee shall establish three (3) ambient monitoring sites at locations approved by IDEM. One of the 3 sites shall be located on or near the school property of Pittsboro Elementary School.~~
- ~~(b) — All monitors shall meet the operating and maintenance criteria outlined in the IDEM, OAQ Quality Assurance Manual.
  - ~~(i) — Each monitoring site shall monitor PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and CO.~~
  - ~~(ii) — Based on the prevailing winds, one of the 3 sites shall also monitor the following meteorological parameters:
    - ~~-- wind speed,~~
    - ~~-- wind directions, and~~
    - ~~— outdoor temperature.~~~~~~
- ~~(c) — The Permittee shall conduct a minimum of 60 months of post-construction monitoring at the Pittsboro Elementary School site and 36 months of post-construction monitoring at each of the other two (2) sites.~~
- ~~(d) — The monitoring must be performed using US EPA approved methods, procedures, and quality assurance programs and be in accordance with plan and protocol approved by IDEM, OAQ.~~
- ~~(e) — A monitoring and quality assurance plan shall be submitted to the:  
  
Indiana Department of Environmental Management  
Office of Air Quality, Ambient Monitoring Section  
2525 North Shadeland Avenue, Indianapolis, IN  
  
no later than 90 calendar days in advance of the start of the monitoring. The plan must be approved by OAQ prior to commencement of monitoring.~~
- ~~(f) — Ambient data along with precision and accuracy data from the monitors shall be submitted on a quarterly basis in a format approved by IDEM, OAQ, no later than 60 days after the end of the quarter being reported.~~
- ~~(g) — The quarterly summary of monitoring shall be submitted to IDEM, OAQ, Ambient Monitoring Section, in the same address mentioned above.~~

~~(h) No sooner than 6 months prior to the end of the minimum monitoring period, the Permittee may submit an application to modify the permit to discontinue one or more of the monitoring sites.~~

~~The application shall include the air quality and meteorological monitoring data collected, actual emissions of PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and CO, actual steel production information, and any addition information that would support a request to discontinue the monitoring site(s).~~

~~(i) The commissioner shall review the information submitted by the Permittee and other available information to determine whether the proper operation of the source could potentially cause or contribute to a violation of any National Ambient Air Quality Standard or maximum allowable increase under 326 IAC 1-3-4 or 326 IAC 2-2-6.~~

~~(j) Any decision regarding the application shall proceed in accordance with the significant permit modifications provisions of 326 IAC 2-7-12(d).~~

The following terms and conditions from previous approvals have been revised in this Part 70 Operating Permit:

1. PSD SSM 063-22329-00037, condition D.1.9, Testing Requirements, paragraph (d) is deleted from the condition now re-numbered as D.1.6, Testing Requirements in Part 70 permit T063-20969-00037. The SO<sub>2</sub> testing is deleted since the continuous emissions monitoring system was installed and operating procedures submitted, so the requirement was completed and not included in this Part 70 Permit. Since the required VOC testing was performed on October 28, 2004 and the required opacity testing was performed on October 27, 2004, and the VOC and opacity testing were one-time tests with no repeat testing requirement, the VOC and opacity testing requirements have been deleted from the condition. The requirement to perform further lead testing has also been deleted from the condition because the lead emission limit is a PSD minor limit and not a limit pursuant to PSD BACT and the source has demonstrated compliance with the PSD minor limit in the previous two stack tests performed. The rule cite for the NSPS, Subpart AAa, have been removed from the condition since the NSPS requirements are listed in separate conditions in the permit. Since the required initial stack testing was performed on the EAF for PM, PM<sub>10</sub>, NO<sub>x</sub>, VOC and Lead on October 27 and 28, 2004, and the required repeat stack testing for PM, PM<sub>10</sub>, NO<sub>x</sub> and Lead was performed on the EAF on April 5, 19, and 20, 2007, the time frame for the next required stack test has been revised to be required prior to the date which is 30 months (2½ years) after the latest stack test performed on April 20, 2007 which is October 20, 2009. Finally, the condition is revised to reflect the expected publication of new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>), signed on May 8th, 2008. Paragraphs in condition D.1.6 (Testing Requirements) have been renumbered where appropriate.

D.1.96 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [326 IAC 2-2] [40 CFR 60.275a]

(a) Pursuant to 326 IAC 2-2, and 40 CFR 60.270a (Subpart AAa), within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the modified EAF **prior to October 20, 2009**, the Permittee shall perform testing on the common EAF Baghouse/LMS Baghouse stack for the following:

- (1) Filterable PM, **and**
- (2) ~~Filterable and condensible PM<sub>10</sub>~~
- ~~(3) SO<sub>2</sub>~~
- (4) NO<sub>x</sub>,
- ~~(5) Lead and~~
- (6) ~~VOC~~

- ~~(b)~~ Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the modified EAF, the Permittee shall perform opacity testing on the EAF dust handling system.
  - ~~(c)~~ The baghouse EAF dust shall be sampled and analyzed for Lead content on a monthly basis according to the procedures specified in the EPA publication SW-846-6010B, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.
  - ~~(d)~~ With the submission of the test protocol, at a minimum, the Permittee shall include the information of sulfur content of injection carbon, charge carbon and sulfurizing agent to be used in testing.
  - ~~(e)~~ The PM and PM<sub>10</sub> testing shall utilize 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or other methods as approved by the Commissioner.
  - (b) The Permittee shall perform PM<sub>2.5</sub> and PM<sub>10</sub> testing of the common EAF Baghouse/LMS Baghouse stack within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. PM<sub>10</sub> and PM<sub>2.5</sub> includes filterable and condensable PM.**
  - ~~(f)~~ **(c) During an emissions test, Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures) and 40 CFR 60.274a(b).**
  - ~~(g)~~ **(d) These PM and NO<sub>x</sub> tests shall be performed using methods as approved by the Commissioner.**
  - ~~(h)~~ **(e) The PM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> and Lead tests shall be repeated at least once every 2.5 years from the date of a valid compliance demonstration.**
  - ~~(i)~~ **(f) Testing shall be conducted in accordance with Section C - Performance Testing.**
2. PSD SSM 063-22329-00037, condition D.1.10 CO and SO<sub>2</sub> Continuous Emissions Rate Monitoring, paragraph (b) is deleted from the condition now re-numbered as D.1.7, CO and SO<sub>2</sub> Continuous Emissions Rate Monitoring in Part 70 permit T063-20969-00037. Since the monitor was installed and operating procedures submitted, the requirement was completed and should not be included in this Part 70 Permit. Paragraphs in condition D.1.7 have been renumbered where appropriate.

D.1.107 CO and SO<sub>2</sub> Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5]

...

- ~~(b)~~ The Permittee shall submit to IDEM, OAQ, upon initial start up, a complete written continuous monitoring standard operating procedure (CMSOP), in accordance with the requirements of 326 IAC 3-5-4.
3. PSD SSM 063-22329-00037, condition D.1.12, Total Hydrocarbon Continuous Emissions Rate Monitoring, paragraph (b) is deleted from the condition now re-numbered as D.1.9, Total Hydrocarbon Continuous Emissions Rate Monitoring in Part 70 permit T063-20969-00037. Since the monitor was installed and operating procedures submitted, the requirement was completed and should not be included in this Part 70 Permit. Also, paragraph (d), now paragraph (c), was revised to clarify the intent of the monitoring requirement. The addition of requirement (d) gives

SDI options to demonstrate continuous compliance with Total Hydrocarbon Emissions which are difficult to measure. Paragraphs in condition D.1.9 have been renumbered where appropriate.

#### D.1.429 Total Hydrocarbon Continuous Emission Rate Monitoring Requirement

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- (a) Pursuant to **PSD SSM 063-22329-00037, issued March 21, 2007**, 326 IAC 2-2, and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMS) and related equipment for measuring total hydrocarbons emissions rates in pounds per hour from the EAF Baghouse/LMS Baghouse stack, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- ~~(b) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after monitor installation, a complete written continuous monitoring standard operating procedure (CMSOP), in accordance with the requirements of 326 IAC 3-5-4.~~
- ~~(c)~~ **(b)** The Permittee shall record the output of the continuous monitoring system(s) and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.
- ~~(d)~~ **(c)** ~~The pound per hour rate of the total hydrocarbons, based on a 3-hour block shall be maintained at or below the maximum concentration established during the latest stack test. When the ppm reading is outside of the above mentioned range for any one reading the Permittee shall take reasonable response steps in accordance with Section C.16 – Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C.16 – Response to Excursions and Exceedances, shall be considered a deviation from this permit. The Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances whenever a 3-hour block average THC ppm reading is greater than the maximum THC ppm concentration measured during the most recent stack test.~~
- (d)** The Permittee may certify the THC CEMSA pursuant to Condition D.1.9(a) using either the RATA method or the method provided in 40 CFR Part 60, Appendix B: Performance Specification 8A - Specifications and Test Procedures for Total Hydrocarbon Continuous Monitoring Systems in Stationary Sources. Compliance with the certification requirement in Condition D.1.9(a) can be demonstrated by passing either the RATA method or the method provided in 40 CFR Part 60, Appendix B: Performance Specification 8A.
4. PSD SSM 063-22329-00037, Condition D.1.14, Maintenance of COMs, now re-numbered as condition D.1.11 in Part 70 permit T063-20969-00037, is revised since IDEM has determined that no additional monitoring will be required during COM downtime, until the COM has been down for twenty-four (24) hours. This allows the Permittee to focus on the task of repairing the COM during the first twenty-four (24) hour period. After twenty-four (24) hours of COM downtime, the Permittee will be required to conduct Method 9 readings for thirty (30) minutes. Once Method 9 readings are required to be performed, the readings should be performed once per day until the COMS is back in service. Also, since 40 CFR 60.273a allows the use of either a COMS or BLDS and the use of either the COMS or the BLDS satisfies the requirements of 40 CFR 64, CAM, the condition is revised to include a sentence stating this. Paragraphs in condition D.1.11 have been renumbered where appropriate.

#### D.1.4411 Maintenance of COMS [326 IAC 2-7-5(3)(A)(iii)][40 CFR 64]

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

- (a) ~~All~~ **The COMS systems** shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (b) In the event that a breakdown of ~~a~~ **the COMS system** occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (c) Whenever ~~a~~ **the COMS** is malfunctioning or ~~will be down for calibration,~~ maintenance or repairs for a period of ~~one (1) hour~~ **twenty-four (24) hours** or more ~~during EAF operation~~ **and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS,** ~~compliance with the applicable opacity limits shall be demonstrated by the following:~~
- (i) ~~Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the EAF at the time of the reading.~~
- (A) ~~A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~
- (B) ~~If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within daylight four (4) hours of the second abnormal notation.~~
- (C) ~~VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.~~
- (ii) ~~If a COM is not online within twenty-four (24) hours of shutdown or malfunction of the primary COM, the Permittee shall provide a certified opacity reader(s), who may be an employees of the Permittee or an independent contractors, to self-monitor the emissions from the EAF stack take visible emission readings from the combined EAF/LMS stack.~~
- (A)(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 **COMS** malfunction or down time.
- (B)(2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least ~~once every four (4) hours~~ **once per day** during daylight operations, until ~~such time that a~~ **the COMS is in operation placed back in service.**
- (C)(3) Method 9 readings may be discontinued once a COM is online.
- (3)(4) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C-46 – Response to Excursions or Exceedances. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C-46 – Response to Excursions or Exceedances, shall be considered a deviation from this permit.

~~(4)~~(5) All of the **Any** opacity readings during this period **Exceedances determined by Method 9 readings** shall be reported with the Quarterly Opacity Exceedances Reports.

(d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a COM system pursuant to 326 IAC 2-2, 326 IAC 3-5, and 40 CFR 60.273a.

**(e) Compliance with this condition and conditions D.1.8 and D.1.12 satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).**

5. PSD SSM 063-22329-00037 condition D.1.15, Bag Leak Detection System (BLDS), which is now re-numbered as condition D.1.12 in Part 70 permit T063-20969-00037, is revised since there is no single compartment baghouse at the EAF/LMS so paragraph (b)(5) is deleted. Also, since 40 CFR 60.273a allows the use of either a COMS or BLDS and the use of either the COMS or the BLDS satisfies the requirements of 40 CFR 64, CAM, the condition is revised to include a sentence stating this. Paragraphs in condition D.1.12 have been renumbered where appropriate.

#### D.1.12 Bag Leak Detection System (BLDS) [40 CFR 64]

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

...

~~(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.

~~(6)~~ (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.

~~(7)~~ The bag detector must be installed downstream of the baghouse.

6. PSD SSM 063-22329-00037 condition D.1.16, Monitoring of Operations, has been deleted from section D.1. This condition included the requirements of 40 CFR 60.274a, Subpart AAa which apply to the EAF and EAF dust handling system. The applicable portions of Subpart AAa are now listed in condition D.1.17 with the specific requirements included in Attachment C to the Part 70 permit.

#### D.1.16 Monitoring of Operations [40 CFR 60.274a]

**Pursuant to 40 CFR 60.274a, the Permittee shall comply with the following monitoring requirements:**

~~(a)~~ Pursuant to 40 CFR 60.274a(b), the Permittee shall check and record on a once-per-shift basis the furnace static pressure and either:

~~(i)~~ Check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or

~~(ii)~~ Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or

~~(iii)~~ Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and records 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  $\pm$  10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The IDEM, OAQ, or the US EPA may require the Permittee to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of 40 CFR Part 60, Appendix A.~~

~~(b) Pursuant to 40 CFR 60.274a(c), when the Permittee is required to demonstrate compliance with the opacity standard and at any other time IDEM, OAQ, or the US EPA may require, that either the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the EAF.~~

~~(c) Pursuant to 40 CFR 60.274a(d), the Permittee 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.~~

7. PSD SSM 063-22329-00037 condition D.1.18(h), Record Keeping Requirements, which is now re-numbered as condition D.1.14 in Part 70 permit T063-20969-00037, has been deleted since IDEM has determined that it is the Permittee's responsibility to include routine control device inspection requirements in the applicable Preventive Maintenance Plans. Control device inspections have been removed from this permit; therefore, the requirement to keep records of the inspections has been removed. Paragraphs in condition D.1.14 have been renumbered where appropriate.

#### ~~D.1.18~~14 Record Keeping Requirements [40 CFR 64]

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~~\*\*\*~~

~~(h) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan and make available upon request to IDEM, OAQ, and the US EPA.~~

8. PSD SSM 063-16628-0003 condition D.8.2 has been deleted from this Part 70 permit T063-20969-00037, since the testing requirement was fulfilled.

#### ~~D.8.2~~ Testing Requirement [326 IAC 2-2]

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~~Pursuant to 326 IAC 2-2, the Permittee shall perform initial compliance tests for opacity on the above mentioned slag processing and handling within 60 days after achieving maximum capacity, but no later than 180 days after initial start up, utilizing 40 CFR Part 60, Appendix A, Method 9, or other methods as approved by the Commissioner.~~

#### **Enforcement Issue**

There are no enforcement actions pending.

#### **Emission Calculations**

See Appendix A of this document for detailed emission calculations.

#### **County Attainment Status**

The source is located in Hendricks County

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective October 19, 2007, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
PM <sub>2.5</sub>	Basic nonattainment.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

- (a) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Hendricks County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General’s Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA’s designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA’s New Source Review Rule for PM2.5 promulgated on May 8<sup>th</sup>, 2008, and effective on July 15<sup>th</sup> 2008. Therefore, direct PM2.5 and SO<sub>2</sub> emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
- (b) 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 emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone.
- On November 8, 2007, a temporary emergency rule took effect redesignating Hendricks County to attainment for the eight-hour ozone standard. The Indiana Air Pollution Control Board has begun the process for a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 should take effect prior to the expiration of the emergency rule. Therefore, VOC emissions and NOx 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) Hendricks County has been classified as attainment or unclassifiable in Indiana for SO<sub>2</sub>, NO<sub>2</sub>, CO, and lead. Therefore, these 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.
- (d) Fugitive Emissions  
Since this type of operation is in one of the twenty-eight (28) listed source categories (i.e. iron and steel mills category) under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

**Potential to Emit of the Source**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions 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, the department, or the appropriate local air pollution control agency.”

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	Greater than 100
PM2.5	Greater than 100
PM10	Greater than 100
SO <sub>2</sub>	Greater than 100
VOC	Less than 100
CO	Greater than 100
NO <sub>x</sub>	Greater than 100

HAPs	tons/year
Antimony	0.04
Arsenic	0.03
Cobalt	0.03
Formaldehyde	0.18
Hexane	8.1
Toluene	4.5
Lead	0.59
Chromium	1.1
Cadmium	0.13
Manganese	5.0
Mercury	0.11
Nickel	1.6
Fluoride	3.2
Total	23.62

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, SO<sub>2</sub>, CO, and NO<sub>x</sub> is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is minor for HAPS.
- (c) Fugitive Emissions  
Since this type of operation is in one of the twenty-eight (28) listed source categories (i.e. iron and steel mills category) under 326 IAC 2-7, fugitive emissions are counted toward the determination of Part 70 applicability.

**Actual Emissions**

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

Pollutant	Actual Emissions (tons/year)
PM	-
PM2.5	26.8
PM-10	46.1
SO <sub>2</sub>	87.4

Pollutant	Actual Emissions (tons/year)
VOC	13.6
CO	598.5
NOx	97.8
Pb	0.00018

**Part 70 Permit Conditions**

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

**Potential to Emit After Issuance**

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

Process/Emission Unit	Potential to Emit (tons/year)						
	PM	PM2.5	PM10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>
EAF & LMS	37.17	107.37	107.37	823.88	48.78	1,084.05	189.71
EAF Fugitive Emissions	3.83	3.83	3.83	8.32	0.49	10.95	1.92
LMS Fugitive Emissions	1.67	1.67	1.67	0.00	0.00	0.00	0.00
Continuous Caster Fugitive Emissions	0.77	0.77	0.77	0.00	0.00	0.00	0.00
Reheat Furnace	2.53	10.12	10.12	0.80	7.32	111.82	75.88
Tundish Nozzle Preheaters, Tundish Preheaters and Dryers	0.34	1.37	1.37	0.11	0.99	15.15	9.02
LMS Ladle Preheaters/Dryers	0.31	1.22	1.22	0.10	0.89	13.53	8.05
VTD Boiler and Flare	0.88	3.51	3.51	0.28	2.54	38.74	23.06
Caster Cutting Torches	5.53	5.69	5.69	0.02	0.15	2.27	2.71
Sawing Operations (bar cutting)	5.48	5.48	5.48	0.00	0.00	0.00	0.00
Nine (9) silos	4.05	4.05	4.05	0.00	0.00	0.00	0.00
Crushing Plant	1.29	0.61	0.61	0.00	0.00	0.00	0.00

Process/Emission Unit	Potential to Emit (tons/year)						
	PM	PM2.5	PM10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>
Cooling Towers	3.95	3.95	3.95	0.00	0.00	0.00	0.00
Emergency generators	0.27	0.27	0.27	0.25	0.30	0.81	3.76
Heat Treat Furnaces	0.47	1.89	1.89	0.15	1.37	20.92	24.91
Wind Erosion	2.05	1.03	1.03	0.00	0.00	0.00	0.00
Bulk Loading	0.14	0.07	0.07	0.00	0.00	0.00	0.00
Pot Slagging	0.27	0.13	0.13	0.00	0.00	0.00	0.00
Pot Skulling	0.27	0.13	0.13	0.00	0.00	0.00	0.00
Pot Digging	0.07	0.16	0.16	0.00	0.00	0.00	0.00
Paved and Unpaved Roadways	36.34	8.16	8.16	0.00	0.00	0.00	0.00
<b>Total</b>	<b>107.68</b>	<b>161.48</b>	<b>161.48</b>	<b>833.91</b>	<b>62.83</b>	<b>1,298.24</b>	<b>339.02</b>
<b>Major Source Threshold</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

- (a) This existing stationary source is major for PSD because the emissions of at least one regulated attainment pollutant are greater than one hundred (>100) tons per year, and it is one of the twenty-eight (28) listed source categories.
- (b) This existing source is a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM2.5 and SO<sub>2</sub> is emitted at a rate of 100 tons per year or more.
- (c) Fugitive Emissions  
Since this type of operation is in one of the twenty-eight (28) listed source categories (i.e. iron and steel mills category) under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Non-attainment New Source Review applicability.

### Federal Rule Applicability

The following federal rules are applicable to the source:

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to existing emission units that involve a pollutant-specific emission unit and meet the following criteria:
  - (1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;
  - (2) is subject to an emission limitation or standard for that pollutant; and
  - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

<b>Emission Unit / Pollutant</b>	<b>Control Device Used</b>	<b>Emission Limitation (Y/N)</b>	<b>Uncontrolled PTE (tons/year)</b>	<b>Controlled PTE (tons/year)</b>	<b>Major Source Threshold (tons/year)</b>	<b>CAM Applicable (Y/N)</b>	<b>Large Unit (Y/N)</b>
EAF & LMS - PM	baghouse	Y	>100	37.17	100	Y	N
EAF & LMS – PM10	baghouse	Y	>100	107.37	100	Y	Y
EAF - CO	(a)	Y	>100	>100	100	N	N
EAF - SO <sub>2</sub>	-	Y	>100	>100	100	N	N
EAF - NO <sub>x</sub>	-	Y	>100	>100	100	N	N
EAF - VOC	-	Y	<100	<100	100	N	N
Reheat Furnace - NO <sub>x</sub>	(b)	Y	<100	<100	100	N	N
Reheat Furnace – PM, PM10, SO <sub>2</sub> , VOC, and CO	-	Y	<100	<100	100	N	N
Tundish Nozzle Preheaters, Tundish Preheaters, and Tundish Dryers - NO <sub>x</sub>	(b)	Y	<100	<100	100	N	N
Tundish Nozzle Preheaters, Tundish Preheaters, and Tundish Dryers – PM, PM10, SO <sub>2</sub> , VOC, and CO	-	Y	<100	<100	100	N	N
LMS Ladle Preheaters/Dryers - NO <sub>x</sub>	(b)	Y	<100	<100	100	N	N
LMS Ladle Preheaters/Dryers – PM, PM10, SO <sub>2</sub> , VOC, and CO	-	Y	<100	<100	100	N	N
VTD Boiler and Flare - NO <sub>x</sub>	(b)	Y	<100	<100	100	N	N
VTD Boiler and Flare – PM, PM10, SO <sub>2</sub> , VOC, and CO	-	Y	<100	<100	100	N	N

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
EAF Dust Silo #8 – PM, PM10	Bin vent filter	N	<100	<100	100	N	N
Eight (8) storage silos – PM, PM10	Bin vent filters	N	<100	<100	100	N	N
Sawing Operations (bar cutting) – PM, PM10	Baghouse	Y	<100	<100	100	N	N

(a) - Emissions are controlled or directed to a direct shell evacuation DSE and canopy hood. These control devices are considered passive control measures using process design features, rather than control equipment that actively remove or destroy CO prior to discharge to the atmosphere.

(b) - Low NOx burners do not meet the definition of a "control device" per 40 CFR 64.1.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the EAF for PM and PM10. A CAM plan has been submitted and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

For PM and PM10, there are no available technologies to directly monitor mass emissions of PM. However, opacity can be used as a surrogate parameter to ensure that the control device is operating properly. The OAQ will require SDI to continuously monitor the opacity from the EAF stack in addition to compliance monitoring that will be required for the baghouse to satisfy the requirements of CAM.

The requirements of 40 CFR Part 64, CAM are not applicable to the following units because they do not use a control device to comply with an emission limit: Continuous Caster, Caster Cutting Torches, Crushing Plant, Cooling Towers, Emergency Generators, and Heat Treat Furnaces.

(b) The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1-1, apply to the EAF and EAF dust handling system described in this section except when otherwise specified in 40 CFR 60 Subpart AAa.

(c) The New Source Performance Standard (NSPS), 326 IAC 12, (40 CFR 60, Subpart AAa, Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983) is included in this permit for the EAF and EAF dust handling system. The EAF and EAF dust handling system are subject to the following portions of Subpart AAa:

- (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

- (d) The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1-1, apply to the VTD boiler described in this section except when otherwise specified in 40 CFR 60 Subpart Dc.
- (e) The New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 326 IAC 12, (40 CFR 60, Subpart Dc) for boilers constructed after June 9, 1989, with maximum rated capacities greater than 10 MMBtu per hour but less than 100 MMBtu per hour is included in this permit for Steel Dynamics, Inc – Engineered Bar Products Division for the VTD boiler. This rule does not include any emission limitations for natural gas or propane-fired boilers. Pursuant to this rule, the source shall maintain records of the amounts of each fuel combusted each day in the VTD Boiler. The VTD Boiler is subject to the following portions of Subpart Dc:
  - (1) 60.40c(a), (b)
  - (2) 60.41c
  - (3) 60.48c(a)(1), (3)
  - (4) 60.48c(g)(1), (2)
  - (5) 60.48c(i)
  - (6) 60.48c(j)
- (f) There are no other NSPS (326 IAC 12 and 40 CFR 60), included in this permit for Steel Dynamics, Inc. – Engineered Bar Products Division.
- (g) The Integrated Iron and Steel Manufacturing NESHAP, 40 CFR 63, Subpart FFFFFF, is not included in this permit for Steel Dynamics, Inc. – Engineered Bar Products Division, since there are no sinter plants, blast furnaces or basic oxygen furnaces at this source.
- (h) The Iron and Steel Foundry NESHAP, 40 CFR 63, Subpart EEEEE, is not included in this permit for Steel Dynamics, Inc. – Engineered Bar Products Division, since the steel minimill does not meet the definition of an iron and steel foundry because the resulting molten metal from the EAF is not poured into molds to produce final or near final shape products but are poured into a continuous caster which does not meet the definition of a pouring area or pouring station to produce the final product.
- (i) The NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities, 40 CFR 63, Subpart YYYYYY, is included in this permit for Steel Dynamics, Inc. – Engineered Bar Products Division because it is an electric arc furnace steelmaking facility that is an area source of HAPs. The EAF is subject to the following portions of Subpart YYYYYY:
  - (1) 40 CFR 63.10680(a), (b)(1), (c) and (d)
  - (2) 40 CFR 63.10681(a) and (b)
  - (3) 40 CFR 63.10685
  - (4) 40 CFR 63.10686(a), (b), (d)(1) – (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 YYYYYY

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart YYYYYY.
- (j) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63), included in this permit for Steel Dynamics, Inc. – Engineered Bar Products Division.

## State Rule Applicability - Entire Source

### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is a major source under this rule because the potential to emit of PM, PM<sub>10</sub>, SO<sub>2</sub>, CO, and NO<sub>x</sub> exceeds the major thresholds of 100 tons per year, it was built after August 1977, and it belongs to one of the 28 source categories listed in this rule.

This steel mill was previously owned and operated by Qualitech Steel Corporation SBQ LLC (Qualitech). On October 31, 1996, the Office of Air Quality issued PSD permit CP 063-6093-00037 to Qualitech. The source was constructed and operated as a steel mini-mill recycling plant and was operated as a major PSD source from July 1998 until the plant ceased operations in January 2001.

The source (Steel Dynamics, Inc. – Engineered Bar Products Division (SDI)) purchased the mini-mill and submitted an application to modify the plant to increase efficiency and accommodate the manufacturing of various bar products. On August 29, 2003, the OAQ issued PSD Significant Source Modification No. 063-16628-00037 to SDI. SDI began operations in March 2004.

On March 21, 2007, the OAQ issued PSD Significant Source Modification No. 063-22329-00037 to SDI. This PSD significant source modification changed the existing three (3) different SO<sub>2</sub> PSD BACT limits for the Electric Arc Furnace (EAF) Baghouse/Ladle Metallurgical Station (LMS) Baghouse to a single SO<sub>2</sub> PSD BACT limit and removed the associated production limitations for the different product series, identified as SBQ (Special Bar Quality) series.

The requirements of 326 IAC 2-2 (PSD) which apply to this source are detailed in the Individual Facilities section below.

All other modifications to the source were minor modifications under PSD and were not subject to this rule.

### 326 IAC 2-1.1-5 (Non-attainment New Source Review)

This existing source is a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM<sub>2.5</sub> and SO<sub>2</sub> is emitted at a rate of 100 tons per year or more.

### 326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. In accordance with the compliance schedule specified in 326 IAC 2-6-3, an emission statement must be submitted triennially by July 1 beginning in 2005 and every 3 years after. Therefore, the next emission statement for this source must be submitted by July 1, 2008. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

### 326 IAC 5-1 (Opacity Limitations)

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 the 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 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

Based on the PTE, SDI, Inc. – Engineered Bar Products Division is not consider a major source in terms of HAPs because HAPs PTE is less than 10 tons per year for any single HAP and less than 25 tons per year for the sum of all the HAPs emitted. Therefore, 326 IAC 2-4.1 does not apply.

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

All of the emission units at this source were subject to 326 IAC 2-2 (PSD) BACT when PSD Significant Source Modification No. 063-16628-00037 was issued to SDI on August 29, 2003 to re-start operation of the mill. Therefore, the EAF, LMS, Continuous Caster, sawing operations (bar cutting operation), nine (9) silos, and slag processing and handling are not subject to this rule, because pursuant to 326 IAC 6-3-1(c)(1), more stringent PM limits have been established by 326 IAC 2-2 (PSD) for these units.

Since there were no particulate matter limits established pursuant to 326 IAC 2-2 (PSD) for the caster cutting torches, they are subject to this rule. Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the caster cutting torches shall not exceed 53.55 pounds per hour when operating at a process weight rate of 125 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

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

**326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**

This source is subject to 326 IAC 6-5 for fugitive particulate matter emissions because it requires a permit as set forth in 326 IAC 2 and has not received all the necessary preconstruction approvals before December 13, 1985. Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary preconstruction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved. The fugitive dust control plan for this source includes the following:

- (a) The silt loading on paved roads and paved parking lots shall be controlled by the use of vehicular vacuum sweeper or water flushing and shall be performed every 14 days, unless it is raining.
- (b) Upon request by IDEM, OAQ, the Permittee shall sample surface material silt content and surface dust loadings in accordance with procedures approved by IDEM, OAQ. Road segments to be sampled shall be approved by IDEM, OAQ.
- (c) The Permittee shall provide supplemental cleaning of paved roads found to exceed allowable silt loadings.

**State Rule Applicability – Individual Facilities**

**Electric Arc Furnace and Ladle Metallurgy Refining Station (LMS)**

**326 IAC 2-2 (PSD), EAF and LMS PSD Best Available Control Technology (BACT)**

Pursuant to PSD SSM 063-16628-00037 issued on August 29, 2003, and as revised by PSD SSM 065-22329-00037 issued on March 21, 2007 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD) BACT), the following shall apply:

- (a) Steel production shall not exceed a maximum production rate of 1,095,000 tons per 12-consecutive month period with compliance demonstrated at the end of each month.
- (b) The sulfur dioxide (SO<sub>2</sub>) emissions from the EAF Baghouse/LMS Baghouse Stack shall not exceed 190 pounds per hour averaged over a 24-hour block period.
- (c) The EAF Baghouse and LMS Baghouse shall exhaust to a common stack.
- (d) Nitrogen oxide (NO<sub>x</sub>) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.35 pound per ton of steel produced and 43.75 pounds of NO<sub>x</sub> per hour.
- (e) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 2.0 pounds per ton of steel produced and 250 pounds of CO per hour, based on a 3-hour block average.
- (f) Volatile organic compound (VOC) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.09 pound per ton of steel produced and 11.5 pounds of VOC per hour. This VOC limit also satisfies the requirements under 326 IAC 8-1-6.
- (g) Filterable particulate matter (PM) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.0018 grains per dry standard cubic foot (gr/dscf).
- (h) Filterable and condensable PM<sub>10</sub> emissions from the EAF Baghouse shall not exceed 0.0052 gr/dscf.
- (i) Visible emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 3% opacity, based on a 6-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).
- (j) Visible emissions from the EAF Dust Handling system shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (k) Fugitive emissions generated at each EAF during each complete cycle from tap to tap shall not exceed 3% opacity when emitted from any roof monitor or building opening, based on a 6-minute average as determined in 326 IAC 5-1-4.

326 IAC 2-2 PSD Minor Pollutants Limitations

Pursuant to PSD SSM 063-22329-00037 issued on March 21, 2007, the Permittee shall emit less than the following emission rates from the EAF Baghouse:

Table 3		
Pollutant	Emission Rate (lb/hr)	PSD Significant Level (tons/year)
Lead	0.134	0.6
Beryllium	5.75x10 <sup>-5</sup>	0.0004
Fluorides	0.68	3.0
Mercury	0.023	0.1

Compliance by the Permittee with these limitations makes the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

326 IAC 2-2 PSD BACT Control and Work Practices - Best Available Control Technology (BACT)  
Pursuant to PSD SSM 065-22329-00037 issued on March 21, 2007 and 326 IAC 2-2, the  
Permittee shall comply with the following:

- (a) The EAF shall be equipped and operated with oxy fuel burners.
- (b) The EAF shall be controlled by a direct shell evacuation (DSE) system and canopy hood.
- (c) VOC emissions shall be controlled through a scrap management program. All grades of scrap shall contain no observable non-ferrous metals, or non-metallics, and shall be free of excessive dirt, oil, grease, and tin plate. Heavily oiled scrap shall not be used.

The Permittee shall implement the scrap management plan (SMP) attached to this permit (Attachment A - SMP).

- (d) Good working practices shall be observed.

#### 326 IAC 2-2.2 Clean Units

The EAF and LMS were previously designated as clean units for SO<sub>2</sub>, NO<sub>x</sub>, VOC, CO and PM<sub>10</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

### **Continuous Caster**

326 IAC 2-2 Particulate Matter (PM/PM10) and Visible Emissions-Limitations Best Available Control Technology (BACT)

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2-3, the Permittee shall comply with the following requirements:

- (a) The PM and PM<sub>10</sub> emissions before control from the Caster shall not exceed 0.07 pound per ton of steel produced.
- (b) The tundish shall be covered by lid to control fugitive emissions.
- (c) The visible emissions from the Caster roof monitor shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

#### 326 IAC 2-2.2 Clean Units

The Continuous Caster was previously designated as a clean unit for PM/PM<sub>10</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

### **Reheat Furnace**

326 IAC 2-2 Reheat Furnace Emissions Limitations PSD Best Available Control Technology (BACT)

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2 (PSD), the Permittee shall comply with the following:

- (a) The NO<sub>x</sub> emissions from the Reheat Furnace shall not exceed 0.08 lb/MMBtu.
- (b) The SO<sub>2</sub> emissions from the Reheat Furnace shall not exceed 0.0006 lb/MMBtu.
- (c) The CO emissions from the Reheat Furnace shall not exceed 0.084 lb/MMBtu.

- (d) The VOC emissions from the Reheat Furnace shall not exceed 0.0055 lb/MMBtu.
- (e) The PM (filterable) emissions from the Reheat Furnace shall not exceed 0.0019 lb/MMBtu.
- (f) The PM<sub>10</sub> (filterable and condensable) emissions from the Reheat Furnace shall not exceed 0.0076 lb/MMBtu.
- (g) The visible emission from the Reheat Furnace shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (h) The Reheat Furnace shall be equipped and operated with natural gas fueled low NO<sub>x</sub> burners.
- (i) Proper combustion operation of the Reheat Furnace shall be followed.
- (j) The Permittee shall use pipeline natural gas.  
Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

#### 326 IAC 2-2.2 Clean Units

The Reheat Furnace was previously designated as a clean unit for NO<sub>x</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

#### Natural Gas-Fired Units

##### 326 IAC 2-2 Emissions Limitations PSD- Best Available Control Technology (BACT)

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2, the Permittee shall comply with the following:

- (a) The NO<sub>x</sub> emissions from each preheater and dryer shall not exceed 0.050 lb/MMBtu.
- (b) The CO emissions from each preheater and dryer shall not exceed 0.084 lb/MMBtu.
- (c) The VOC emissions from each preheater and dryer shall not exceed 0.0055 lb/MMBtu.
- (d) The SO<sub>2</sub> emissions from each preheater and dryer shall not exceed 0.0006 lb/MMBtu.
- (e) The PM (filterable) emissions from each preheater and dryer shall not exceed 0.0019 lb/MMBtu.
- (f) The PM<sub>10</sub> (filterable and condensable) emissions from each preheater and dryer shall not exceed 0.0076 lb/MMBtu.
- (g) The Permittee shall equip and operate each preheater and dryer with natural gas fueled low NO<sub>x</sub> burners.
- (h) Good combustion shall be practiced.

- (i) The Permittee shall use pipeline natural gas. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

#### 326 IAC 2-2.2 Clean Units

The preheaters and dryers were previously designated as clean units for NOx. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

#### Vacuum Tank Degasser (VTD) and VTD Boiler

##### 326 IAC 2-2 Emissions Limitations PSD- Best Available Control Technology (BACT)

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2-3, the Permittee shall operate the VTD flare, with the temperature not less than 1,100<sup>0</sup>F, except during start up and shutdown, to control CO emissions at all times that the VTD is in operation.

The PSD requirements for the old VTD boiler, which was replaced with the new VTD boiler in 2007, were removed under Administrative Amendment No. AA063-25117-00037, issued on August 10, 2007 because the 69.0 MMBtu per hour VTD Boiler, installed in 2007, is not subject to the requirements of 326 IAC 2-2 (PSD). This is because the installation of the new VTD Boiler in 2007 was a modification to an existing major stationary source that was not major because potential to emit from the new boiler was less than the PSD significant thresholds.

Additionally, since the VTD boiler was replaced in 2007 and the new boiler is not subject to 326 IAC 2-2 (PSD), the clean unit designation for the old boiler which was replaced no longer applies. Additionally, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

##### 326 IAC 2-1.1-5 (Non-attainment New Source Review) and 326 IAC 2-3 (Emission Offset)

The installation of the new VTD Boiler in 2007 was a modification to an existing major stationary source under 326 IAC 2-1.1-5 and 326 IAC 2-3. The modification was not major because the potential to emit from the new boiler was less than the Emission Offset and Nonattainment NSR significant levels. Therefore, pursuant to 326 IAC 2-3 and 326 IAC 2-1.1-5, the Emission Offset and Nonattainment NSR requirements do not apply. Note that when Administrative Amendment No. AA063-25117-00037 was issued on August 10, 2007 for the installation of the new boiler, Hendricks county was designated as nonattainment for the 8-hour ozone standard so it was an existing major stationary source under 326 IAC 2-3 (Emission Offset).

##### 326 IAC 6-2-4 (Emission Limitations for Indirect Heating Facilities Constructed After September 21, 1983)

The VTD boiler is subject to this rule because it was constructed after September 21, 1983 and is an indirect heating facility. Although it is subject to the NSPS, 40 CFR 60, Subpart Dc, there are no applicable particulate matter emission limits pursuant to the NSPS so this rule applies. Pursuant to 326 IAC 6-2-4, the PM from the 69.0 MMBtu per hour heat input VTD boiler shall be limited to 0.36 pound per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of PM emitted per MMBtu of heat input

Q = The total source maximum operating capacity rating for indirect heating units = 69.0

Based on the potential to emit of PM emissions from the VTD boiler of 0.002 lb/MMBtu, the boiler is able to comply with this rule.

### **Supporting Operations**

#### **326 IAC 2-2 Emissions Limitations PSD - Best Available Control Technology (BACT)**

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003 and 326 IAC 2-2, the Permittee shall comply with the following:

- (a) The PM (filterable) emissions from the Sawing Operation (Bar Cutting operation) shall be controlled by a baghouse and shall not exceed 0.0052 gr/dscf.
- (b) The visible emissions from each baghouse shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (c) The Permittee shall use pipeline natural gas for the caster cutting torches. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

#### **326 IAC 2-2.2 Clean Units**

The sawing operation was previously designated as a clean unit for PM/PM<sub>10</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

### **Storage Silos**

#### **326 IAC 2-2 Emissions Limitations PSD Best Available Control Technology (BACT)**

Pursuant to PSD SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2, the Permittee shall comply with the following:

- (a) The PM (filterable) emissions from each storage silo shall be each controlled by bin vent filter at an outlet grain loading of 0.010 grains per dry standard cubic feet.
- (b) The visible emissions from each storage silo bin vent shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

#### **326 IAC 2-2.2 Clean Units**

The storage silos were previously designated as clean units for PM/PM<sub>10</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

### **Slag Handling and Processing – performed by an on-site contractor**

#### **326 IAC 2-2 Emission Limitations PSD BACT**

Pursuant to PSD SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2, the Permittee shall comply with the following:

- (a) The Permittee shall not process more than 876,000 tons of slag per 12-consecutive month period with compliance demonstrated at the end of each month.

- (b) The visible emission limitations from fugitive emissions from each process shall not exceed the specified opacity limit, based on a 6-minute average as determined in 326 IAC 5-1-4:

Slag Handling/Processing Operation	Opacity (%)
Transferring of skull slag to slag pot	10
Pouring of liquid slag from EAF or LMS to slag pots	3
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
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

- (c) The Permittee's contractor shall dump slag in a partially enclosed roof structure. The roof shall extend over the entire slag pit area and past the dump stations. The sides of the structure shall extend downward from the roof taking into account:
- (1) Reduction of PM emissions during slag dumping and partial shielding of prevailing winds; and
  - (2) Dissipation of heat and consideration of safety concerns within the structure.
- (d) The Permittee shall comply with the following BACT requirements for the scrap handling and processing operations:
- (1) Scrap cutting is not allowed outdoors.
  - (2) Good working practices shall be observed.
- (e) The Permittee's contractor shall comply with the following for fugitive PM emissions:
- (1) The particulate emissions from the slag processing final transfer points and slag piles shall be controlled as needed by the application of water or chemical suppressant.
  - (2) The Permittee shall minimize drop heights, except during ball dropping.
  - (3) Good working practices shall be performed.

### 326 IAC 2-2.2 Clean Units

The slag handling and processing was previously designated as a clean unit for PM/PM<sub>10</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

## **Transporting on paved roadways and parking lots, unpaved roadways and unpaved areas**

### **326 IAC 2-2 Emission Limitations PSD BACT**

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2, the Permittee shall comply with the following:

- (a) The visible emissions from paved roadways and paved parking lots shall not exceed 10% opacity.
- (b) The visible emissions from unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall not exceed 10% opacity.
- (c) The Permittee shall maintain, update, comply with, and implement its Fugitive Dust Plan (included as Attachment B).
  - (1) The silt loading on paved roads and paved parking lots shall be controlled by the use of vehicular vacuum sweeper or water flushing and shall be performed every 14 days, unless it is raining.
  - (2) Upon request by IDEM, OAQ, the Permittee shall sample surface material silt content and surface dust loadings in accordance with procedures approved by IDEM, OAQ. Road segments to be sampled shall be approved by IDEM, OAQ.
  - (3) The Permittee shall provide supplemental cleaning of paved roads found to exceed allowable silt loadings.

The requirements in paragraph (c) above will also satisfy the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations).

- (d) The opacity from paved roadways and parking lots 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.
- (e) The three (3) opacity readings for each vehicle pass on paved roadways and parking lots shall be taken as follows:
  - (1) The first will be taken at the time of emission generation.
  - (2) The second will be taken five (5) seconds later.
  - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.
- (f) The opacity from unpaved roadways and unpaved areas around slag storage piles and steel scrap piles 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.
- (g) The three (3) opacity readings for each vehicle pass on unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall be taken as follows:
  - (1) The first will be taken at the time of emission generation.
  - (2) The second will be taken five (5) seconds later.
  - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

- (h) The three (3) readings for paved roadways and parking lots and the three (3) readings for unpaved roadways and unpaved areas around slag storage piles and steel scrap piles shall be taken at the point of maximum opacity.
- (i) The readings shall be taken 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.
- (j) Each reading shall be taken approximately four (4) feet above the surface of the paved or unpaved roadway.

#### 326 IAC 2-2.2 Clean Units

The transporting on paved roadways and parking lots, unpaved roadways and unpaved areas was previously designated as a clean unit for PM/PM<sub>10</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

### Cooling Towers

#### 326 IAC 2-2 Emission Limitations PSD BACT

Pursuant to PSD SSM 063-16628-00037, issued on August 29, 2003, and 326 IAC 2-2, the following shall apply:

- (a) The visible emissions from each cooling tower shall not exceed 20% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (b) The drift rate from each cooling tower shall not exceed 0.0005%.

#### 326 IAC 2-2.2 Clean Units

The cooling towers were previously designated as clean units for PM/PM<sub>10</sub>. However, the United States Court of Appeals for the District of Columbia Circuit vacated the federal Clean Unit provisions on June 24, 2005. As a result, all permit conditions pertaining to a unit's Clean Unit status have been removed from the permit.

### Diesel Generator

#### 326 IAC 2-2 Emission Limitations PSD BACT

Pursuant to PSD SSM 063-16628-00037 issued on August 29, 2003, and 326 IAC 2-2, the Permittee shall comply with the following:

- (a) Each emergency generator shall solely provide back up power when electric power is interrupted.
- (b) Each emergency generator shall not operate more than 500 hours per 12-consecutive month period, with compliance determined at the end of each month.
- (c) The sulfur content of the diesel fuel used shall not exceed 0.05 percent by weight.
- (d) Good combustion practices shall be performed.

### Insignificant Activities

#### 326 IAC 6-3-2 Particulate Emissions

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the 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. This applies to the brazing equipment, cutting torches, soldering equipment and welding equipment.

### Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to this source are as follows:

Equipment	Pollutant	Time Frame for Testing	Frequency of Testing
Electric Arc Furnace (EAF)	PM (filterable) and NOx	Prior to October 20, 2009 (30 months after the April 20, 2007 compliance demonstration stack test)	Once every 2 ½ years
Electric Arc Furnace (EAF)	PM10 and PM2.5 (filterable and condensable)	Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008.	Once every 2 ½ years
Reheat Furnace	NOx	Within one hundred and eighty (180) days after startup of the modification permitted by SSM 063-25379-00037, issued on May 27, 2008.	Once every 5 years

The compliance monitoring requirements applicable to this source are as follows:

1. The Electric Arc Furnace has applicable compliance monitoring conditions as specified below:
  - (a) Total Hydrocarbon Continuous Emissions Monitoring System (Condition D.1.9)
    - (1) Pursuant to PSD SSM 063-22329-00037, issued March 21, 2007, 326 IAC 2-2, and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain a continuous emissions monitoring system (CEMS) for measuring total hydrocarbons emissions rates in pounds per hour from the EAF Baghouse/LMS Baghouse stack, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
    - (2) The Permittee shall record the output of the continuous monitoring system(s) and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.
    - (3) The Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances whenever a 3-hour block average THC ppm reading is greater than the maximum THC ppm concentration measured during the most recent stack test.
    - (4) The Permittee may certify the THC CEMSA pursuant to Condition D.1.9(a) using either the RATA method or the method provided in 40 CFR Part 60, Appendix B: Performance Specification 8A. Compliance with the certification requirement in Condition D.1.9(a) can be demonstrated by passing either the RATA method or the method provided in 40 CFR Part 60, Appendix B: Performance Specification 8A.
  - (b) Maintenance of CEMS (Condition D.1.10)
    - (1) In the event that a breakdown of the CO or SO<sub>2</sub> continuous emission monitoring system (CEMS) occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
    - (2) Whenever the CO CEMS is malfunctioning or will be down for calibration, maintenance or repairs for a period of four (4) hours or more, the Permittee shall perform once per shift operational status inspections of the fourth hole duct or direct shell evacuation (DSE) 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.
    - (3) Whenever the SO<sub>2</sub> CEMS is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, the Permittee shall monitor and record the sulfur content of the charge carbon and injection carbon added to the EAF. Vendor certifications or analyses may be used to verify the sulfur content of the charge carbon and injection carbon.
    - (4) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2 and 326 IAC 3-5.

- (c) Maintenance of COMS (Condition D.1.11)
  - (1) 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.
  - (2) In the event that a breakdown of the COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
  - (3) Whenever the COMS is malfunctioning or down for maintenance, or repairs for a period of twenty-four (24) hours or more and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, 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 combined EAF/LMS stack.
    - (A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the COMS malfunction or down time.
    - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once per day during daylight operations until the COMS is placed back in service.
    - (C) Method 9 readings may be discontinued once a COM is online.
    - (D) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.
    - (E) Any opacity Exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
  - (4) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a COM system pursuant to 326 IAC 2-2, 326 IAC 3-5, and 40 CFR 60.273a.
  - (5) Compliance with this condition and conditions D.1.8 and D.1.12 satisfies Compliance Assurance Monitoring (CAM).
- (d) Bag Leak Detection System (BLDS) (Condition D.1.12)
  - (1) The Permittee shall install and operate a continuous bag leak detection system (BLDS).
  - (2) The BLDS shall meet the following requirements:

- (A) The bag leak detection system 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.
  - (B) The bag leak detection system sensor must provide output of relative particulate matter loading.
  - (C) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loading is detected over a preset level established or verified during a stack test.
  - (D) The bag leak detection system shall be installed and 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 installation, operation, and adjustment of the system.
  - (E) 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.
- (3) Compliance with this condition and conditions D.1.8 and D.1.11 satisfies Compliance Assurance Monitoring (CAM).

These monitoring conditions are necessary because the baghouse for the electric arc furnace and LMS must operate properly to ensure compliance with PM/PM10, and Visible Emission BACT Emission Limits, 40 CFR 60.274(a) (EAF NSPS), 40 CFR 64 (CAM) and 326 IAC 2-7 (Part 70).

2. Vacuum Tank Degasser Flare

The Permittee shall operate the VTD flare, with the temperature not less than 1,100<sup>0</sup>F, except during start up and shutdown, to control CO emissions at all times that the VTD is in operation.

These monitoring conditions are necessary because the flare for the VTD must operate properly to ensure compliance with the CO BACT Emission Limits pursuant to 326 IAC 2-2 (PSD), and 326 IAC 2-7 (Part 70).

- 3. There are no applicable compliance monitoring conditions for the bin vent filters controlling particulate emissions from the storage silos because the exhaust stacks from the silos each have a nominal flow of 1,200 dscf/minute and these units are typically small sources of emissions.
- 4. There are no compliance monitoring requirements for the continuous caster, the reheat furnace, the natural gas fired dryers and preheaters, the caster cutting torches, the scrap material handling, the slag processing and handling, and the cooling towers because they do not use add-on control devices.

5. There are no compliance monitoring requirements for the baghouse controlling the sawing operations (bar cutting) because it exhausts inside the building.

### **Recommendation**

The staff recommends to the Commissioner that the Part 70 Operating Permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 17, 2005.

### **Conclusion**

The operation of this steel minimill shall be subject to the conditions of the attached Part 70 Operating Permit No. T063-20969-00037.

Appendix A: Emission Calculations  
 Steel Dynamics, Inc. - Bar Products Division  
 Potential to Emit

Company Name: Steel Dynamics, Inc. - Bar Products Division  
 Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
 Permit Number: T063-20969-00037  
 Reviewer: ERG/TE  
 Date: 02/27/08

Emission Unit	Throughput (tons/year)	Pollutant	Emission Factor	Units	Source of EF	Capture Eff.	Control Eff.	PTE After Controls						
								PM (TPY)	PM-10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)	PB (TPY)
EAF Baghouse/LMS Baghouse Exhaust Flow Rate (dscf/min)	550,000	PM	0.0018	gr/dscf	PSD Permit Limit	-	-	37.17	107.37	-	-	-	-	-
		PM-10	0.0052	gr/dscf	PSD Permit Limit	-	-							
EAF & LMS	1,095,000	SO2	190	lb/hr	PSD Permit Limit	99.00%	0.00%	-	-	823.88	189.71	48.78	1084.05	0.59
		NOx	0.35	lb/ton	PSD Permit Limit	99.00%	0.00%							
		VOC	0.09	lb/ton	PSD Permit Limit	99.00%	0.00%							
		CO	2.0	lb/ton	PSD Permit Limit	99.00%	0.00%							
		Pb	0.134	lb/hr	PSD Permit Limit w/control	99.50%	-							
EAF Fugitive Emissions	1,095,000	PM	1.4	lb/ton	AP-42, Table 12.5-1	0.00%	0.00%	3.83	3.83	8.32	1.92	0.49	10.95	2.93E-03
		PM-10	1.4	lb/ton	AP-42, Table 12.5-1	0.00%	0.00%							
		SO2	190	lb/hr	PSD Permit Limit	0.00%	0.00%							
		NOx	0.35	lb/ton	PSD Permit Limit	0.00%	0.00%							
		VOC	0.09	lb/ton	PSD Permit Limit	0.00%	0.00%							
		CO	2.0	lb/ton	PSD Permit Limit	0.00%	0.00%							
		Pb	0.134	lb/hr	PSD Permit Limit	0.00%	0.00%							
LMS Fugitive Emissions Assumes 99.5% captured, 0.5% is fugitive	1,095,000	PM	0.61	lb/ton	EF based on previous permits	0.00%	0.000%	1.67	1.67	0.00	0.00	0.00	0.00	0.00
		PM-10	0.61	lb/ton	EF based on previous permits	0.00%	0.000%							
Continuous Caster Operation is covered with a tundish lid for control. Assumes 2% of emissions are uncontrolled and fugitive.	1,095,000	PM	0.07	lb/ton	PSD Permit Limit	0.00%	0.00%	0.77	0.77	0.00	0.00	0.00	0.00	0.00
		PM-10	0.07	lb/ton	PSD Permit Limit	0.00%	0.00%							
Sawing Operations	1,095,000	PM	0.1	lb/ton*	AP-42, Table 12.5-1*	100.00%	90.00%	5.48	5.48	0.00	0.00	0.00	0.00	0.00
		PM-10	0.1	lb/ton*	AP-42, Table 12.5-1*	100.00%	90.00%							
Storage Silos (9) Flow Rate for all 9 (dscf/min)	10,800 (dscf/min)	PM	0.01	gr/dscf	PSD Permit Limit	-	-	4.05	4.05	0.00	0.00	0.00	0.00	0.00
		PM-10	0.01	gr/dscf	PSD Permit Limit	-	-							
Cutting Torches	1,095,000	PM	0.01	lb/ton**	AP-42, Table 12.5-1**	0.00%	0.00%	5.48	5.48	0.00	0.00	0.00	0.00	0.00
		PM-10	0.01	lb/ton**	AP-42, Table 12.5-1**	0.00%	0.00%							
Cutting Torches (Natural Gas) 1 mmcf = 1,020 MMBtu	6.3 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.05	0.21	0.02	2.71	0.15	2.27	1.35E-05
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	100	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							

Appendix A: Emission Calculations  
 Steel Dynamics, Inc. - Bar Products Division  
 Potential to Emit

Emission Unit	Throughput (tons/year)	Pollutant	Emission Factor	Units	Source of EF	Capture Eff.	Control Eff.	PTE After Controls						
								PM (TPY)	PM-10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)	PB (TPY)
Reheat Furnace  1 mmcf = 1,020 MMBtu	310 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	2.53	10.12	0.80	75.88	7.32	111.82	6.66E-04
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	57	lb/mmcf	October 2004 stack test	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
VTD Boiler and Flare  1 mmcf = 1,020 MMBtu	107.4 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.88	3.51	0.28	23.06	2.54	38.74	2.31E-04
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	50	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
LMS Ladle Preheaters and Dryers (5 heaters @ 7.5 MMBtu/hr) 1 mmcf = 1,020 MMBtu	37.5 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.31	1.22	0.10	8.05	0.89	13.53	8.05E-05
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	50	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
2 Tundish Preheaters (9 MMBtu/hr each) 3 Tundish Nozzle Preheaters (6 MMBtu/hr total) 2 Tundish Dryers (9 MMBtu/hr each)  1 mmcf = 1,020 MMBtu	42 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.34	1.37	0.11	9.02	0.99	15.15	9.02E-05
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	50	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
Heat Treat Furnaces  1 mmcf = 1,020 MMBtu	58 MMBtu/hr	PM	1.9	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%	0.47	1.89	0.15	24.91	1.37	20.92	1.25E-04
		PM-10	7.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		SO2	0.6	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		NOx	100	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		VOC	5.5	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		CO	84	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
		Pb	0.0005	lb/mmcf	AP-42, Chapter 1.4	0.00%	0.00%							
Cooling Tower 1 Melt Shop Non-contact Concentration (ppm) = 3,000 Density (lb/gal) = 8.345	26,700 Gallons/min	PM	0.00001	unitless	Engineering Estimate (see example calcs below)	-	-	1.76	1.76	0.00	0.00	0.00	0.00	0.00
Cooling Tower 2 Vacuum Degasser Contact Concentration (ppm) = 2,000 Density (lb/gal) = 8.345	2,000 Gallons/min	PM	0.00002	unitless	Engineering Estimate (see example calcs below)	-	-	0.18	0.18	0.00	0.00	0.00	0.00	0.00
Cooling Tower 3 Bar Mill Contact Concentration (ppm) = 3,000 Density (lb/gal) = 8.345	9,700 Gallons/min	PM	0.00002	unitless	Engineering Estimate (see example calcs below)	-	-	1.28	1.28	0.00	0.00	0.00	0.00	0.00
Cooling Tower 4 Bar Mill Non-Contact Concentration (ppm) = 3,000 Density (lb/gal) = 8.345	5,600 Gallons/min	PM	0.00002	unitless	Engineering Estimate (see example calcs below)	-	-	0.74	0.74	0.00	0.00	0.00	0.00	0.00

Emission Unit	Throughput (tons/year)	Pollutant	Emission Factor	Units	Source of EF	Capture Eff.	Control Eff.	PTE After Controls						
								PM (TPY)	PM-10 (TPY)	SO2 (TPY)	NOx (TPY)	VOC (TPY)	CO (TPY)	PB (TPY)
Emergency Generators Usage based on 500 hours/year as emergency generators	485 Hp	PM	0.0022	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%	0.27	0.27	0.25	3.76	0.30	0.81	0.00
		PM-10	0.0022	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
		SO2	0.00205	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
		NOx	0.031	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
		VOC	0.0025141	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%							
CO	0.00668	lb/hp-hr	AP-42, Table 3.3-1	0.00%	0.00%									
Roads (See attached spreadsheets)		PM	-	-				36.34	8.16	0.00	0.00	0.00	0.00	0.00
		PM-10	-	-										
Crushing Plant - Grizzle Feeder	876,000	PM	0.0001	lb/ton	From PSD permit	0.00%	0.00%	0.04	0.02	0.00	0.00	0.00	0.00	0.00
		PM-10	0.000048	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant Conveyors 2, 2A, 2B, 3, 3A, 7, 8, 9, 10, 13, & 14	876,000	PM	0.0001	lb/ton	From PSD permit	0.00%	0.00%	0.04	0.02	0.00	0.00	0.00	0.00	0.00
		PM-10	0.000048	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant Conveyors 5'x12' Screen (2), 4'x8' Screen (1), & 6'x16' Screen (3)	876,000	PM	0.0018	lb/ton	From PSD permit	0.00%	0.00%	0.79	0.37	0.00	0.00	0.00	0.00	0.00
		PM-10	0.00084	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant Jaw Crusher and 5 1/2 Cone Crusher	613,200	PM	0.0012	lb/ton	From PSD permit	0.00%	0.00%	0.37	0.18	0.00	0.00	0.00	0.00	0.00
		PM-10	0.00059	lb/ton	From PSD permit	0.00%	0.00%							
Crushing Plant 24" Stackers #S4, S5, and S1	876,000	PM	0.0001	lb/ton	From PSD permit	0.00%	0.00%	0.04	0.02	0.00	0.00	0.00	0.00	0.00
		PM-10	0.000048	lb/ton	From PSD permit	0.00%	0.00%							
Wind Erosion (See attached spreadsheets)	77,250	PM	-	-	AP-42, Section 13.2.5	0.00%	0.00%	2.05	1.03	0.00	0.00	0.00	0.00	0.00
		PM-10	-	-	AP-42, Section 13.2.5	0.00%	0.00%							
Bulk Loading	77,250	PM	0.0035	lb/ton	AP-42, Section 13.2.4	0.00%	0.00%	0.14	0.07	0.00	0.00	0.00	0.00	0.00
		PM-10	0.0017	lb/ton	AP-42, Section 13.2.4	0.00%	0.00%							
Pot Slagging	20,625	PM	0.026	lb/ton	From PSD permit	0.00%	0.00%	0.27	0.13	0.00	0.00	0.00	0.00	0.00
		PM-10	0.013	lb/ton	From PSD permit	0.00%	0.00%							
Pot Skulling	20,625	PM	0.026	lb/ton	From PSD permit	0.00%	0.00%	0.27	0.13	0.00	0.00	0.00	0.00	0.00
		PM-10	0.013	lb/ton	From PSD permit	0.00%	0.00%							
Pot Digging	75,000	PM	0.0018	lb/ton	From PSD permit	0.00%	0.00%	0.07	0.16	0.00	0.00	0.00	0.00	0.00
		PM-10	0.0043	lb/ton	From PSD permit	0.00%	0.00%							
<b>Total PTE</b>								<b>107.65</b>	<b>161.47</b>	<b>833.89</b>	<b>339.00</b>	<b>62.83</b>	<b>1,298.24</b>	<b>0.59</b>

**Notes:**

\* The sawing operations emission factors are from AP-42 Table 12.5-1 for uncontrolled scarfing operations

\*\* The caster cutting particulate emission factor is from the AP-42 Table 12.5-1 for uncontrolled scarfing operations multiplied by 10% escaping the building.

PSD Permit limits are from Permit #063-16628-00037

**Example Calculations**

Caster PM emissions = (throughput - tons/yr)\*(emission factor - lb/ton)\*(1 - control eff)\*(1 ton/2,000 lbs)

Caster PM emissions (tons/year) = (1,095,000 tons/yr)\*(0.07 lbs/ton)\*(1 - 0.98)/2000

Caster PM emissions = 0.7665 tons/year

EAF/LMS baghouse PM emissions = (grain loading - gr/dscf) \*(flow rate - dscf/min) \*(1 lb/7,000 grains)\*(60 min/hr)\*(8,760 hr/yr)\*(1 ton/2,000 lbs)

EAF/LMS baghouse PM emissions = (0.0018 gr/dscf)\*(550,000 dscf/min)\*(1 lb/7,000 grains)\*(60 min/hr)\*(8,760 hr/yr)\*(1 ton/2,000 lbs)

EAF/LMS baghouse PM emissions = 37.1674 tons/year

Based on the drift eliminators (emission factor), cooling tower emissions are computed by the following formula:

Cooling Tower 1 PM emissions = (flow rate - gal/min)\*(ppm concentration)\*(emission factor - no units)\*(density lb/gal)\*(60 min/1 hr)\*(8,760 hr/1 yr)\*(1 ton/2,000 lbs)

Cooling Tower 1 PM emissions = (26,700 gal/min)\*(3,000/1,000,000)\*(0.00001)(8.345 lb/gal)\*(60 min/hr)\*(8,760 hr/1 yr)\*(1 ton/2,000lbs)

Cooling Tower 1 PM emissions = 1.7566 tons/year

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## Roads

### Shipping Out

Emissions from traffic on paved roads used an equation from AP-42., Section 13.2.1.

$$E = (k) * (SL/2)^{0.65} * (W/3)^{1.5} \text{ lb/mi}$$

where: k = 0.082 for PM,

k = 0.016 for PM10,

SL = 9.7 (silt loading) Table 13.2.1-3, AP-42

W = 30 tons (average weight of trucks) (20 tons empty, 40 tons full)/2

$$\text{PM EF} = (0.082) * (9.7/2)^{0.65} * (30/3)^{1.5} = 7.24 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.016) * (9.7/2)^{0.65} * (30/3)^{1.5} = 1.41 \text{ lb/mi}$$

$$\text{trips per year} = (400,000 \text{ tons/year}) / (20 \text{ Tons/trip}) = 20,000 \text{ trips/yr}$$

$$\text{VMT} = (20,000 \text{ trips/yr}) * (1,950 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 14,773 \text{ mi/yr}$$

70% control assumed for watering/cleaning roads

$$\text{PM} = (7.24 \text{ lb/mi}) * (14,773 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 16.0 \text{ tpy}$$

$$\text{PM10} = (1.41 \text{ lb/mi}) * (14,773 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 3.1 \text{ tpy}$$

### Employee Parking Paved Roads

W = 2 tons (average weight of vehicles)

$$\text{PM EF} = (0.082) * (9.7/2)^{0.65} * (2/3)^{1.5} = 0.12 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.016) * (9.7/2)^{0.65} * (2/3)^{1.5} = 0.02 \text{ lb/mi}$$

$$\text{VMT} = (250 \text{ trips/day}) * (365 \text{ days/yr}) * (500 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 17,282 \text{ mi/yr}$$

$$\text{PM} = (0.12 \text{ lb/mi}) * (17,282 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.3 \text{ tpy}$$

$$\text{PM10} = (0.02 \text{ lb/mi}) * (17,282 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.1 \text{ tpy}$$

### Scrap Delivered Direct - Paved Roads

W = 30 tons (average weight of trucks)

$$\text{PM EF} = (0.082) * (9.7/2)^{0.65} * (30/3)^{1.5} = 7.24 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.016) * (9.7/2)^{0.65} * (30/3)^{1.5} = 1.41 \text{ lb/mi}$$

$$\text{VMT} = (10,500 \text{ trips/yr}) * (2,200 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 8,750 \text{ mi/yr}$$

$$\text{PM} = (7.24 \text{ lb/mi}) * (8,750 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 9.5 \text{ tpy}$$

$$\text{PM10} = (1.41 \text{ lb/mi}) * (8,750 \text{ mi/yr}) * (1-0.70) * (1 \text{ ton}/2,000 \text{ lbs}) = 1.9 \text{ tpy}$$

### Scrap Delivered Direct - Unpaved Roads

Emissions from traffic on unpaved roads uses an equation from AP-42 Section 13.2.2.

$$E = (k) * (5.9) * (s/12) * (S/30) * (W/3)^{0.7} * (w/4)^{0.5} * ((365-p)/365)$$

where: k = particulate size multiplier, 0.8 for PM, 0.36 for PM10

s = silt content of road surface material (%) (6%)

S = mean vehicle speed (mph) (10)

W = mean vehicle weight (tons) (30)

w = mean number of wheels (18)

p = number of days per year with at least 0.01 inches of precipitation (110)

$$\text{PM EF} = (0.8) * (5.9) * (6/12) * (10/30) * (30/3)^{0.7} * (18/4)^{0.5} * ((365-110)/365) = 5.84 \text{ lb/mi}$$

$$\text{PM10 EF} = (0.36) * (5.9) * (6/12) * (10/30) * (30/3)^{0.7} * (18/4)^{0.5} * ((365-110)/365) = 2.63 \text{ lb/mi}$$

$$\text{VMT} = (10,500 \text{ trips/yr}) * (200 \text{ ft one way}) * (2) / (5,280 \text{ ft/mi}) = 795 \text{ mi/yr}$$

Assume 80% control watering/chemical application on unpaved roads

$$\text{PM} = (5.84 \text{ lb/mi}) * (795 \text{ mi/yr}) * (1-0.80) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.5 \text{ tpy}$$

$$\text{PM10} = (2.63 \text{ lb/mi}) * (795 \text{ mi/yr}) * (1-0.80) * (1 \text{ ton}/2,000 \text{ lbs}) = 0.2 \text{ tpy}$$

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**Scrap Delivered Yard - Paved Roads**

W = 30 tons (average weight of trucks)  
 PM EF =  $(0.082) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 7.24 \text{ lb/mi}$   
 PM10 EF =  $(0.016) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 1.41 \text{ lb/mi}$   
 VMT =  $(10,500 \text{ trips/yr}) \cdot (1,450 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 5,767 \text{ mi/yr}$   
 PM =  $(7.24 \text{ lb/mi}) \cdot (5,767 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 6.3 \text{ tpy}$   
 PM10 =  $(1.41 \text{ lb/mi}) \cdot (5,767 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 1.2 \text{ tpy}$

**Scrap Delivered Yard - Unpaved Roads**

S = 10 mph, W = 30 tons, w = 18 wheels  
 PM EF =  $(0.8) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 5.84 \text{ lb/mi}$   
 PM10 EF =  $(0.36) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 2.63 \text{ lb/mi}$   
 VMT =  $(10,500 \text{ trips/yr}) \cdot (1,500 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 5,966 \text{ mi/yr}$   
 Assume 80% control watering/chemical application on unpaved roads  
 PM =  $(5.84 \text{ lb/mi}) \cdot (5,966 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 3.5 \text{ tpy}$   
 PM10 =  $(2.63 \text{ lb/mi}) \cdot (5,966 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 1.6 \text{ tpy}$

**Alloy Delivery to Point 1 Paved Roads**

W = 30 tons (average weight of trucks)  
 PM EF =  $(0.082) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 7.24 \text{ lb/mi}$   
 PM10 EF =  $(0.016) \cdot (9.7/2)^{0.65} \cdot (30/3)^{1.5} = 1.41 \text{ lb/mi}$   
 VMT =  $(213 \text{ trips/yr}) \cdot (2,200 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 178 \text{ mi/yr}$   
 PM =  $(7.24 \text{ lb/mi}) \cdot (178 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.2 \text{ tpy}$   
 PM10 =  $(1.41 \text{ lb/mi}) \cdot (178 \text{ mi/yr}) \cdot (1-0.70) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.04 \text{ tpy}$

**Alloy Delivery to Point 2 - Unpaved Roads**

S = 10 mph, W = 30 tons, w = 18 wheels  
 PM EF =  $(0.8) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 5.84 \text{ lb/mi}$   
 PM10 EF =  $(0.36) \cdot (5.9) \cdot (6/12) \cdot (10/30) \cdot (30/3)^{0.7} \cdot (18/4)^{0.5} \cdot ((365-110)/365) = 2.63 \text{ lb/mi}$   
 VMT =  $(213 \text{ trips/yr}) \cdot (900 \text{ ft one way}) \cdot (2)/(5,280 \text{ ft/mi}) = 73 \text{ mi/yr}$   
 Assume 80% control watering/chemical application on unpaved roads  
 PM =  $(5.84 \text{ lb/mi}) \cdot (73 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.04 \text{ tpy}$   
 PM10 =  $(2.63 \text{ lb/mi}) \cdot (73 \text{ mi/yr}) \cdot (1-0.80) \cdot (1 \text{ ton}/2,000 \text{ lbs}) = 0.02 \text{ tpy}$

**Roads Emission Summary**

	Paved Roads		Unpaved Roads		Total	
	PM (TPY)	PM10 (TPY)	PM (TPY)	PM10 (TPY)	PM (TPY)	PM10 (TPY)
Shipping out	16.0	3.1	0.0	0.0	16.0	3.1
Employee Parking	0.3	0.1	0.0	0.0	0.3	0.1
Scrap - Direct	9.5	1.9	0.5	0.2	10.0	2.1
Scrap - Yard	6.3	1.2	3.5	1.6	9.8	2.8
Alloy Delivery Point 1	0.2	0.04	0.0	0.0	0.2	0.0
Alloy Delivery Point 2	0.0	0.0	0.04	0.02	0.04	0.02
<b>Total</b>	<b>32.3</b>	<b>6.34</b>	<b>4.04</b>	<b>1.82</b>	<b>36.34</b>	<b>8.16</b>

**Company Name: Steel Dynamics, Inc. - Bar Products Division**  
**Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167**  
**Permit Number: T063-20969-01**  
**Reviewer: ERG/TE**  
**Date: 02/27/08**

### Wind Erosion

Wind erosion emissions from storage piles are estimated using procedures outlined in AP-42, Section 13.2.5. A year of meteorological data was reviewed (Indianapolis, 1994) to determine highest daily wind speeds to utilize in the calculations. The annual throughput is 77,250 tons so a 30 day supply would equal approximately 6,400 tons.

Assuming a density of calcined gypsum (55 lb/ft<sup>3</sup>), the volume of the pile would be:  
(6,400 tons)(2,000 lb/ton)/(55 lb/ft<sup>3</sup>) = 232,727 ft<sup>3</sup>

The volume of a cone is equal to:  $V = (1/3) * (\pi) * (h) * (r)^2$   
Assuming that the slope is 30 degrees, the height is equal to  $r \times \tan 30$  or  $0.577 r$ .  
Substituting this into the above equations results in  $V = (1/3) * (\pi) * (0.577r) * (r)^2 = 232,727 \text{ ft}^3$

Solving for r and h:  
 $r = 72.8 \text{ ft}$                        $h = 42.0 \text{ ft}$ .

The surface area of a cone is equal to:  $S = (\pi) * (r) * (r^2 + h^2)^{0.5}$   
Substituting in the appropriate values results in an area of 19,222 ft<sup>2</sup> which is equivalent to 0.44 acres or 1786 square meters.

The subareas of the pile are:

0.2	(1786 sq m)*(0.40) = 714.4 sq m
0.6	(1786 sq m)*(0.48) = 857.3 sq m
0.9	(1786 sq m)*(0.12) = 214.3 sq m

Emissions are based upon emission factors determined from the frequency of the wind over critical threshold wind speeds.

0.2	(714.4 sq m)*(0 g/m <sup>2</sup> /yr)*(1 lb/453.6 g)*(1 ton/2,000 lb) = 0 tpy
0.6	(857.3 sq m)*(904.2 g/m <sup>2</sup> /yr)*(1 lb/453.6 g)*(1 ton/2,000 lb) = 0.85 tpy
0.9	(214.3 sq m)*(5,074 g/m <sup>2</sup> /yr)*(1 lb/453.6 g)*(1 ton/2,000 lb) = 1.2 tpy

**PM total = 2.05 tpy**

**PM10 Total = 1.03 tpy**                      (PM10 is one half of PM)

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<i>Emission Unit</i>	<i>Throughput</i>	<i>Pollutant</i>	<i>Emission Factor</i>	<i>Units</i>	<i>Capture Efficiency</i>	<i>PTE (TPY)</i>	
<b>Source of Emission Factors</b> EAF Dust Analysis (Emission factors assume 99% baghouse control of PM HAPs)  *Beryllium, Mercury & Fluoride emission factors are a PSD Limit.	1,095,000 Tons/year	Antimony	4.11E-05	lb/ton	0.995	0.02	
		Arsenic	3.08E-05	lb/ton	0.995	0.02	
		Beryllium*	5.75E-05	lb/hour	0.995	2.51E-04	
		Cadmium	1.48E-04	lb/ton	0.995	0.08	
		Chromium	1.26E-03	lb/ton	0.995	0.69	
		Cobalt	2.85E-05	lb/ton	0.995	0.02	
		Manganese	5.71E-03	lb/ton	0.995	3.11	
		Mercury*	2.30E-02	lb/hour	0.995	0.10	
		Nickel	1.83E-03	lb/ton	0.995	1.00	
		Selenium	4.11E-05	lb/ton	0.995	0.02	
		Fluoride*	6.80E-01	lb/hour	0.99	2.95	
		Hexane	5.95E-03	lb/ton	0.99	3.23	
		Toluene	7.27E-03	lb/ton	0.99	3.94	
		<b>TOTAL</b>					<b>15.17</b>
<b>Source of Emission Factors</b> EAF Dust Analysis  *Beryllium, Mercury & Fluoride emission factors are a PSD Limit.	1,095,000 Tons/year	Antimony	4.11E-03	lb/ton	0.00	1.13E-02	
		Arsenic	3.08E-03	lb/ton	0.00	8.43E-03	
		Beryllium*	5.75E-05	lb/hour	0.00	1.26E-06	
		Cadmium	1.48E-02	lb/ton	0.00	4.05E-02	
		Chromium	1.26E-01	lb/ton	0.00	0.34	
		Cobalt	2.85E-03	lb/ton	0.00	7.80E-03	
		Manganese	5.71E-01	lb/ton	0.00	1.56	
		Mercury*	2.30E-02	lb/hour	0.00	5.04E-04	
		Nickel	1.83E-01	lb/ton	0.00	0.50	
		Selenium	4.11E-03	lb/ton	0.00	1.13E-02	
		Fluoride*	6.80E-01	lb/hour	0.00	2.98E-02	
		Hexane	5.95E-03	lb/ton	0.00	3.26E-02	
		Toluene	7.27E-03	lb/ton	0.00	3.98E-02	
		<b>TOTAL</b>					<b>2.59</b>
<b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	310 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	2.85E-03	
		Cadmium	1.10E-03	lb/mmcf	0.00	1.49E-03	
		Chromium	1.40E-03	lb/mmcf	0.00	1.90E-03	
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	1.63E-03	
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.02E-01	
		Hexane	1.80E+00	lb/mmcf	0.00	2.44E+00	
		Manganese	3.80E-04	lb/mmcf	0.00	5.16E-04	
		Nickel	2.10E-03	lb/mmcf	0.00	2.85E-03	
		Toluene	3.40E-03	lb/mmcf	0.00	4.62E-03	
		<b>TOTAL</b>					<b>2.56</b>
		<b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	107.4 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00
Cadmium	1.10E-03			lb/mmcf	0.00	5.17E-04	
Chromium	1.40E-03			lb/mmcf	0.00	6.59E-04	
Dichlorobenzene	1.20E-03			lb/mmcf	0.00	5.64E-04	
Formaldehyde	7.50E-02			lb/mmcf	0.00	3.53E-02	
Hexane	1.80E+00			lb/mmcf	0.00	8.47E-01	
Manganese	3.80E-04			lb/mmcf	0.00	1.79E-04	
Nickel	2.10E-03			lb/mmcf	0.00	9.88E-04	
Toluene	3.40E-03			lb/mmcf	0.00	1.60E-03	
<b>TOTAL</b>							<b>0.89</b>

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 Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167  
 Permit Number: T063-20969-00037  
 Reviewer: ERG/TE  
 Date: 02/27/08

Emission Unit	Throughput	Pollutant	Emission Factor	Units	Capture Efficiency	PTE (TPY)
LMS Ladle Preheaters and Dryers  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	37.5 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	3.45E-04
		Cadmium	1.10E-03	lb/mmcf	0.00	1.81E-04
		Chromium	1.40E-03	lb/mmcf	0.00	2.30E-04
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	1.97E-04
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.23E-02
		Hexane	1.80E+00	lb/mmcf	0.00	2.96E-01
		Manganese	3.80E-04	lb/mmcf	0.00	6.24E-05
		Nickel	2.10E-03	lb/mmcf	0.00	3.45E-04
		Toluene	3.40E-03	lb/mmcf	0.00	5.58E-04
		<b>TOTAL</b>				

Emission Unit	Throughput	Pollutant	Emission Factor	Units	Capture Efficiency	PTE (TPY)
Tundish Preheaters Tundish Nozzle Preheaters Tundish Dryers  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	42 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	3.86E-04
		Cadmium	1.10E-03	lb/mmcf	0.00	2.02E-04
		Chromium	1.40E-03	lb/mmcf	0.00	2.58E-04
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	2.21E-04
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.38E-02
		Hexane	1.80E+00	lb/mmcf	0.00	3.31E-01
		Manganese	3.80E-04	lb/mmcf	0.00	6.99E-05
		Nickel	2.10E-03	lb/mmcf	0.00	3.86E-04
		Toluene	3.40E-03	lb/mmcf	0.00	6.25E-04
		<b>TOTAL</b>				

Emission Unit	Throughput	Pollutant	Emission Factor	Units	Capture Efficiency	PTE (TPY)
Heat Treat (natural gas)  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,020 MMBtu	58 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	5.33E-04
		Cadmium	1.10E-03	lb/mmcf	0.00	2.79E-04
		Chromium	1.40E-03	lb/mmcf	0.00	3.56E-04
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	3.05E-04
		Formaldehyde	7.50E-02	lb/mmcf	0.00	1.91E-02
		Hexane	1.80E+00	lb/mmcf	0.00	4.57E-01
		Manganese	3.80E-04	lb/mmcf	0.00	9.65E-05
		Nickel	2.10E-03	lb/mmcf	0.00	5.33E-04
		Toluene	3.40E-03	lb/mmcf	0.00	8.64E-04
		<b>TOTAL</b>				

Emission Unit	Throughput	Pollutant	Emission Factor	Units	Capture Efficiency	PTE (TPY)
Cutting Torches (natural gas)  <b>Source of Emission Factors</b> AP-42, Tables 1.4-3 & 1.4-4  1mmcf = 1,000 MMBtu	6.3 MMBtu/hr	Benzene	2.10E-03	lb/mmcf	0.00	5.79E-05
		Cadmium	1.10E-03	lb/mmcf	0.00	3.04E-05
		Chromium	1.40E-03	lb/mmcf	0.00	3.86E-05
		Dichlorobenzene	1.20E-03	lb/mmcf	0.00	3.31E-05
		Formaldehyde	7.50E-02	lb/mmcf	0.00	2.07E-03
		Hexane	1.80E+00	lb/mmcf	0.00	4.97E-02
		Manganese	3.80E-04	lb/mmcf	0.00	1.05E-05
		Nickel	2.10E-03	lb/mmcf	0.00	5.79E-05
		Toluene	3.40E-03	lb/mmcf	0.00	9.38E-05
		<b>TOTAL</b>				

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<b>Emission Unit</b>	<b>Throughput</b>	<b>Pollutant</b>	<b>Emission Factor</b>	<b>Units</b>	<b>Capture Efficiency</b>	<b>PTE (TPY)</b>	
<b>Source of Emission Factors</b> 9 Storage Silos EAF dust analysis	4.0546 Tons of PM/year	Antimony	6.54E-04	lb/lb*	0.00	2.65E-03	
		Arsenic	4.90E-04	lb/lb*	0.00	1.99E-03	
		Beryllium	4.58E-06	lb/lb*	0.00	1.86E-05	
		Cadmium	2.36E-03	lb/lb*	0.00	9.57E-03	
		Chromium	2.00E-02	lb/lb*	0.00	8.11E-02	
		Cobalt	4.53E-04	lb/lb*	0.00	1.84E-03	
		Manganese	9.08E-02	lb/lb*	0.00	3.68E-01	
		Mercury	1.77E-03	lb/lb*	0.00	7.18E-03	
		Nickel	2.91E-02	lb/lb*	0.00	1.18E-01	
		Selenium	6.54E-04	lb/lb*	0.00	2.65E-03	
		Fluoride	5.41E-02	lb/lb*	0.00	2.19E-01	
		Hexane	9.46E-02	lb/lb*	0.00	3.84E-01	
		Toluene	1.16E-01	lb/lb*	0.00	4.70E-01	
		<b>TOTAL</b>					<b>1.67</b>

\* Pound of pollutant per pound particulate

**HAPs Summary**

<b>Pollutant</b>	<b>Total PTE (tpy)</b>
Antimony	0.04
Arsenic	0.03
Benzene	5.16E-03
Beryllium	2.70E-04
Cadmium	0.13
Chromium	1.12
Cobalt	0.03
Dichlorobenzene	2.95E-03
Fluoride	3.20
Formaldehyde	0.18
Hexane	8.07
Manganese	5.04
Mercury	0.11
Nickel	1.62
Selenium	0.04
Toluene	4.46
Lead	0.59
<b>Total HAPs</b>	<b>24.65</b>

Note:

- Not all HAPs were listed for natural gas combustion.  
(Only a sample of the top pollutants were selected for this calculation.)
- Lead calculations can be found on the Potential to Emit spreadsheet.
- The single worst case HAP is Hexane with PTE of 7.08 tpy, which is less than 10 tpy.
- The baghouse controlling the EAF is required to comply with the NSPS Subpart AAa and 326 IAC 2-2 (PSD), and is therefore federally enforceable so that the PTE of HAPs from the EAF is after control.