



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: June 3, 2010

RE: SDI Engineered Bar Products Division / 063-27230-00037

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was 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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Mr. Mike Brooks
Steel Dynamics, Inc. – Engineered Bar Products Division
8000 North County Road 225 East
Pittsboro, IN 46167

June 3, 2010

Re: 063-27230-00037
Significant Permit Modification to
Part 70 Operating Permit No.: T 063-20969-00037

Dear Mr. Brooks:

Steel Dynamics, Inc. – Engineered Bar Products Division was issued a Part 70 Operating Permit on January 7, 2009, for a stationary steel mini-mill. A letter requesting changes to this permit was received on December 3, 2008, revising the CO BACT emission limit applicable to the combined EAF/LMS baghouse stack and increasing the nominal exhaust flow rate of the combined EAF/LMS baghouse stack (with resultant increase in PM and PM₁₀ emissions), re-evaluation of NO_x BACT for the Tundish Preheaters, LMS Ladle Preheaters/Dryers, Tundish Dryers, and Tundish Nozzle Preheaters, and resolution of outstanding issues with the operating permit conditions. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Kimberly Cottrell, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Kimberly Cottrell or extension (3-0870), or dial (317) 233-0870.

Sincerely,

Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Attachments:

Updated Permit, Technical Support Document, PTE Calculations, BACT Analysis, Air Quality Analysis

klc

cc: File – Hendricks County
Hendricks County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Permit Reviewers – Kristen Layton
Office of Legal Counsel/Attorney General's Office – Julie Lang

Mr. Barry Schneider
Steel Dynamics, Inc. – Engineered Bar Products Division
8000 North County Road 225 East
Pittsboro, IN 46167

Paul Dubenetzky
Keramida Environmental, Inc.
401 North College Avenue
Indianapolis, IN 46202



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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.: T 063-20969-00037	
Issued by/Original signed by:	
Tripurari P. Sinha, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date: January 7, 2009 Expiration Date: January 7, 2014

Administrative Amendment No.: T 063-28464-00037, issued on September 24, 2009.

Significant Permit Modification No.: T 063-27230-00037	
Issued by:	
 Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality	Issuance Date: June 3, 2010 Expiration Date: 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)]

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

Source 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 PM _{2.5} 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)]

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

- (a) One (1) batch mode Electric Arc Furnace (EAF), with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted in 2003 and 2009 for modification, 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 in 2003 and 2009 for modification 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 in 2003 for modification. 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 in 2003 for modification. 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 in 2003 and 2008 for modification, 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_x Tundish Preheaters, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (g) Five (5) natural gas fueled low NO_x LMS Ladle Preheaters/Dryers, each with nominal capacity of 7.5 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (h) Two (2) natural gas fueled low NO_x Tundish Dryers, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (i) Three (3) natural gas fueled low NO_x Tundish Nozzle Preheaters, with nominal total capacity of 6 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (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_x 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 in 2003 for modification; 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 in 2003 for modification.
- (m) Eight (8) silos to store lime, carbon, and flux additives, originally permitted in 1996 and permitted in 2003 for modification, 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. Outdoor cutting of mill scrap and skulls, vented to a particulate control device.
- (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 in 2003 for modification 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.
- (q) Contact and Non-Contact Cooling towers, with a nominal capacity of 44,000 gal/min originally permitted in 1996 and permitted in 2003 for modification:

Cooling Tower	Nominal Capacity (gal/min)
Tower 1 -- Meltshop Non-Contact Cooling Tower	26,700

Tower 2 -- VTD Contact Cooling Tower	2,000
Tower 3 -- Bar Mill Contact Cooling Tower	9,700
Tower 4 -- Bar Mill Non-Contact Cooling Tower	5,600
Total	44,000

- (r) Diesel fueled Emergency Generator(s), with total nominal capacity of 485 HP permitted in 2003.
- (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 2005.

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;
 - (2) Roughing mill;
 - (3) Finishing mill;
 - (4) Cooling bed;
 - (5) Shipping; and
 - (6) Storage.

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

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability), except as provided by 326 IAC 2-7-3, because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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

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

- (a) The Part 70 Operating Permit, T 063-20969-00037, is issued for a fixed term of five (5) years as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

- (a) the condition is modified in a subsequent permit action pursuant to the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7]

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

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

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

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

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

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

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

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

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

- (i) it contains a certification by a "responsible official", as defined by 326 IAC 2-7-1 (34), and
- (ii) the certification states that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

- (a) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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 of any limitation on emissions. The PMPs do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (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]

- (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, no later than four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or

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

Facsimile Number: 317-233-6865

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

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

no later than two (2) working days after the time when emission limitations were exceeded due to the emergency.

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

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

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

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

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

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

- (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

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

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

PSD Permit Number	Issuance Dates
063-16628-00037	August 29, 2003
063-22033-00037	December 13, 2005
063-22329-00037	March 21, 2007
063-24956-00037	August 10, 2007
063-25379-00037	May 27, 2008

issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised under 326 IAC 2-7-10.5, or deleted by this permit. Except for the construction authorizations in Permit Nos. 063-16628-00037, 063-22033-00037, 063-22329-00037, 063-24956-00037, and 063-25379-00037, these prior permits and all of their terms and conditions are hereby 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)]

The Permittee's right to operate this source terminates with the expiration of the Part 70 Operating Permit, T 063-20969-00037, unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the reasonable deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

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

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

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

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

- (4) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b),(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

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

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

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks a permit revision reflecting a change 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

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

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

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

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 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 except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

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

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

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan included as Attachment A. 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]

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

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

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

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

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

- (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not necessarily limited to, the following:
- (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit no later than 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:

- (a) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (b) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.
- (c) If there is a reasonable possibility (as defined in 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(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the 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]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

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

- (d) 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.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) 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).
- (f) The report for a project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and 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 wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction project.

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

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

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

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) batch mode Electric Arc Furnace (EAF), with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted in 2003 and 2009 for modification, 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 YYYYY.
- (b) One (1) Ladle Metallurgy Station (LMS), with a nominal capacity of 125 tons/hour originally permitted in 1996 and permitted in 2003 and 2009 for modification 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 in 2003 for modification. 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 063-27213-00037, PSD SSM 063-22329-00037 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 (SO₂) emissions from the EAF Baghouse/LMS Baghouse Stack shall not exceed 190 pounds per hour averaged over a 24-hour block period.
- (c) Nitrogen oxide (NO_x) 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_x per hour.
- (d) Carbon monoxide (CO) emissions:
 - (1) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 2,409 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
 - (2) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 550 pounds of CO per hour, based on a 24-hour block average.

- (e) 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.
- (f) 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) and 19.81 pounds per hour (lb/hr).
- (g) Filterable and condensable PM₁₀ emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.0052 gr/dscf and 57.22 pounds per hour (lb/hr).
- (h) 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).
- (i) 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.
- (j) 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]

The Permittee shall emit less than the following emission rates from the EAF Baghouse:

Pollutant	Emission Rate (lb/hr)
Lead	0.136
Beryllium	9.0×10^{-5}
Fluorides	0.68
Mercury	0.023

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

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

Pursuant to PSD SSM 063-22329-00037 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 Plan (SMP). The Permittee shall implement the SMP, which shall be in writing and available for inspection. The SMP shall provide that:
 - (1) All grades of scrap charged to the furnaces shall not contain excessive non-metallics.
 - (2) All grades of scrap shall not contain excessive oil and grease.
 - (3) Heavily oiled scrap shall not be used.
- (d) Good working practices shall be observed.

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

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

Compliance Determination Requirements

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

In order to comply with Condition D.1.1 - EAF and LMS Limitations PSD BACT:

- (a) 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) 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) The EAF operations shall use a roof canopy hood located above the EAF to further capture particulate emissions so they are contained and collected within the meltshop.

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

- (a) Pursuant to 326 IAC 2-2, the Permittee shall perform testing on the common EAF Baghouse/LMS Baghouse stack for the following:
 - (1) Filterable PM,
 - (2) NO_x, and
 - (3) VOC.
- (b) The Permittee shall perform PM₁₀ testing of the common EAF Baghouse/LMS Baghouse stack not later than 180 days after the later of: (i) initial start-up of the baghouse modification authorized by SSM No. 063-27213-00037; or (ii) 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_{2.5}), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. PM₁₀ 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, PM₁₀, NO_x and VOC tests shall be performed using methods as approved by the Commissioner and in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures).
- (e) The PM and PM₁₀ tests shall be repeated at least once every 5 years, and NO_x and VOC tests shall be repeated at least once every 2.5 years from the date of the last valid compliance demonstration.
- (f) Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

D.1.7 CO and SO₂ Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5]

- (a) Pursuant to 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 emissions rates in pounds per hour averaged over a 24-hour block period from the common EAF Baghouse/LMS Baghouse stack in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- (b) Pursuant to 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 SO₂ emissions rates in pounds per hour averaged over a 24-hour block period from the common EAF Baghouse/LMS Baghouse stack in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- (c) The Permittee shall record the output of the continuous monitoring system(s) pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

D.1.8 Continuous Opacity Monitoring (COM) [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 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.1.10 - Maintenance of COMS and D.1.11 - Bag Leak Detection System (BLDS) 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 Maintenance of CEMS [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the CO or SO₂ 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 during meltshop operation, 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 SO₂ CEMS is malfunctioning or will be down for calibration, maintenance, or repairs for a period of more than twenty-four (24) hours during meltshop operation, 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.1.10 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 during meltshop operation, 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. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to the reasonable response steps required by this condition.
 - (5) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (d) Compliance with this condition and conditions D.1.8 – Continuous Opacity Monitoring (COM) or D.1.11 – Bag Leak Detection System (BLDS) satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

D.1.11 Bag Leak Detection System (BLDS) [40 CFR 60.273a] [40 CFR 64]

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 0.00044 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 or established according to paragraph (4). The alarm must be located such that it can be heard by the appropriate plant personnel.
 - (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 or conditions D.1.8 – Continuous Opacity Monitoring (COM) and D.1.10 – Maintenance of COMS satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

D.1.12 EAF Baghouse

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.1.13 Record Keeping Requirements [40 CFR 64] [40 CFR 60.276a]

- (a) To document compliance with Condition D.1.1 – EAF and LMS Limitations PSD BACT, 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) – EAF and LMS Limitations PSD BACT, 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 – CO and SO₂ Continuous Emission Rate Monitoring Requirement, the Permittee shall maintain records of the readings of the CO and SO₂ CEMS.
- (d) If the Permittee elects to operate a COMS under 40 CFR 60.273a, then to document compliance with condition D.1.8 – Continuous Opacity Monitoring (COM), the Permittee shall maintain records of the readings of the COM.
- (e) To document compliance with condition D.1.9(c) – Maintenance of CEMS, when applicable the Permittee shall maintain records of the verification of sulfur content of charge carbon, and injection carbon added into the EAF.
- (f) If the Permittee elects to operate a BLDS under 40 CFR 60.273a, then to document compliance with condition D.1.11 – Bag Leak Detection System (BLDS), 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) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.
- (h) Records necessary to demonstrate compliance shall be available no later than 30 days after the end of each compliance period.

D.1.14 Reporting Requirements [326 IAC 2-1.1-11] [40 CFR 60.276a]

- (a) The Permittee shall submit a quarterly report of the actual amount of steel produced using the Quarterly Production Report or equivalent.
- (b) The Permittee shall submit a quarterly report of the actual amount of carbon monoxide (CO) emissions using the Quarterly Production Report or equivalent.
- (c) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for CO and SO₂.
- (d) 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 continuous opacity monitor (COM) data, pursuant to 326 IAC 3-5-7.
- (e) These reports shall be submitted not later than thirty (30) calendar days following the end of each calendar quarter. Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.
- (f) These reports require a certification that meets the requirements of 326 IAC 2-7-6(1) by a responsible official, as defined by 326 IAC 2-7-1(34).

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

D.1.15 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart AAa]

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.

D.1.16 New Source Performance Standards for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983 [40 CFR Part 60, Subpart AAa] [326 IAC 12]

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

- (1) 40 CFR 60.272a
- (2) 40 CFR 60.273a
- (3) 40 CFR 60.274a
- (4) 40 CFR 60.275a
- (5) 40 CFR 60.276a

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

D.1.17 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]

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 the schedule in 40 CFR 63 Subpart YYYYYY.

D.1.18 National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc
Furnace Steelmaking Facilities [40 CFR Part 63, Subpart YYYYYY]

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

- (1) 40 CFR 63.10681(a)
- (2) 40 CFR 63.10685
- (3) 40 CFR 63.10686(a), (b), (d)(1), (d)(3), (d)(4), (d)(6), (e)
- (4) 40 CFR 63.10690
- (5) Table 1 to 40 CFR 63, Subpart 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 in 2003 for modification. 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 PM₁₀ emissions before control from the Caster shall not exceed 0.07 pound per ton of steel produced.
- (b) The tundish shall be covered by a lid to control fugitive emissions exhausting to the roof monitor.
- (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) is required for this unit and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

SECTION D.3

FACILITY OPERATION CONDITIONS

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

- (e) One (1) Reheat Furnace, permitted in 1996 and permitted in 2003 and 2008 for modification, with a nominal heat input capacity of 310 MMBtu/hr, equipped with low NO_x 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_x emissions from the Reheat Furnace shall not exceed 0.08 lb/MMBtu.
- (b) The SO₂ 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 PM₁₀ (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_x 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 (PMP) is required for the Reheat Furnace. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

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

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_x testing of the Reheat Furnace in order to demonstrate compliance with Condition D.3.1(a) - Emission Limitations PSD BACT. 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 the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

SECTION D.4

FACILITY OPERATION CONDITIONS

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

- (f) Two (2) natural gas fueled low NO_x Tundish Preheaters, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (g) Five (5) natural gas fueled low NO_x LMS Ladle Preheaters/Dryers, each with nominal capacity of 7.5 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (h) Two (2) natural gas fueled low NO_x Tundish Dryers, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (i) Three (3) natural gas fueled low NO_x Tundish Nozzle Preheaters, with nominal total capacity of 6 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.

(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 063-27213-00037, 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_x emissions from each preheater and dryer shall not exceed 0.1 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 SO₂ 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 PM₁₀ (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_x burners.
- (h) The Permittee shall use pipeline natural gas for the preheaters and dryers.

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_x 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 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for the VTD boiler and the VTD flare. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

D.5.3 VTD Flare Operation

The Permittee shall operate the VTD flare to control CO emissions at all times the VTD is in operation and exhausting to the VTD flare. Except for periods of startup and shutdown of the VTD, the flare temperature shall be not less than 1,128 F.

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 - VTD Flare, the Permittee shall maintain records of the temperature of the VTD flare. 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) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

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]

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.

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

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

- (1) 60.48c(a)(1), (3)
- (2) 60.48c(g)
- (3) 60.48c(i)
- (4) 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 in 2003 for modification; 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 in 2003 for modification.

(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.

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:

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

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

A Preventive Maintenance Plan (PMP) is required for the sawing operations baghouse. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

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

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 in 2003 for modification, 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 (PMP) is required for the bin vent filters. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

D.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. Outdoor cutting of mill scrap and skulls, vented to a particulate control device.

(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 in 2003 for modification 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 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 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 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) Particulate emissions from outdoor cutting of mill scrap and skulls shall be vented to a particulate control device.
- (e) The Permittee 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

- (a) The Permittee shall maintain records of the amount of slag handled and processed.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

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.

(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 Control Plan (FDCP) (included as Attachment A).
 - (1) 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.
 - (2) 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

- (a) The Permittee shall maintain records of the activities required by the fugitive dust control plan.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

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 in 2003 for modification:

Cooling Tower	Nominal Capacity (gal/min)
Tower 1 -- Meltshop Non-Contact Cooling Tower	26,700
Tower 2 -- VTD Contact Cooling Tower	2,000
Tower 3 -- Bar Mill Contact Cooling Tower	9,700
Tower 4 -- Bar Mill Non-Contact Cooling Tower	5,600
Total	44,000

(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]

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 permitted 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 2005.

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 A 063-22499-00037, 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
Part 70 Permit No.: T 063-20969-00037

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

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167
Part 70 Permit No.: T 063-20969-00037

This form consists of 2 pages

Page 1 of 2

<input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12). <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), no later than four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and• The Permittee must submit notice in writing or by facsimile no later than two (2) 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? <input type="checkbox"/> Y <input type="checkbox"/> N Describe:
Type of Pollutants Emitted: <input type="checkbox"/> TSP <input type="checkbox"/> PM-10 <input type="checkbox"/> SO ₂ <input type="checkbox"/> VOC <input type="checkbox"/> NO _x <input type="checkbox"/> CO <input type="checkbox"/> Pb <input type="checkbox"/> other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167
Part 70 Permit No.: T 063-20969-00037
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 for This Month (tons)	Steel Production for Previous 11 Months (tons)	Steel Production for 12-Month Period (tons)

- No deviation occurred in this quarter.
- Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167
Part 70 Permit No.: T 063-20969-00037
Facility: EAF
Parameter: CO Emissions
Limit: 2,409 tons per 12 consecutive month period with compliance demonstrated at the end of each month.

YEAR: _____

Month	CO Emissions for This Month (tons)	CO Emissions for Previous 11 Months (tons)	CO Emissions for 12-Month Period (tons)

- No deviation occurred in this quarter.
- Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

**PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Address: 8000 North County Road 225 East, Pittsboro, Indiana 46167
Part 70 Permit No.: T 063-20969-00037

Months: _____ to _____ Year: _____

Page 1 of 2

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

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management Office of Air Quality

Attachment A: Fugitive Dust Control Plan to 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
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	063-27213-00037
Significant Permit Modification No.:	063-27230-00037
Permit Reviewer:	Kimberly Cottrell

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 B: Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983 [40 CFR 60, Subpart AAa]

Source Description and Location

Source Name:	Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, Indiana
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	063-27213-00037
Significant Permit Modification No.:	063-27230-00037
Permit Reviewer:	Kimberly Cottrell

NSPS [40 CFR Part 60, Subpart AAa]

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 ± 10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The Administrator may require the owner or operator to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of appendix A of this part.

(c) When the owner or operator of an affected facility is required to demonstrate compliance with the standards under §60.272a(a)(3) and at any other time that the Administrator may require (under section 114 of the CAA, as amended) either: the control system fan motor amperes and all damper positions, the volumetric flow rate through each separately ducted hood, or the volumetric flow rate at the control device inlet and all damper positions shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b) of this section. The owner or operator may petition the Administrator for reestablishment of these parameters whenever the owner or operator can demonstrate to the Administrator's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. Operation at other than baseline values may be subject to the requirements of §60.276a(c).

(d) Except as provided under paragraph (e) of this section, the owner or operator shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (*i.e.* , pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

(e) The owner or operator may petition the Administrator to approve any alternative to either the monitoring requirements specified in paragraph (b) of this section or the monthly operational status inspections specified in paragraph (d) of this section if the alternative will provide a continuous record of operation of each emission capture system.

(f) Except as provided for under §60.273a(d), if emissions during any phase of the heat time are controlled by the use of a DEC system, the owner or operator shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The pressure shall be recorded as 15-minute integrated averages. The monitoring device may be installed in any appropriate location in the EAF or DEC duct prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of ± 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions.

(g) Except as provided for under §60.273a(d), when the owner or operator of an EAF controlled by a DEC is required to demonstrate compliance with the standard under §60.272a(a)(3), and at any other time the Administrator may require (under section 114 of the Clean Air Act, as amended), the pressure in the free space inside the furnace shall be determined during the meltdown and refining period(s) using the monitoring device required under paragraph (f) of this section. The owner or operator may petition the Administrator for reestablishment of the pressure whenever the owner or operator can demonstrate to the Administrator's satisfaction that the EAF operating conditions upon which the pressures were previously

established are no longer applicable. The pressure determined during the most recent demonstration of compliance shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility.

(h) During any performance test required under §60.8, and for any report thereof required by §60.276a(f) of this subpart, or to determine compliance with §60.272a(a)(3) of this subpart, the owner or operator shall monitor the following information for all heats covered by the test:

- (1) Charge weights and materials, and tap weights and materials;
- (2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside an EAF when direct-shell evacuation control systems are used;
- (3) Control device operation log; and
- (4) Continuous opacity monitor or Method 9 data.

[49 FR 43845, Oct. 31, 1984, as amended at 64 FR 10111, Mar. 2, 1999; 65 FR 61758, Oct. 17, 2000; 70 FR 8533, Feb. 22, 2005]

§ 60.275a Test methods and procedures.

(a) During performance tests required in §60.8, the owner or operator shall not add gaseous diluents to the effluent gas stream after the fabric in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.

(b) When emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner or operator shall use either or both of the following procedures during a performance test (see also §60.276a(e)):

- (1) Determine compliance using the combined emissions.
- (2) Use a method that is acceptable to the Administrator and that compensates for the emissions from the facilities not subject to the provisions of this subpart.
- (c) When emission from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, the owner or operator shall demonstrate compliance with §60.272(a)(3) based on emissions from only the affected facility(ies).

(d) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(e) The owner or operator shall determine compliance with the particulate matter standards in §60.272a as follows:

- (1) Method 5 shall be used for negative-pressure fabric filters and other types of control devices and Method 5D shall be used for positive-pressure fabric filters to determine the particulate matter concentration and volumetric flow rate of the effluent gas. The sampling time and sample volume for each

run shall be at least 4 hours and 4.50 dscm (160 dscf) and, when a single EAF or AOD vessel is sampled, the sampling time shall include an integral number of heats.

(2) When more than one control device serves the EAF(s) being tested, the concentration of particulate matter shall be determined using the following equation:

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

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.

§ 60.276a Recordkeeping and reporting requirements.

(a) Records of the measurements required in §60.274a must be retained for at least 2 years following the date of the measurement.

(b) Each owner or operator shall submit a written report of exceedances of the control device opacity to the Administrator semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(c) Operation at a furnace static pressure that exceeds the value established under §60.274a(g) and either operation of control system fan motor amperes at values exceeding ± 15 percent of the value established under §60.274a(c) or operation at flow rates lower than those established under §60.274a(c) may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Administrator semiannually.

(d) The requirements of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(e) When the owner or operator of an EAF or AOD is required to demonstrate compliance with the standard under §60.275 (b)(2) or a combination of (b)(1) and (b)(2) the owner or operator shall obtain approval from the Administrator of the procedure(s) that will be used to determine compliance. Notification of the procedure(s) to be used must be postmarked at least 30 days prior to the performance test.

(f) For the purpose of this subpart, the owner or operator shall conduct the demonstration of compliance with §60.272a(a) of this subpart and furnish the Administrator a written report of the results of the test. This report shall include the following information:

- (1) Facility name and address;
- (2) Plant representative;
- (3) Make and model of process, control device, and continuous monitoring equipment;
- (4) Flow diagram of process and emission capture equipment including other equipment or process(es) ducted to the same control device;
- (5) Rated (design) capacity of process equipment;
- (6) Those data required under §60.274a(h) of this subpart;
 - (i) List of charge and tap weights and materials;
 - (ii) Heat times and process log;
 - (iii) Control device operation log; and
 - (iv) Continuous opacity monitor or Method 9 data.

- (7) Test dates and test times;
 - (8) Test company;
 - (9) Test company representative;
 - (10) Test observers from outside agency;
 - (11) Description of test methodology used, including any deviation from standard reference methods;
 - (12) Schematic of sampling location;
 - (13) Number of sampling points;
 - (14) Description of sampling equipment;
 - (15) Listing of sampling equipment calibrations and procedures;
 - (16) Field and laboratory data sheets;
 - (17) Description of sample recovery procedures;
 - (18) Sampling equipment leak check results;
 - (19) Description of quality assurance procedures;
 - (20) Description of analytical procedures;
 - (21) Notation of sample blank corrections; and
 - (22) Sample emission calculations.
- (g) The owner or operator shall maintain records of all shop opacity observations made in accordance with §60.273a(d). All shop opacity observations in excess of the emission limit specified in §60.272a(a)(3) of this subpart shall indicate a period of excess emission, and shall be reported to the administrator semi-annually, according to §60.7(c).
- (h) The owner or operator shall maintain the following records for each bag leak detection system required under §60.273a(e):
- (1) Records of the bag leak detection system output;
 - (2) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
 - (3) An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.

[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6673, Feb. 14, 1989; 64 FR 10111, Mar. 2, 1999; 65 FR 61758, Oct. 17, 2000; 70 FR 8533, Feb. 22, 2005]

Attachment C: National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities [40 CFR 63, Subpart YYYYYY]

Source Description and Location	
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Source Name:	Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, Indiana
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	063-27213-00037
Significant Permit Modification No.:	063-27230-00037
Permit Reviewer:	Kimberly Cottrell

NESHAP [40 CFR Part 63, Subpart YYYYYY]
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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 D: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Dc]

Source Description and Location

Source Name:	Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, Indiana
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	063-27213-00037
Significant Permit Modification No.:	063-27230-00037
Permit Reviewer:	Kimberly Cottrell

NSPS [40 CFR Part 60, Subpart Dc]

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

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/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 (SO₂) 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 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 subject 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 subject by this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 60.41c Definitions.

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

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

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

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

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) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO₂ 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 SO₂ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

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

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

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

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

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

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

Natural gas means:

- (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or
- (2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or
- (3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

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

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

Potential sulfur dioxide emission rate means the theoretical SO₂ emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

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

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

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

Wet flue gas desulfurization technology means an SO₂ 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 SO₂.

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

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 60.42c Standard for sulfur dioxide (SO₂).

(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 SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ 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 SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ 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 SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO₂ emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of SO₂ 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 SO₂ emissions limit or the 90 percent SO₂ 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 SO₂ emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 50 percent (0.50) of the potential SO₂ emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ 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 SO₂ 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 SO₂ 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 SO₂ 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 SO₂ in excess of the following:

(1) The percent of potential SO₂ emission rate or numerical SO₂ 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:

$$E_e = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s = SO₂ emission limit, expressed in ng/J or lb/MMBtu heat input;

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

K_b = 260 ng/J (0.60 lb/MMBtu);

K_c = 215 ng/J (0.50 lb/MMBtu);

H_a = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

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

(f) Reduction in the potential SO₂ 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 SO₂ emission rate; and
- (2) Emissions from the pretreated fuel (without either combustion or post-combustion SO₂ 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 SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 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 can combust 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. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(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 SO₂ emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 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 SO₂ 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 affected 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 SO₂ emission limits under §60.42c is based on the average percent reduction and the average SO₂ 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 SO₂ 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 SO₂ emission rate (E_{ho}) and the 30-day average SO₂ emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} (E_{hoO}) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao} (E_{aoO}). The E_{hoO} is computed using the following formula:

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

Where:

E_{hoO} = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho} = Hourly SO₂ emission rate, ng/J (lb/MMBtu);

E_w = SO₂ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$.

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

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO₂ 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 SO₂ emission rate is computed using the following formula:

$$\%P_f = 100 \left(1 - \frac{\%R_f}{100} \right) \left(1 - \frac{\%R_p}{100} \right)$$

Where:

$\%P_s$ = Potential SO₂ emission rate, in percent;

$\%R_g$ = SO₂ removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = SO₂ removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_{g0}$) is computed from E_{ao} from paragraph (e)(1) of this section and an adjusted average SO₂ inlet rate (E_{ai0}) using the following formula:

$$\%R_{g0} = 100 \left(1 - \frac{E_{ao}}{E_{ai0}} \right)$$

Where:

$\%R_{g0}$ = Adjusted $\%R_g$, in percent;

E_{ao} = Adjusted E_{ao} , ng/J (lb/MMBtu); and

E_{ai0} = Adjusted average SO₂ inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai0} , an adjusted hourly SO₂ inlet rate (E_{hi0}) is used. The E_{hi0} is computed using the following formula:

$$E_{hi0} = \frac{E_m - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi0} = Adjusted E_{hi} , ng/J (lb/MMBtu);

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$; and

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

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

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

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

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

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

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

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

(6) For determination of PM emissions, an oxygen (O₂) or carbon dioxide (CO₂) 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 O₂ or CO₂ measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

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

(8) Method 9 of appendix A–4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

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

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

(2) Notify the Administrator 1 month before stopping use of the system.

- (3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.
- (4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.
- (5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.
- (6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.
- (7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.
- (i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
- (ii) [Reserved]
- (8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.
- (9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.
- (10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.
- (11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O₂ (or CO₂) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.
- (i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and
- (ii) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in the Federal Register, whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and
- (iii) For O₂ (or CO₂), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.
- (12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.
- (13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) After July 1, 2011, within 90 days after the date of completing each performance evaluation required by paragraph (c)(11) of this section, the owner or operator of the affected facility must either submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main> or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243-01; RTP, NC 27711.

(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).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 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 SO₂ emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO₂ concentrations and either O₂ or CO₂ concentrations at the outlet of the SO₂ control device (or the outlet of the steam generating unit if no SO₂ 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 SO₂ concentrations and either O₂ or CO₂ concentrations at both the inlet and outlet of the SO₂ control device.

(b) The 1-hour average SO₂ 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 SO₂ 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 SO₂ 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 SO₂ CEMS at the inlet to the SO₂ control device shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted, and the span value of the SO₂ CEMS at the outlet from the SO₂ control device shall be 50 percent of the maximum estimated hourly potential SO₂ 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 SO₂ CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ 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 SO₂ 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 SO₂ at the inlet or outlet of the SO₂ 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 SO₂ and CO₂ 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 SO₂ 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), (f), and (g) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) and that is not required to install a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to install a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

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

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

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

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

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

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

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A–7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.* , 90 seconds per 30 minute period) the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.* , 90 seconds) or conduct a new Method 9 of appendix A–4 of this part performance test using the procedures in paragraph (a) of this section within 30 calendar days according to the requirements in §60.45c(a)(8).

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

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

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO₂ or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.45c(c). The CEMS specified in paragraph §60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO₂, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

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

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

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

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

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

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

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

(f) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part is not required to operate a COMS.

(g) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and 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 permitting authority is not required to operate a COMS. 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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 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 SO₂ 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 SO₂ emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

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

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

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

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

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

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

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

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

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

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

(d) The owner or operator of each affected facility subject to the SO₂ 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 SO₂ 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 SO₂ 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 SO₂ 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 SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

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

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ 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 SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

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

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (TSD) for a Part 70 Significant Source Modification and Part 70 Significant Permit Modification

Source Description and Location

Source Name:	Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, Indiana
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	063-27213-00037
Significant Permit Modification No.:	063-27230-00037
Permit Reviewer:	Kimberly Cottrell

Public Notice Information

On January 6, 2010, the Office of Air Quality (OAQ) had a notice published in Hendricks County Flyer in Avon, Indiana, stating that the Steel Dynamics, Inc. – Engineered Bar Products Division had applied for a significant modification to their Part 70 Operating Permit issued on January 7, 2009 to revise the CO BACT emission limit applicable to the combined EAF/LMS and increasing the nominal exhaust flow rate of the combined EAF/LMS baghouse stack, re-evaluation of NO_x BACT for the Tundish Preheaters, LMS Ladle Preheaters/Dryers, Tundish Dryers, and Tundish Nozzle Preheaters, and resolution of outstanding issues with the operating permit conditions. 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 February 5, 2010, OAQ received comments from Jaime Saylor, on behalf of Steel Dynamics, Inc. – Engineered Bar Products Division. 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 1:

SDI requests the following changes to the emission unit descriptions in Condition A.2:

The change to paragraph (n) reflects IDEM's change to D.8.1(d).

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

...

(a) - (d) ...

(e) One (1) Reheat Furnace, permitted in 1996 and permitted in 2003 **and 2008** for modification ~~and 2008~~, with a nominal heat input capacity of 310 MMBtu/hr, equipped with low NOx burners, exhausting to stack 2.

(f) - (m) ...

(n) Scrap material handling, lime handling, carbon handling. **Outdoor cutting of mill scrap and skulls, vented to a particulate control device.**

(o) - (t) ...

Response:

IDEM has made these changes.

Comment 2:

SDI requests the following changes to Condition B.9, Annual Compliance Certification: This change just clarifies that, as provided in IDEM's nonrule policy document Air-0013-NPD, a responsible official for the onsite contractor may certify compliance for the contractor's operations within the source's Annual Compliance Certification.

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

(a) - (b) ...

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

(1) - (5) ...

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

Certification by the on-site slag processor may be submitted for the units listed in Section D.8 in lieu of the certification by the Permittee.

Response:

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 3:

SDI requests the following changes to Condition B.10, Preventive Maintenance Plan because this permit does not require the preparation of any new PMPs:

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) ...

(1)- (3) ...

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

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

~~The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

(b) - (c) ...

Response:

IDEM has made the following changes to Condition B.10:

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) ~~A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:~~ **If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:**

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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 of any limitation on emissions. The PMPs do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.

Comment 4:

SDI requests the following changes to Condition B.11, Emergency Provisions:

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

(a) - (b) ...

(1) - (4) ...

(5) ...

...

no later than two (2) working days ~~of~~ **after** the time when emission limitations were exceeded due to the emergency.

...

(6) ...

(c) - (g) ...

Response:

IDEM has made this change.

Comment 5:

SDI requests the following changes to Condition B.13, Prior Permits Superseded, as SDI believes that IDEM's model language provides for this revision, and it is consistent with other NSR source modifications issued by IDEM. Also, it clarifies for all parties what permit terms are in effect.

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

~~(a) All terms and conditions of permits established prior to T 063-20969-00037 and~~ **Except for the respective construction authorizations, all terms and conditions of the following permits:**

PSD Permit Number	Issuance Dates
063-16628-00037	August 29, 2003

063-22033-00037	December 13, 2005
063-22329-00037	March 21, 2007
063-24956-00037	August 10, 2007
063-25379-00037	May 27, 2008

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.~~ **by this permit. Except for the construction authorizations in Permit Nos. 063-16628-00037, 063-22033-00037, 063-22329-00037, 063-24956-00037, and 063-25379-00037, these prior permits and all of their terms and conditions**

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

Response:

IDEM has made this change.

Comment 6:

SDI requests that this permit contain clear supersession language. This language has been approved by IDEM in other construction permits.

SDI requests that references to prior permits be deleted. Including appropriate supersession language allows SDI to conduct its compliance certification responsibilities in a more efficient manner.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Section D.1 of PSD Significant Source Modification No. 063-22329-00037, issued on March 21, 2007, is superseded by this Section D.1 of PSD/SSM No. 063-27213-00037.

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

~~Pursuant to PSD SSM 063-27213-00037, PSD SSM 063-22329-00037 issued on March 21, 2007,~~ and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following BACT requirements:

(a) - (j) ...

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

~~Pursuant to PSD SSM 063-22329-00037 issued on March 21, 2007 and 326 IAC 2-2-3 (PSD BACT),~~ the Permittee shall comply with the following:

(a) - (d) ...

SECTION D.2 FACILITY OPERATION CONDITIONS

Section D.2 of PSD Significant Source Modification Permit No. 063-16628-00037, issued on August 29, 2003, is superseded by this Section D.2 of PSD/SSM No. 063-27313-00037.

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) - (c) ...

SECTION D.3 FACILITY OPERATION CONDITIONS

Section D.3 of PSD Significant Source Modification Permit No. 063-25379-00037, issued on May 27, 2008, is superseded by this Section D.3 of PSD/SSM No. 063-27313-00037.

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) - (j) ...

SECTION D.4 FACILITY OPERATION CONDITIONS

Section D.4 of PSD Significant Source Modification Permit No. 063-16628-00037, issued on August 29, 2003, is superseded by this Section D.4 of PSD/SSM No. 063-27313-00037.

D.4.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to ~~PSD SSM 063-27213-00037, 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) - (h) ...

SECTION D.5 FACILITY OPERATION CONDITIONS

Section D.5 of PSD Significant Source Modification Permit No. 063-16628-00037, issued on August 29, 2003, is superseded by this Section D.5 of PSD/SSM No. 063-27313-00037.

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 to control CO emissions at all times the VTD is in operation and exhausting to the VTD flare. Except for periods of startup and shutdown of the VTD, the flare temperature shall be not less than 1,128°F.

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) - (c) ...

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

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.

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) - (b) ...

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

Section D.8 of PSD Significant Source Modification Permit No. 063-16628-00037, issued on August 29, 2003, is superseded by this Section D.8 of PSD/SSM No. 063-27313-00037.

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) - (e) ...

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) - (j) ...

SECTION D.10 FACILITY OPERATION CONDITIONS

Section D.10 of PSD Significant Source Modification Permit No. 063-16628-00037, issued on August 29, 2003, is superseded by this Section D.10 of PSD/SSM No. 063-27313-00037.

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) ...

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) - (d) ...

Response:

IDEM does not agree that additional language regarding supersession is warranted in the remainder of the permit. The BACT limits originated from the permits that SDI wishes to strike from the permit conditions. IDEM and U.S. EPA, Region V prefer to leave these references in the opening statement of the BACT requirements so that the permit clearly states the origin of the BACT requirements. No changes have been made to the permit as a result of this comment.

Comment 7:

SDI requests deletion of Condition B.14, Termination of Right to Operate. SDI believes this condition does not make sense in a significant source modification because it references the “expiration of this permit,” which only makes sense when referring to a Title V operating permit, and is confusing when included in a construction permit. As made clear on the cover page, this construction permit does not contain an expiration date. For the sake of clarity, SDI requests that only terms necessary for either appeal resolution or a significant source modification be included in this construction permit, as was done in Significant Source Modification No. 063-25739-00037, issued to this facility on May 27, 2008.

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

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

Response:

IDEM has modified the Condition B.14, Termination of Right to Operate, as follows:

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

The Permittee's right to operate this source terminates with the expiration of ~~this permit~~ **the Part 70 Operating Permit, T 063-20969-00037**, 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).

Comment 8:

SDI requests the following changes to Condition C.19, General Reporting Requirements, to correct typographical errors.

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) - (e) ...

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

(1) - (4) ...

(g) ...

Response:

IDEM has made this change.

Comment 9:

SDI requests the changes to Condition D.1.3, PSD BACT Control and Work Practices. SDI requests that the SMP not be included as an attachment to the permit. Including the SMP as an attachment to the permit results in a static document that cannot be changed except through permit revision. However, the NESHAP anticipates revisions to the SMP and requires facilities to submit a revised SMP to the agency, ensuring that the agency can review the changes at that time.

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

Pursuant to PSD SSM 063-22329-00037 issued on March 21, 2007 and 326 IAC 2-2-3 (PSD BACT), the Permittee shall comply with the following:

- (a) - (b) ...
- (c) VOC emissions shall be controlled through a Scrap Management Plan (SMP) ~~(included as Attachment A)~~. The Permittee shall implement the SMP, which shall be in writing and available for inspection. The SMP shall provide that:
 - (1) All grades of scrap charged to the furnaces shall not contain excessive non-metallics.
 - (2) All grades of scrap shall not contain excessive oil and grease.
 - (3) Heavily oiled scrap shall not be used.
- (d) ...

Response:

IDEM has made this change.

Comment 10:

SDI requests removal of language pertaining to "good working practices", "best operating practices", and "proper combustion operation". SDI is not sure how one annually certifies compliance with such vague standards. The provision in D.1.9(d) is not part of IDEM's model language regarding maintenance of CEMS, was not requested by SDI, and is too vague to allow SDI to certify compliance with the requirement. It is not clear what "best operating practices" are, whether this provision only applies to periods of CEMS downtime, or whether IDEM means to require SDI to operate the EAF any differently than when the CEMS is operating.

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

- ...
- (a) - (c) ...
- (d) ~~Good working practices shall be observed.~~

D.1.9 Maintenance of CEMS [326 IAC 2-7-5(3)(A)(iii)]

- (a) - (c) ...
- ~~(d) The EAF shall be operated according to best operating practices.~~

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

- ...
- (a) - (h) ...
- ~~(i) Proper combustion operation of the Reheat Furnace shall be followed.~~
- (j) ...

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

...

(a) - (d) ...

(e) ...

(1) - (2) ...

(3) ~~Good working practices shall be performed.~~

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

...

(a) - (c) ...

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

Response:

These work practice standards are PSD BACT requirements. PSD BACT requirements may not be changed without reopening the BACT review. Good work practices and proper maintenance are required to ensure that emission units and control devices are operating properly.

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.

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. No changes have been made to Condition D.1.3(d) as a result of this comment.

Since Condition D.1.9 is a compliance monitoring requirement and Condition D.1.3 sufficiently addresses the PSD BACT Control Requirements and Work Practice Standards, IDEM has made the requested change to remove the requirements under Condition D.1.9(d).

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 to Condition D.3.1(i) as a result of this comment.

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. No changes have been made to Condition D.8.1(e)(3) as a result of this comment.

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.

Comment 11:

SDI has the option of using either COMS or BLDS under the NSPS and this permit. In order to accurately reflect this choice, Conditions D.1.10(d) and D.1.11(c) should be modified to clearly state that compliance with either the COM or BLDS requirements satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

D.1.10 Maintenance of COMS [326 IAC 2-7-5(3) (A) (iii)] [326 IAC 3-5] [40 CFR 60.273a] [40 CFR 64]

...

(a) - (c) ...

(d) Compliance with this condition and conditions D.1.8 – Continuous Opacity Monitoring (COM) ~~and or~~ D.1.11 – Bag Leak Detection System (BLDS) satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

D.1.11 Bag Leak Detection System (BLDS) [40 CFR 60.273a] [40 CFR 64]

...

(a) - (b) ...

(c) Compliance with this condition ~~and or~~ conditions D.1.8 – Continuous Opacity Monitoring (COM) and D.1.10 – Maintenance of COMS satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

Response:

IDEM has made this change.

Comment 12:

SDI wishes to modify Section D.2, which as currently written does not reflect earlier permitting and does not allow SDI to reasonably certify compliance.

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 integral controls, and there is no discrete stack that could be tested for this purpose.

The TSD for SSM 16628 contains emission calculations for the caster. IDEM seems to suggest that the tundish lid is responsible for reducing PTE of the caster by approximately 98%, from 38.325 tons per year to less than one ton per year, stating “[t]he casting is water cooled and a lid is used to control emissions from the tundish, thus PTE after the lid is less than 1 ton/year.” See TSD Appendix A, page 3 of 11. The TSD also states “[b]ased on the original PSD permit issued to this mill, the PM and PM₁₀ BACT limits before control for the caster shall not exceed 0.07 pound per ton of steel produced, and the tundish shall be covered by a lid to control fugitive emissions.” See Continuous Caster BACT Analysis, TSD Appendix B, page 33 of 64.

However, none of the operation conditions in the 1996 Qualitech construction permit (CP 063-6093-00037) actually require the use of the tundish lid to control fugitive emissions; rather, Operation Condition 17 merely states “[t]hat the fugitive particulate matter emissions from the tundish above the caster shall be vented through roof monitors.” See CP 6093, page 7 of 18.

The emission calculations from CP 6093 don’t account for the use of a lid. Page 1 of 20 of Appendix A sets out the caster emission calculations. The 0.07 lb/ton emission factor taken from AP-42 is for a different process called teeming, which is pouring molten steel into ingots which are later heated and formed into other shapes. The original permit calculated PTE for the caster based on the teeming emission factor, determined that 98% of caster emissions are captured and routed to the EAF Baghouse, and thus 2% (0.83 tpy based on throughput at that time) remained as fugitive emissions. A control factor for the tundish lid was not applied separately to further reduce the fugitive emission result.

Also, although the 1996 BACT Determination for the caster stated a lid is used to control emissions from the tundish, the permit itself did not actually contain a requirement to use a lid. See Operation Condition 17, cited above. In fact, the statement in the BACT Determination is erroneous and inconsistent with the emission calculations, which did not factor in the use of a lid. It is also incorrect to state that the purpose of a tundish lid is to control emissions; the purpose is actually to prevent nitrogen found in the ambient air from contacting the molten steel, as excess nitrogen can adversely affect the chemistry of the steel.

As currently expressed, Condition D.2.1 inaccurately reflects the original requirements imposed at the continuous caster, which did not require the use of a tundish lid to further control fugitive emissions beyond the control already offered by the EAF Baghouse. Also, there is simply no way for SDI to certify compliance with the limit in Condition D.2.1(a), because it has no means of determining emissions from the caster “before controls.”

D.2.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

... the Permittee shall comply with the following requirements:

- ~~(a) The PM and PM₁₀ 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.~~

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.~~

Response:

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.

IDEM has determined that Condition D.2.3 is duplicative of Condition D.2.1(b); therefore, D.2.3 has been removed, and D.2.1 is revised as follows:

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 PM₁₀ emissions before control from the Caster shall not exceed 0.07 pound per ton of steel produced.
- (b) The tundish shall be covered by a lid to control fugitive emissions **exhausting to the roof monitor**.
- (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.

~~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.~~

Comment 13:

SDI requests deletion of 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.

It was not shown during permitting that use of the tundish lid actually reduces fugitive emissions by any additional amount and BACT for the caster is no control; therefore, the requirement to have a PMP is baseless and SDI requests that the requirement be removed.

The opacity limit applicable to the caster roof monitor is more than adequate to ensure that emissions from the continuous caster, a very small source, are appropriate and not excessive.

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

~~A Preventive Maintenance Plan (PMP) is required for this unit and its control device. Section B- Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.~~

Response:

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.

There are no changes to Condition D.2.2 as a result of this comment.

Comment 14:

SDI requests the SO₂, 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 control over these very small emissions and no reasonable way of certifying compliance. Also, there is no basis for a separate filterable-only particulate emission limit and there is no reasonable way to certify compliance with limitations based on fractions of particulate for such small sources.

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

...

(a)

~~(b) The SO₂ emissions from the Reheat Furnace shall not exceed 0.0006 lb/MMBtu.~~

(c) ...

~~(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 PM₁₀ (filterable and condensable) emissions from the Reheat Furnace shall not exceed 0.0076 lb/MMBtu.~~

(g) - (j) ...

D.4.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

....

(a) - (b) ...

~~(c) — The VOC emissions from each preheater and dryer shall not exceed 0.0055 lb/MMBtu.~~

~~(d) — The SO₂ 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 PM₁₀ (filterable and condensable) emissions from each preheater and dryer shall not exceed 0.0076 lb/MMBtu.~~

(g) - (h) ...

Response:

The BACT determinations for the Reheat Furnace and for the preheaters and dryer that were included in SSM 065-16628-00037 established limits for NO_x, CO, VOC, SO₂, PM (filterable) and PM₁₀ (filterable and condensable) emissions. The SO₂, 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.

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

Comment 15:

SDI requests removal of the clarifying language regarding natural gas from Condition D.3.1(j) such that the requirement mirrors what is required for the similar units in Condition D.4.1(h) and D.6.1(c).

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) - (i) ...

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

Pursuant to PSD SSM 063-27213-00037, 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) - (g) ...

(h) The Permittee shall use pipeline natural gas for the preheaters and dryers.

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) - (b) ...

(c) The Permittee shall use pipeline natural gas for the caster cutting torches.

Response:

The BACT determinations for the Reheat Furnace and for the preheaters and dryer that were included in SSM 065-16628-00037 established the natural gas requirement. All applicable requirements must be included in the Part 70 permit and changes to a PSD BACT limit require a reopening of BACT.

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

Comment 16:

The current permit action revised this condition by adjusting the temperature requirement. Therefore, it is inaccurate to cite the old permit as the basis for the revised requirement. By including the appropriate supersession language requested above, these inaccurate permit references can be removed.

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 to control CO emissions at all times the VTD is in operation and exhausting to the VTD flare. Except for periods of startup and shutdown of the VTD, the flare temperature shall be not less than 1,128°F.

Response:

IDEM has removed this condition as an emission limitation and placed the requirements in the Compliance Monitoring Section of the permit section.

~~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 to control CO emissions at all times the VTD is in operation and exhausting to the VTD flare. Except for periods of startup and shutdown of the VTD, the flare temperature shall be not less than 1,128°F.~~

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

D.5.3 VTD Flare Operation

The Permittee shall operate the VTD flare to control CO emissions at all times the VTD is in operation and exhausting to the VTD flare. Except for periods of startup and shutdown of the VTD, the flare temperature shall be not less than 1,128°F.

Comment 17:

SDI requests changes to Condition D.5.3, Preventive Maintenance Plan. SDI believes a PMP is not necessary for the VTD boiler and was not required in the underlying permit for this unit.

~~D.5.3~~ D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for ~~the VTD boiler and~~ the VTD flare. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

Response:

Since the VTD boiler is a large unit (69 MMBtu per hour) which could significantly contribute to emissions of air pollutants such as NO_x 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. Condition B.10(c) states "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." There are no changes to this condition as a result of this comment.

Comment 18:

SDI requests changes to Condition D.5.4(a), Record Keeping Requirements. SDI believes it is unnecessary to require a record documenting when a temperature reading was not taken and the reason. This occurs primarily during maintenance outages, when personnel are instead properly focused on equipment repairs and on safety.

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).~~

Response:

IDEM does not agree that this requirement is unnecessary. 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 as a result of this comment.

Comment 19:

SDI requests changes to Condition D.8.1(a) to be consistent with the August 27, 2009 stay agreement filed in OEA under Cause No. 03-A-J-3183.

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

...

- (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) - (e) ...

Response:

A stay agreement that is filed with the Office of Environmental Adjudication (OEA) is not a final permit decision. The issue is not resolved until a settlement agreement is in place between IDEM and the petitioner. There are no changes to D.8.1(a) as a result of this comment.

Comment 20:

As stated in (e), the contractor is required to comply with the requirements in (e)(2). As provided in IDEM's nonrule policy document Air-0013-NPD, a responsible official for the on-site contractor may certify compliance for the contractor's operations within the source's Annual Compliance Certification.

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

Table 4	
Slag Handling/Processing Operation	Opacity (%)
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) Particulate emissions from outdoor cutting of mill scrap and skulls shall be vented to a particulate control device.
- (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's contractor~~ **Permittee's contractor** shall minimize drop heights, except during ball dropping.
 - (3) Good working practices shall be performed.

Response:

Compliance with the emission limitations in this permit are the responsibility of the Permittee. IDEM has modified Condition D.8.1 as follows:

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~~ **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.

The ~~Permittee's contractor~~ **Permittee** 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) ...
- (c) The ~~Permittee's contractor~~ **Permittee** 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) ...
- (e) The ~~Permittee's contractor~~ **Permittee** 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.

Comment 21:

SDI requests to change the drift rate requirement in Condition D.10.1, Emission Limitations PSD BACT. IDEM has recently determined that BACT for cooling towers located at Nucor Steel - Crawfordsville and SDI-Structural and Rail is a 0.005% drift rate. Because the same factors necessitating a 0.005% drift rate for those towers are present at this mill, SDI requests that the drift rate in this condition be revised to constitute BACT.

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

- (a) ...
- (b) Pursuant to 326 IAC 2-2, the drift rate from each cooling tower shall not exceed ~~0.0005%~~ **0.005%**.

Response:

The PSD BACT limit of 0.0005% in Condition D.10.1(b) is not modified, 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)".

Comment 22:

SDI requests removal of Condition D.10.2, Drift Eliminators. Drift eliminators are built into each cooling tower, but this condition makes it appear that they are subject to some sort of operational control each time the tower is operated, which is not the case.

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

~~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.~~

Response:

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 23:

SDI requests the Emergency Occurrence form be called a "submittal" instead of a "report".

EMERGENCY OCCURRENCE REPORT-SUBMITTAL

Response:

The Emergency Occurrence form is a report. No changes were made to the permit as a result of this comment.

Comment 24:

SDI requests the Quarterly Report regarding C emissions for the EAF be updated to specify "CO Emissions" rather than "Steel Production".

Month	Steel Production CO Emissions for This Month (tons)	Steel Production CO Emissions for Previous 11 Months (tons)	Steel Production CO Emissions for 12-Month Period (tons)
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Response:

IDEM has made this change.

Comment 25:

SDI requests the PTE calculations in the TSD be revised to reflect the correct limited PTE for CO (2,409 tons per year) and correct emission factor (550 lb/hr).

Response:

IDEM does not amend the Technical Support Document (TSD) because the TSD and amendments to the TSD are maintained to document the original review. Corrected emission calculations are included as Attachment A to this addendum. Table 3 from the TSD should read as follows to correspond to the revised emission rates:

Process / Emission Unit	PM	PM ₁₀	PM _{2.5}	CO	NO _x
Revised EAF Baghouse/LMS Baghouse Exhaust	86.75	250.61	250.61		

Table 3: Potential to Emit (ton/yr)					
Process / Emission Unit	PM	PM₁₀	PM_{2.5}	CO	NO_x
Revised EAF & LMS				3,252.15	
Revised EAF Fugitive Emissions	3.83	3.83	3.83	32.85 2409.00	
Revised LMS Fugitive Emissions Assumes 99.5% captured, 0.5% is fugitive	1.67	1.67	1.67	0	
Revised LMS Ladle Preheaters and Dryers	0.31	1.25	1.25	13.80	16.43
Revised Tundish Preheaters, Nozzle Preheaters, and Dryers	0.35	1.40	1.40	15.45	18.40
Total After Modification	92.91	258.76	258.76	3,314.25 2,438.25	34.82

EPA Comments and IDEM's Responses

On April 26, 2010, OAQ received comments from Charmagne Ackerman, on behalf of the U.S. EPA, Region 5. 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 1: The project description is for an increase in flowrate to the EAF/LMS baghouse to more than double the current operation. The increase will increase PM, PM₁₀, NO_x and CO to more than double the current emissions. From the description given in the TSD, we believe that a physical change or change to method of operation may have taken place as part of this project. Since the permit action is re-opening BACT for the EAF/LMS baghouse to accommodate an increase in flowrate, why was PM_{2.5} not further discussed. The TSD states that the facility is over 100 tpy for PM_{2.5} and located in a non-attainment area for PM_{2.5} but an assessment was not included for LAER for PM_{2.5}. In the latest addendum to the TSD Appendix A, PM_{2.5} was not included in the "Summary of Potential to Emit."

Response:

There is no physical modification or change in the method of operation of the emissions units. The only change is to increase the airflow of the control device. The purpose of the change to the baghouse is to capture the additional gas flow that was not being captured before. The increased airflow will result in increased particulate emissions; therefore, the source requested for reopening of the PM and PM₁₀ BACT Analyses. These emissions are not additional emissions due to any physical modification or change in the method of operation. There are no changes to the proposed permit as a result of this comment.

Comment 2: Since BACT is being reopened and there will be an increase in NO_x emissions, has an air quality analysis been done for the new NO₂ 1-hour standard?

Response:

The potential to emit of NO_x after issuance is less than 40 tons per year; therefore, a PSD air quality analysis was not required for NO_x. New rules were established requiring the NO_x emissions be modeled if permit is issued after April 12, 2010. The Significant Source Modification No. 063-27213-00037 was issued on March 12, 2010.

Although, IDEM is not required to conduct 1-hr NO_x modeling for this project, IDEM has prepared this modeling as Appendix B to this addendum. The results show that the increased NO_x emissions from this project will not cause or contribute to a violation of the National Ambient Air Quality Standards for NO_x.

Comment 3: In Section D of the permit it discusses emission limitations for PM/PM₁₀ and testing required for PM/PM₁₀/PM_{2.5} however, it does not list an emission limitation for PM_{2.5} or placeholder language for an emission limit once one is established.

Response:

There is no limit established for PM_{2.5} emissions as part of this modification; therefore, IDEM does not have reason to require testing of the PM_{2.5} emissions. **It was inadvertently included in testing condition.** IDEM has updated the testing requirements as follows to remove the requirement for testing of the PM_{2.5} emissions:

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

- (a) Pursuant to 326 IAC 2-2, the Permittee shall perform testing on the common EAF Baghouse/LMS Baghouse stack for the following:
- (1) Filterable PM,
 - (2) NO_x, and
 - (3) VOC.
- (b) The Permittee shall perform ~~PM_{2.5} and~~ PM₁₀ testing of the common EAF Baghouse/LMS Baghouse stack not later than 180 days after the later of: (i) initial start-up of the baghouse modification authorized by SSM No. 063-27213-00037; or (ii) 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_{2.5}), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. ~~PM₁₀ and PM_{2.5}~~ 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, PM₁₀, ~~PM_{2.5}~~ NO_x and VOC tests shall be performed using methods as approved by the Commissioner and in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures).
- (e) The PM, ~~and PM₁₀, and PM_{2.5}~~ tests shall be repeated at least once every 5 years, and NO_x and VOC tests shall be repeated at least once every 2.5 years from the date of the last valid compliance demonstration.

- (f) Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Comment 4: TSD states that PM_{2.5} and SO₂ emissions were reviewed for non-attainment NSR, but there was no further discussion of it. The emission estimates used for PM_{2.5} mirror the PM₁₀ emission estimates, if PM₁₀ is being used as a surrogate, there needs an explanation, however since this area is non-attainment for PM_{2.5}, use of PM₁₀ surrogate was not allowed.

Response:

IDEM uses standard language in the technical support document to summarize the attainment status of the county. This language includes the following statement: "... Therefore, direct PM_{2.5} and SO₂ 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." In the TSD, IDEM specified "There are no changes to State Rule Applicability as a result of this modification." Since the most recent permitting action was issuance of Part 70 Operating Permit No. T 063-20969-00037 on January 7, 2009, the applicability stated in the TSD for the operating permit remains the same. This statement is included in this addendum for clarification of the source status regarding PM_{2.5} and SO₂ emissions and non-attainment NSR:

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_{2.5} and SO₂ is emitted at a rate of 100 tons per year or more.

There are no changes to the draft permit as a result of this comment.

Other Changes

Upon further review, the OAQ has decided to make the following revisions to the permit:

Change No. 1: IDEM, OAQ has decided to remove all references to the source mailing address. IDEM, OAQ will continue to maintain records of the mailing address. The changes to Condition A.1 and the source information on the reporting forms is as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary 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

Certification, Emergency Occurrence Report, Quarterly Reports, and 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.: T 063-20969-00037

Change No. 1 IDEM has revised Condition B.8, 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:
- (i) it contains a certification by a "responsible official", as defined by 326 IAC 2-7-1(34), and
 - (ii) ~~the certification is~~ **the certification states that** based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

Change No. 2: IDEM has removed the following statement from the reporting forms:

"Attach a signed certification that meets the requirements of 326 IAC 2-7-6(1) to complete this report."

IDEM Contact

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 Significant Source Modification No. 063-27213-00037 and Significant Permit Modification No. 063-27230-00037 in all correspondence.

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

Appendix A – Emission Calculations
Addendum to the Technical Support Document (TSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Company Name: Steel Dynamics, Inc. - Engineered Bar Products Division
Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167
County: Hendricks
SIC Code: 3312
Part 70 Operating Permit No.: T 063-20969-00037
Issuance Date of Part 70 Operating Permit: January 7, 2009
Significant Source Modification (SSM) No.: 063-27213-00037
Significant Permit Modification (SPM) No.: 063-27230-00037
Permit Reviewer: Kimberly Cottrell
Date: March 12, 2010

Summary of Potential to Emit

The tables below summarize the changes to the potential to emit as submitted by SDI and compared to the PTE levels from Part 70 Operating Permit No. T 063-20969-00037. IDEM has reviewed these calculations and verified their accuracy.

Emission Unit	Previously Permitted Emission Rates					Capture Eff.	Control Eff.	Limited PTE			
	Throughput (tpy)	Pollutant	Emission Factor	Units	Source of EF			PM (TPY)	PM-10 (TPY)	NOx (TPY)	CO (TPY)
EAF Baghouse/LMS Baghouse Exhaust Flow Rate (dscf/min)	550,000 dscf/min 653,774 ACFM	PM PM-10	0.0018 0.0052	gr/dscf gr/dscf	PSD Permit Limit (16628) PSD Permit Limit (16628)	- -	- -	37.17	107.37		-
EAF & LMS	1,095,000	CO	2.0	lb/ton	PSD Permit Limit (16628)	99%	0%	-	-		1,084.05
EAF Fugitive Emissions	1,095,000	PM PM-10 CO	1.4 1.4 2.0	lb/ton lb/ton lb/ton	AP-42, Table 12.5-1 AP-42, Table 12.5-1 PSD Permit Limit (16628)	0% 0% 0%	0% 0% 0%	3.83	3.83		10.95
LMS Fugitive Emissions	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% 0%	0% 0%	1.67	1.67		0
Assumes 99.5% captured, 0.5% is fugitive											
LMS Ladle Preheaters and Dryers (5 heaters @ 7.5 MMBtu/hr) 1 mmcf = 1,020 MMBtu	37.5 MMBtu/hr	PM PM-10 NOx CO	0.0019 0.0076 0.05 0.084	lb/MMBtu lb/MMBtu lb/MMBtu lb/MMBtu	AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4	0% 0% 0% 0%	0% 0% 0% 0%	0.31	1.25	8.21	13.80
2 Tundish Preheaters (9 MMBtu/hr each) 3 Tundish Nozzle Preheaters (6 MMBtu/h) 2 Tundish Dryers (9 MMBtu/hr each) 1 mmcf = 1,020 MMBtu	42 MMBtu/hr	PM PM-10 NOx CO	0.0019 0.0076 0.05 0.084	lb/MMBtu lb/MMBtu lb/MMBtu lb/MMBtu	AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4 AP-42, Chapter 1.4	0% 0% 0% 0%	0% 0% 0% 0%	0.35	1.40	9.20	15.45
Total PTE (Based on PSD Permit 16628)								43.33	115.52	17.41	1,124.25

Emission Unit	Revised Emission Rates					Capture Eff.	Control Eff.	Limited PTE			
	Throughput (tpy)	Pollutant	Emission Factor	Units	Source of EF			PM (TPY)	PM-10 (TPY)	NOx (TPY)	CO (TPY)
EAF Baghouse/LMS Baghouse Exhaust Flow Rate (dscf/min)	1,283,730 dscf/min 1,500,000 ACFM	PM PM-10 PM PM-10	0.0018 0.0052 19.81 57.22	gr/dscf gr/dscf lb/hr lb/hr	PSD Permit Limit (27213) PSD Permit Limit (27213)	- -	- -	86.75	250.61		-
EAF & LMS	1,095,000	CO	550 4.4	lb/hr lb/ton	PSD Permit Limit (27213) <i>Equivalent Limit</i>	99% 99%	0% 0%	-	-		2,384.91
EAF Fugitive Emissions	1,095,000	PM PM-10 CO CO	1.4 1.4 550 4.4	lb/ton lb/ton lb/hr lb/ton	AP-42, Table 12.5-1 AP-42, Table 12.5-1 PSD Permit Limit (27213) <i>Equivalent Limit</i>	0% 0% 0% 0%	0% 0% 0% 0%	3.83	3.83		24.09
LMS Fugitive Emissions	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% 0%	0% 0%	1.67	1.67		0
Assumes 99.5% captured, 0.5% is fugitive											
LMS Ladle Preheaters and Dryers (5 heaters @ 7.5 MMBtu/hr) 1 mmcf = 1,020 MMBtu	37.5 MMBtu/hr	PM PM-10 NOx CO	0.0019 0.0076 0.1 0.084	lb/MMBtu lb/MMBtu lb/MMBtu lb/MMBtu	AP-42, Chapter 1.4 AP-42, Chapter 1.4 PSD Permit Limit (27213) AP-42, Chapter 1.4	0% 0% 0% 0%	0% 0% 0% 0%	0.31	1.25	16.43	13.80
2 Tundish Preheaters (9 MMBtu/hr each) 3 Tundish Nozzle Preheaters (6 MMBtu/h) 2 Tundish Dryers (9 MMBtu/hr each) 1 mmcf = 1,020 MMBtu	42 MMBtu/hr	PM PM-10 NOx CO	0.0019 0.0076 0.1 0.084	lb/MMBtu lb/MMBtu lb/MMBtu lb/MMBtu	AP-42, Chapter 1.4 AP-42, Chapter 1.4 PSD Permit Limit (27213) AP-42, Chapter 1.4	0% 0% 0% 0%	0% 0% 0% 0%	0.35	1.40	18.40	15.45
Total PTE (Based on Revised PSD Limits under Permit 27213)								92.91	258.76	34.82	2,438.25

Notes:

Original PSD Permit limits are from Permit #063-16628-00037
New PSD Permit limits for CO and PM-10 are included in proposed Significant Source Modification No. 063-27213-00038
The 550 lb/hr limit on CO for the EAF and LMS includes fugitive emissions. This results in an overall CO limit for the EAF and LMS of 2,409 tons per 12 months. This emission rate is equivalent to 4.4 lb CO /ton metal.

Methodology

dscf/min = acfm x [(70 + 460) / (150 + 460) x (1-0.015)], where 150 degrees F was the modeled stack gas temperature, and a moisture content of 1.5 % is assumed.
EAF/LMS CO emissions = (equivalent emission factor - lb/ton metal) x (metal throughput - ton/yr) x (capture efficiency - %) x (1 - control efficiency - %) / (2000 lb/ton)
EAF/LMS Fugitive CO emissions = (equivalent emission factor - lb/ton metal) x (metal throughput - ton/yr) x (1 - capture efficiency - %) / (2000 lb/ton)
EAF/LMS baghouse PM/PM10 emissions = (grain loading - gr/dscf) x (flow rate - dscf/min) x (60 min/hr) x (8,760 hr/yr) / (2000 lb/ton) x (7000 grains/lb)
LMS Tundish Preheat emissions = (Emission Factor - lb/MMBtu) x (Capacity - MMBtu/hr) x (8,760 hr/yr) / (2000 lb/ton)

Indiana Department of Environmental Management Office of Air Quality

Appendix B – NO_x Air Quality Analyses **Addendum to the Technical Support Document (TSD)** Prevention of Significant Deterioration (PSD) Significant Source Modification (SSM) of a Part 70 Source Significant Permit Modification (SPM) of 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
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	063-27213-00037
Significant Permit Modification No.:	063-27230-00037
Permit Reviewer:	Kimberly Cottrell
Modeler:	Michael Mosier

Proposed Project

Steel Dynamics, Inc. (SDI) submitted a request for a revision of their CO, PM₁₀, and NO_x emission limits. The increase in their NO_x emissions was below the PSD significant emission rate. EPA made the following comment on the proposed permit: "Since BACT is being reopened and there will be an increase in NO_x emissions, has an air quality analysis been done for the new NO₂ 1-hour standard?"

IDEM, OAQ, is addressing this comment with the following NO₂ 1-hour modeling analysis.

Air Quality Impact Objectives

The purpose of the air quality impact analysis in the permit application is to accomplish the following objectives. Each objective is individually addressed in this document in the sections outlined below.

- A. Establish which pollutants require an air quality analysis based on the new federal air quality standards.
- B. Provide analyses of actual stack heights with respect to Good Engineering Practice (GEP), the meteorological data used, a description of the model used in the analysis, and the receptor grid utilized for the analyses.
- C. Determine background air quality levels.
- D. Demonstrate that the source will not cause or contribute to a violation of the National Ambient Air Quality Standard (NAAQS).
- E. Summarize the Air Quality Analysis

Section A - Pollutants Analyzed for Air Quality Impact

Applicability

On January 22, 2010, EPA announced a new hourly NO₂ standard of 100 ppb (188.68 ug/m³) based on the 3-year average of the 98th percentile of the annual distribution of the daily maximum 1-hour concentrations. The final rule for the new hourly NAAQS was published in the Federal Register on February 9, 2010, and the standard is effective on April 12, 2010. There are currently no significant impact levels or PSD increments with this new standard.

Based on EPA's comments and the effective date of the new standard, SDI is subject to this new standard.

Section B – Good Engineering Practice (GEP), Met Data, Model Used, Receptor Grid

Stack Height Compliance with Good Engineering Practice (GEP)

Applicability

Stacks should comply with GEP requirements established in 326 IAC 1-7-4. If stacks are lower than GEP, excessive ambient concentrations due to aerodynamic downwash may occur. Dispersion modeling credit for stacks taller than 65 meters (213 feet) is limited to GEP for the purpose of establishing emission limitations. The GEP stack height takes into account the distance and dimensions of nearby structures, which affect the downwind wake of the stack. The downwind wake is considered to extend five times the lesser of the structure's height or width. A GEP stack height is determined for each nearby structure by the following formula:

$$H_g = H + 1.5L$$

Where: H_g is the GEP stack height
H is the structure height
L is the structure's lesser dimension (height or width)

Existing Stack

Since the existing stack height of the unit for which the modification is proposed is below GEP stack height, the effect of aerodynamic downwash will be accounted for in the air quality analysis for the project.

Meteorological Data

The meteorological data used by QAQ consisted of 1988 through 1992 surface data from the Indianapolis Airport Weather Service station merged with the mixing heights from Peoria, Illinois Airport National Weather Service station. The meteorological data was downloaded from Lakes Environmental and preprocessed using AERMET.

Model Description

OAQ used AERMOD, Version 09292. All regulatory default options were utilized in the U.S. EPA approved model, as listed in the 40 Code of Federal Register Part 51, Appendix W "Guideline on Air Quality Models".

Receptor Grid

The receptor grid extended out to approximately 12 km and consisted of 1205 receptors. Fence line receptors were closely spaced (100 meters) near the plant boundary to identify the influence of aerodynamic building downwash.

Section C - Background Air Quality Levels

Background Concentrations

Applicability

EPA's "Ambient Monitoring Guidelines for Prevention of Significant Deterioration" (EPA-450/4-87-007) Section 2.4.1 is cited for approval of the monitoring sites for this area.

Background Monitors

Background data was taken from the closest monitoring station from SDI. The closest NO₂ monitoring station is located in Hendricks County at Pittsboro which is an on-site monitor. This monitor picks up both SDI emissions and background sources for the area.

Pollutant	Monitoring Site	Averaging Period	Concentration (ppb)
NO ₂	18-063-30002	3-year average of 98 th percentile	40 (75.5 ug/m ³)

Section D - National Ambient Air Quality Standards (NAAQS)

NAAQS Compliance Analysis and Results

IDEM, OAQ, modeled all inventory point sources. The NAAQS inventories are generated from EMITS (Emission Inventory Tracking System) in accordance with 326 IAC 2-6.

NAAQS modeling for the appropriate time-averaging period for NO₂ was conducted and compared to the respective NAAQS limit. The modeling analysis included a 75% conversion of NO_x to NO₂ based on the ambient ratio method contained in EPA's "Guideline on Air Quality Models". All SDI NO_x emissions, NO_x inventory sources, and monitored background were used in the modeling analysis. The background was taken from an on-site monitor that counts SDI's emissions and other background sources, which were also included in the modeling. Using on site monitoring made the analysis conservative and assures the new NO₂ 1-hour standard is protected.

The proposed permit projects a NO_x emissions increase of 17.41 tons per year. Based on 75% conversion of NO_x to NO₂, the potential increase in NO₂ emissions is 13.06 tons per year.

IDEM, OAQ, modeling results are shown in Table 2.

Pollutant	Time-Averaging Period	Maximum Concentration (ug/m³)	Background Concentration (ug/m³)	Total (ug/m³)	NAAQS Limit (ug/m³)	NAAQS Violation
NO ₂	1-hour	110.6	75.5	186.1	188.6 (100ppb)	NO

The highest of the average 8th highest (98th percentile) concentrations across all receptors based on 5 years of meteorological data represents the modeled 1-hour NO₂ design value based on the form of the standard.

Since the modeled concentration was below the NAAQS limit, no further modeling was required.

Section E - Summary of Air Quality Analysis

Steel Dynamics, Inc. (SDI) submitted a request for a revision of their CO, PM₁₀, and NO_x emission limits. Since there was a NO_x emissions increase, EPA had concerns that the NO₂ 1-hour standard wasn't addressed. IDEM, OAQ, addressed this comment with a NO₂ 1-hour modeling analysis. Based on the modeling results, the increase in NO_x emissions from this modification will not cause the source to violate the new NO₂ 1-hour NAAQS.

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location

Source Name:	Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, Indiana
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	SSM 063-27213-00037
Significant Permit Modification No.:	SPM 063-27230-00037
Permit Reviewer:	Kimberly Cottrell

Existing Approvals

The source was issued Part 70 Operating Permit No. T 063-20969-00037 on January 7, 2009.

County Attainment Status

The source is located in Hendricks County.

Table 1: County Attainment Status

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective October 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
PM _{2.5}	Basic nonattainment designation effective federally April 5, 2005.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Hendricks County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NO_x 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.

- (b) **PM_{2.5}**
 U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Hendricks County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General’s Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA’s designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA’s New Source Review Rule for PM_{2.5} promulgated on May 8th, 2008, and effective on July 15th 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
- (c) Hendricks County has been classified as attainment or unclassifiable for PM₁₀, SO₂, NO₂, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Since this source is classified as a steel mill, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) **Fugitive Emissions**
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Table 2: Source Status PTE	
Pollutant	Emissions (ton/yr)
CO	> 100
NO _x	> 100
PM	> 100
PM ₁₀	> 100
PM _{2.5}	> 100
SO ₂	> 100
VOC	< 100
Single HAP	< 10
Total HAP	< 25

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is not a major stationary source under Nonattainment New Source Review (326 IAC 2-1.1-5) because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.

- (c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).
- (d) These emissions are based upon Part 70 Operating Permit No. T 063-20969-00037, issued on January 7, 2009.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Steel Dynamics, Inc. – Engineered Bar Products Division on December 3, 2008. The modification requests:

- (a) Re-evaluation of Best Available Control Technology (BACT) for:
 - (1) The CO BACT emission limit applicable to the combined EAF/LMS baghouse stack.
 - (2) Increasing the nominal exhaust flow rate of the combined EAF/LMS baghouse stack (with resultant increase in PM and PM₁₀ emissions).
 - (3) The NO_x BACT requirements for the Tundish Preheaters, LMS Ladle Preheaters/Dryers, Tundish Dryers, and Tundish Nozzle Preheaters.
- (b) Resolution of outstanding issues with the operating permit conditions.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Stack Summary

There are no new or modified stacks due to this modification.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document.

Permit Level Determination – Part 70

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

The CO, PM/PM₁₀, and NO_x BACT emission limits for this source are being reevaluated pursuant to 326 IAC 2-2; therefore, pursuant to 326 IAC 2-7-10.5(b)(2), this modification is being processed as a significant source modification. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because the changes require case-by-case determination of the new emission limitations.

Permit Level Determination – PSD

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 modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Table 3: Potential to Emit (ton/yr)					
Process / Emission Unit	PM	PM₁₀	PM_{2.5}	CO	NO_x
Revised EAF Baghouse/LMS Baghouse Exhaust	86.75	250.61	250.61		
Revised EAF & LMS				3,252.15	
Revised EAF Fugitive Emissions	3.83	3.83	3.83	32.85	
Revised LMS Fugitive Emissions Assumes 99.5% captured, 0.5% is fugitive	1.67	1.67	1.67	0	
Revised LMS Ladle Preheaters and Dryers	0.31	1.25	1.25	13.80	16.43
Revised Tundish Preheaters, Nozzle Preheaters, and Dryers	0.35	1.40	1.40	15.45	18.40
Total After Modification	92.91	258.76	258.76	3,314.25	34.82

This modification to an existing major stationary source is major because the CO, PM/PM₁₀, and NO_x BACT emission limits for this source are being re-evaluated pursuant to 326 IAC 2-2. Therefore, pursuant to 326 IAC 2-2, the PSD requirements are as follows as determined in the Analysis of Best Available Control Technology (BACT), included as Appendix B.

- (a) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 2,409 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
- (b) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 550 pounds of CO per hour, based on a 24-hour block average.
- (c) The Permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and related equipment for measuring CO emissions rates in pounds per hour based on a 24-hour average from the common EAF Baghouse/LMS Baghouse stack.
- (d) 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) and 19.81 pounds per hour (lb/hr).

- (e) Filterable and condensable PM₁₀ emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.0052 gr/dscf and 57.22 pounds per hour (lb/hr).
- (f) 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).
- (g) The NO_x emissions from each preheater and dryer shall not exceed 0.1 lb/MMBtu.
- (h) The Permittee shall equip and operate each preheater and dryer with natural gas fueled low NO_x burners.
- (i) The Permittee shall use pipeline natural gas.

Federal Rule Applicability Determination

There are no changes to Federal Rule Applicability as a result of this modification.

State Rule Applicability Determination

There are no changes to State Rule Applicability as a result of this modification.

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.

Compliance Determination Requirements

There are no changes to the Compliance Determination Requirements as a result of this modification.

Compliance Monitoring Requirements

There are no changes to the Compliance Monitoring Requirements as a result of this modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T 063-20969-00037. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change No. 1 IDEM has made the following changes throughout the permit:

... require ~~the a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)**...

...by ~~the a~~ "responsible official"...

...by ~~the a~~ responsible official...

Change No. 2 Indiana Department of Environmental Management
Several of IDEM's Branches and sections have been renamed. Therefore, IDEM has updated the addresses and contact information listed in the permit. References to "Permit Administration and Development Section" and the "Permits Branch" have been changed to "Permit Administration and Support Section". References to "Asbestos Section", "Compliance Data Section", "Air Compliance Section", "Compliance Section", and "Compliance Branch" have been changed to "Compliance and Enforcement Branch".

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

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, ~~Compliance Section~~
Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for ~~Compliance Section~~ **Compliance and Enforcement Branch**)

Change No. 3 The emission unit descriptions for the Electric Arc Furnace (EAF) and Ladle Metallurgy Station (LMS) are revised as follows throughout the permit:

- (a) One (1) batch mode **Electric Arc Furnace (EAF)**, with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted ~~to be modified in 2004 in 2003 and 2009 for modification~~, 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 YYYYY.
- (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 in 2003 and 2009 for modification~~, 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.

Change No. 4 The emission unit descriptions for the Tundish Preheaters, LMS Ladle Preheaters/Dryers, Tundish Dryers, and Tundish Nozzle Preheaters are revised as follows throughout the permit:

- (f) Two (2) natural gas fueled low NO_x Tundish Preheaters, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 **and 2009** for modification.
- (g) Five (5) natural gas fueled low NO_x LMS Ladle Preheaters/Dryers, each with nominal capacity of 7.5 MMBtu/hour and originally permitted in 1996 and permitted in 2003 **and 2009** for modification.
- (h) Two (2) natural gas fueled low NO_x Tundish Dryers, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 **and 2009** for modification.
- (i) Three (3) natural gas fueled low NO_x Tundish Nozzle Preheaters, with nominal total capacity of 6 MMBtu/hour and originally permitted in 1996 and permitted in 2003 **and 2009** for modification.

Change No. 5 IDEM agrees to make the following changes to the emission unit descriptions in Section A and throughout the permit:

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:

- (a) - (m)...
- (n) Scrap material handling, lime handling, carbon handling originally ~~permitted in 1996 and permitted in 2003 for modification.~~
- (o) ...
- (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 in 2003 for modification.~~
- (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~~ **in 2003 for modification:**

~~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,~~

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

Total	44,000
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(r) Diesel fueled Emergency Generator(s), with total nominal capacity of 485 HP ~~installed in 2004~~ **permitted in 2003.**

(s) - (t) ...

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. ...
2. Other Insignificant Activities

(a) - (r) ...

(s) Insignificant supporting operations consisting of:

- (1) Water descaler, ~~originally permitted in 1996 and permitted in 2003 for modification;~~
- (2) Roughing mill, ~~originally permitted in 1996 and permitted in 2003 for modification;~~
- (3) Finishing mill, ~~originally permitted in 1996 and permitted in 2003 for modification;~~
- (4) Cooling bed, ~~originally permitted in 1996 and permitted in 2003 for modification;~~
- (5) Shipping ~~originally permitted in 1996 and permitted in 2003 for modification;~~ and
- (6) Storage ~~originally permitted in 1996 and permitted in 2003 for modification.~~

Change No. 6 IDEM has added clarification to Condition B.15, Permit Term, as follows:

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~~ **The Part 70 Operating Permit**, T 063-20969-00037, 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.

Change No. 7 There may be times when it is unnecessary for a responsible official to "certify" additional information requested by IDEM; therefore, paragraph (a) of Condition B.7, Duty to Provide Information, is revised as follows:

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

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. ~~The submittal by the Permittee does require a 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) ...

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 a "responsible official" of truth, accuracy, and completeness. This certification shall state that, A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:~~
- (i) **it contains a certification by a "responsible official", as defined by 326 IAC 2-7-1 (34), and**
 - (ii) **the certification is** 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 Permittee may use** the attached Certification Form ~~or another form meeting the requirements of 326 IAC 2-7-4(f), or its equivalent,~~ with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) ~~The A~~ "responsible official" is defined at 326 IAC 2-7-1(34).

Change No. 8 The Preventive Maintenance Plan requirements have been clarified 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) for each facility as described in 326 IAC 1-6-3. At a minimum, the PMP shall include:~~
- (a) **A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:**
- (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 time frame specified in Section D, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require ~~the a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A 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~~ **an exceedance of any** limitation on emissions ~~for that unit~~. The PMPs do not require ~~the a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.

Change No. 9 The emergency provisions requirements have been clarified as follows:

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

(a) (b) ...

(1) - (3) ...

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, ~~within no later than~~ **within no later than** four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

...

(5) ...

~~within no later than~~ **within no later than** 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) - (C)...

The notification which shall be submitted by the Permittee does not require ~~the a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

(6) ...

(c) - (g) ...

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

PART 70 OPERATING PERMIT EMERGENCY OCCURRENCE REPORT

- This is an emergency as defined in 326 IAC 2-7-1(12).
- The Permittee must notify the Office of Air Quality (OAQ), ~~within~~ **no later than four (4) daytime** business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and
 - The Permittee must submit notice in writing or by facsimile ~~within~~ **no later than two (2) days** (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

Attach a signed certification **that meets the requirements of 326 IAC 2-7-6(1)** to complete this report.

Change No. 10 Appeal Resolution: IDEM has removed the Condition B.15, Deviations from Permit Requirements and Conditions, and moved the requirements to Condition C.21, General Reporting Requirements, as follows:

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

~~(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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2254~~

~~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.~~

Change No. 11 The General Reporting Requirements have been clarified as follows:

C.24C.20 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 except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.**
- (b) ~~Reports required by conditions in Section D of this permit shall be submitted to The~~ **address for report submittal is:**
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- ~~(d) 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)~~(d) 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) (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, and the project meets the following criteria:
- (1) - (2) ...
- ~~(g)~~ (f) ~~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) - (3) ...

- (4) Any other information that the Permittee ~~deems fit~~ **wishes** to include in this report **such as an explanation as to why the emissions differ from the preconstruction project.**

...

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

Change No. 12 The Permit Modification, Reopening, Revocation and Reissuance, or Termination provisions have been clarified as follows:

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]

- (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 a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

...

Change No. 13 The Permit Renewal requirements have been clarified as follows:

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 a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) ...
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the reasonable deadline specified, **pursuant to 326 IAC 2-7-4(a)(2)(D)**, in writing by IDEM, OAQ any additional information identified as being needed to process the application.

Change No. 14 *Appeal Resolution*: The words "or notice" have been added to Condition B.19(a) 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.
- (b) ...

Change No. 15 The Operational Flexibility provisions have been clarified as follows:

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

- ...
- (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~~ **a certification that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ **a "responsible official"** as defined by 326 IAC 2-7-1(34).

...

Change No. 16 The Transfer of Ownership or Operational Control provisions have been clarified as follows:

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

- ...
- (b) ...
- The application which shall be submitted by the Permittee does require ~~the~~ **a certification that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ **a "responsible official"** as defined by 326 IAC 2-7-1(34).

...

Change No. 17 The Opacity requirements have been clarified 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 (**Applicability**) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) - (b) ...

Change No. 18 The Incineration requirements have been clarified as follows:

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

Change No. 19 The Performance Testing requirements have been clarified 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 procedures approved by IDEM, OAQ.~~

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require **a certification that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "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 **a certification that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

(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 **a certification that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 20 The Compliance Monitoring requirements have been clarified as follows:

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

~~Unless otherwise specified in this permit, for all monitoring 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:~~

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

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

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

The notification which shall be submitted by the Permittee does require ~~the a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

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.

Change No. 21 The general requirements for Monitoring Methods were removed from Section C as follows (This provision will be included as needed in Section D of the permit.):

~~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.~~

Change No. 22 The general requirements for Instrument Specifications were added to Section C as follows:

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

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

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

Change No. 23 IDEM has decided not to list the submission date of the ERP because the ERP can be updated without permit change. Paragraph (a) of original Condition C.13 (now C.16), Emergency Reduction Plans, is revised as follows:

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee ~~prepared and~~ **shall maintain the most recently** submitted written emergency reduction plans (ERPs) consistent with safe operating procedures ~~on May 11, 2003.~~

Change No. 24 Appeal Resolution: IDEM is revising Condition C.15 as follows:

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

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

- (a) ~~Upon detecting an excursion or exceedance, the~~ **The Permittee shall take reasonable response steps to** restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing **excess** emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction ~~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~~ **The response** may include, but ~~are~~ **is** not limited to, the following:
- (1) initial inspection and evaluation;
 - (2) recording that operations returned **or are returning** to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation ~~to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable~~ **normal or usual manner of operation.**
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not **necessarily** limited to, the following:
- (1) - (3) ...
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall ~~maintain the following records:~~ **record the reasonable response steps taken.**

- ~~(1) — monitoring data;~~
- ~~(2) — monitor performance data, if applicable; and~~
- ~~(3) — corrective actions taken.~~

Change No. 25 Appeal Resolution: IDEM is revising paragraph (b) of Condition C.16 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 its~~ response actions to IDEM, OAQ, no later than ~~thirty (30)~~ **seventy-five (75)** days after ~~receipt the date~~ 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~~ **no later than** one hundred ~~twenty (120)~~ **eighty (180)** days of ~~receipt after the date~~ of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred ~~twenty (120)~~ **eighty (180)** days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) ...

The response action documents submitted pursuant to this condition do require ~~the a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 26 Appeal Resolution: IDEM is revising paragraph (a) of Condition C.17 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 no later than** 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)(a)~~ Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
 - ~~(2)(b)~~ 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 a~~ certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the a~~ "responsible official" as defined by 326 IAC 2-7-1(34).

- ~~(b) 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.~~

Change No. 27 The General Record Keeping requirements have been revised as follows:

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

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

Change No. 28 The Stratospheric Ozone Protection requirements have been revised 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.~~

Change No. 29 *Appeal Resolution:* IDEM agrees to make the following changes throughout Section D of the permit:

~~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.~~ **A Preventive Maintenance Plan (PMP) is required for this unit and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.**

Testing shall be conducted in accordance with **the provisions of 326 IAC 3-6 (Source Sampling Procedures).** Section C - Performance Testing **contains the Permittee's obligations with regard to the performance testing required by this condition.**

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. **Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.**

~~All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~ **contains the Permittee's obligations with regard to the record keeping required by this condition.**

These reports shall be submitted not later than thirty (30) calendar days following the end of each calendar quarter. ~~and in accordance with Condition~~ **Section C - General Reporting Requirements of this permit. contains the Permittee's obligations with regard to the reporting required by this condition.**

Change No. 30 The revised PSD BACT requirements for PM, PM₁₀, and CO for the Electric Arc Furnace (EAF) and Ladle Metallurgy Station (LMS) are revised as follows:

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

Pursuant to **PSD SSM 063-27213-00037**, ~~PSD SSM 065~~ **SSM 063-22329-00037** 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 (SO₂) 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_x) 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_x 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.~~
- (d) Carbon monoxide (CO) emissions:**
 - (1) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 2,409 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month.**
 - (2) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 550 pounds of CO per hour, based on a 24-hour block average.**
- ~~(f)~~ **(e)** 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)~~ **(f)** 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) **and 19.81 pounds per hour (lb/hr).**
- ~~(h)~~ **(g)** Filterable and condensable PM₁₀ emissions from the EAF Baghouse/**LMS Baghouse stack** shall not exceed 0.0052 gr/dscf **and 57.22 pounds per hour (lb/hr).**
- (h)** 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).
- ~~(i)~~ **(i)** 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)~~ **(j)** 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~~ **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 0.136	0.6
Beryllium	5.75 9.0x10⁻⁵	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 **to the EAF Baghouse.**

Change No. 31 IDEM has reviewed a revised Scrap Management Plan (“SMP”). NESHAP Subpart YYYYY contains numerous scrap management provisions for mercury, chlorinated plastics, lead and free organic liquids, dramatically lessens the need for numerous SMP conditions. The SMP will be maintained on site and the current plan will be made available during inspection. Condition D.1.3(c), which references the SMP’s requirements, is revised as follows:

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

- (c) VOC emissions shall be controlled through a ~~scrap management program.~~ **Scrap Management Plan (SMP) (included as Attachment A). The Permittee shall implement the SMP, which shall be in writing and available for inspection. The SMP shall provide that:**
 - (1) All grades of scrap **charged to the furnaces** shall **not** contain ~~no observable non-ferrous metals, or excessive non-metallics, and.~~
 - (2) **All grades of scrap shall be free of not contain** excessive dirt, oil, ~~and grease, and tin plate.~~ **and**
 - (3) Heavily oiled scrap shall not be used.

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

* * *

Change No. 32 Appeal Resolution: 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. Condition D.1.5 is revised as follows revised to clarify this point:

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

In order to comply with Condition D.1.1 - EAF and LMS Limitations PSD BACT:

- (a) ~~Pursuant to PSD SSM 063-22329-00037, issued March 21, 2007, 326 IAC 2-2 and 326 IAC 2-7-6(6), the~~ **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 063-22329-00037, issued March 21, 2007, and 326 IAC 2-2, the~~ **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 063-22329-00037, 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.~~ **The EAF operations shall use a roof canopy hood located above the EAF to further capture particulate emissions so they are contained and collected within the meltshop.**
- (d) ~~There shall be no roof monitor in the Meltshop.~~

Change No. 33 Appeal Resolution: IDEM and SDI have agreed to the following changes to Condition D.1.6, Testing Requirements, pursuant to the January 30, 2009, Partial Settlement Agreement and Stay:

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

- (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_x, ~~and~~
 - (3) **VOC.**
- (b) The Permittee shall perform PM_{2.5} and PM₁₀ testing of the common EAF Baghouse/LMS Baghouse stack not later than 180 days after **the later of: (i) initial start-up of the baghouse modification authorized by SSM No. 063-27213-00037; or (ii) 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_{2.5}), signed on May 8th, 2008.** This testing shall be conducted utilizing methods as approved by the Commissioner. PM₁₀ and PM_{2.5} includes filterable and condensable PM.
- (c) ...

- (d) The ~~PM and NO_x~~ **PM, PM₁₀, PM_{2.5}, NO_x and VOC** tests shall be performed using methods as approved by the Commissioner **and in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures)**.
- (e) The PM, PM₁₀, and PM_{2.5} tests shall be repeated at least once every 5 years, and NO_x **and VOC** tests shall be repeated at least once every 2.5 years from the date of a **the last** valid compliance demonstration.
- (f) ~~Testing shall be conducted in accordance with Section C - Performance Testing~~ **contains the Permittee's obligations with regard to the performance testing required by this condition.**

Change No. 34 The Section D requirements pertaining to CEMS and COMS are updated as follows:

D.1.7 CO and SO₂ Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5]

- (a) **Pursuant to 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 emissions rates in pounds per hour averaged over a 24-hour block period from the common EAF Baghouse/LMS Baghouse stack in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.**
- ~~(a)~~ (b) 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 SO₂~~ emissions rates in pounds per hour **averaged over a 24-hour block period** from the common EAF Baghouse/LMS Baghouse stack in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- ~~(b)~~ (c) 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 SO₂ 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 SO₂ and NO_x 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]

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.1.10 - **Maintenance of COMS** and D.1.11 - **Bag Leak Detection System (BLDS)** satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

~~D.1.10~~ **D.1.9** Maintenance of CEMS [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the CO or SO₂ 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 **during meltshop operation**, 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 SO₂ CEMS is malfunctioning or will be down for calibration, maintenance, or repairs for a period of more than twenty-four (24) hours **during meltshop operation**, 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) The EAF shall be operated according to best operating practices.**

D.1.10 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) - (b) ...
- (c) Whenever the COMS is malfunctioning or down for maintenance, or repairs for more than twenty-four (24) hours **during meltshop operation**, the Permittee shall provide a certified opacity reader to take visible emission readings from the combined EAF/LMS stack.
 - (1) - (4) ...
 - (5) Any opacity ~~Exceedances~~ **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 – **Continuous Opacity Monitoring (COM)** and D.1.11 – **Bag Leak Detection System (BLDS)** satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

Change No. 35 IDEM has revised the requirement for the alarm system for the Bag Leak Detection System as follows to clarify the requirements:

~~D.1.12~~ **D.1.11** Bag Leak Detection System (BLDS) [40 CFR 60.273a] [40 CFR 64]

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

(a) - (b) ...

- (1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of ~~0.0048~~ **0.00044** grains per actual cubic foot or less.
- (2) ...
- (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 **or established according to paragraph (4). The alarm must be located such that it can be heard by the appropriate plant personnel.**

(4) - (5) ...

- (c) Compliance with this condition and conditions D.1.8 – **Continuous Opacity Monitoring (COM)** and D.1.10 – **Maintenance of COMS** satisfies 40 CFR 64, Compliance Assurance Monitoring (CAM).

Change No. 36 Appeal Resolution: IDEM and SDI have agreed to remove Condition D.1.9, Total Hydrocarbon Continuous Emission Rate Monitoring Requirement, pursuant to the January 30, 2009, Partial Settlement Agreement and Stay. As a result of this change, the remaining conditions are renumbered and referenced to the renumbered conditions are updated. The changes are as follows:

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

- ~~(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.1.14-D.1.13 Record Keeping Requirements [40 CFR 64] [40 CFR 60.276a]~~

- ~~(a) To document compliance with Condition D.1.1 – **EAF and LMS Limitations PSD BACT**, 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) – **EAF and LMS Limitations PSD BACT**, 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~~ – **CO and SO₂ Continuous Emission Rate Monitoring Requirement**, the Permittee shall maintain records of the readings of the CO, ~~and SO₂ 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 – **Continuous Opacity Monitoring (COM)**, the Permittee shall maintain records of the readings of the COM.
- (e) To document compliance with condition ~~D.1.10(e)~~ **D.1.9(c) – Maintenance of CEMS**, 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~~ **D.1.11 – Bag Leak Detection System (BLDS)**, 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) - (h) ...

~~D.1.15~~ **D.1.14** 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 report of the actual amount of carbon monoxide (CO) emissions using the Quarterly Production Report or equivalent.**
- ~~(b)~~ (c) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for **CO and SO₂**, ~~CO, SO₂ and total hydrocarbons, and continuous opacity monitor (COM) data, pursuant to 326 IAC 3-5-7.~~
- (d) **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 continuous opacity monitor (COM) data, pursuant to 326 IAC 3-5-7.**
- (e) 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.
- ~~(e)~~ 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)~~ (f) These reports ~~do~~ require ~~the~~ a certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ a responsible official, as defined by 326 IAC 2-7-1(34).

Change No. 37 The NSPS and NESHAP provisions are revised as follows to remove the IDEM mailing address as this information is provided in Section C of the permit:

~~D.1.16~~ **D.1.15** 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 46204-2251~~

~~D.1.18~~ **D.1.17** 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 **the** 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 46204-2251~~

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 46204-2251~~

Change No. 38 Conditions D.1.16, D.1.18, and D.5.6 are revised to correct some of the references to applicable NSPS or NESHAP provisions. Also, some of the applicable standards actually provide options for compliance, but this is not reflected when IDEM merely lists applicable provisions. In some cases, IDEM has listed only one of multiple options that SDI could choose for compliance. To help clarify that the permit does not limit its use of available options, Conditions D.1.16, D.1.18, and D.5.6 are revised as follows:

~~D.1.17~~ **D.1.16** New Source Performance Standards for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983 [40 CFR Part 60, Subpart AAa] [326 IAC 12]

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

- ~~(1)~~ 40 CFR ~~60.270a~~272a
- ~~(2)~~ 40 CFR ~~60.271a~~273a
- ~~(3)~~ **(1)** 40 CFR 60.272a
- ~~(4)~~ **(2)** 40 CFR 60.273a
- ~~(5)~~ **(3)** 40 CFR 60.274a
- ~~(6)~~ **(4)** 40 CFR 60.275a
- ~~(7)~~ **(5)** 40 CFR 60.276a

~~D.1.19~~ **D.1.18** National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities [40 CFR Part 63, Subpart YYYYYY]

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

- (1)** 40 CFR ~~63.10680(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)(3)**, (d)(4), (d)(6), (e)
- ~~(5)~~ 40 CFR 63.10690
- ~~(6)~~ 40 CFR ~~63.10691~~
- ~~(7)~~ 40 CFR ~~63.10692~~
- (8)** Table 1 to 40 CFR 63, Subpart YYYYYY

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

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

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

Change No. 39 Condition D.4.1 of SDI's permit is revised as follows to reflect the revised NO_x BACT limit included in Appendix B.

D.4.1 Emission Limitations PSD BACT [326 IAC 2-2-3]

Pursuant to PSD SSM 063-27213-00037, 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_x emissions from each preheater and dryer shall not exceed ~~0.050~~**0.1** 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 SO₂ 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 PM₁₀ (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_x burners.
- (h) ~~Good combustion shall be practiced.~~
- (i) The Permittee shall use pipeline natural gas **for the preheaters and dryers.** ~~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.6.1 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) - (b) ...
- (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.~~

Change No. 40 Appeal Resolution: The BACT condition for the VTD flare temperature (Condition D.5.2) required a minimum flare temperature of 1,100 °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. IDEM changed this minimum temperature to 1,300 °F in the Part 70 Operating Permit. Upon further review, IDEM is changing the temperature requirement to 1,128 °F as this temperature is the auto ignition temperature for CO as reported in the Occupational Safety and Health Guideline for Carbon Monoxide. The changes are 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 °F, except during start up and shutdown,~~ to control CO emissions at all times that the VTD is in operation **and exhausting to the VTD flare. Except for periods of startup and shutdown of the VTD, the flare temperature shall be not less than 1,128 °F.**

D.5.4 Record Keeping Requirements

- (a) To document compliance with Condition D.5.2 - **VTD Flare**, 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) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

Change No. 41 SDI has agreed to install a dust collector to address emissions from outdoor cutting of mill scrap and skulls. Section D.8 is revised as follows:

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

...

(a) - (c) ...

~~(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.~~

(d) Particulate emissions from outdoor cutting of mill scrap and skulls shall be vented to a particulate control device.

(e) ...

D.8.2 Record Keeping Requirements

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

(b) Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

Change No. 42 Condition D.9.1(c)(1) is removed, as shown below, because this provision is already included in the Fugitive Dust Control Plan (“FDCP”) and Condition D.9.1(c) already requires SDI to implement its FDCP. Also, the language in (c)(1) is incomplete, because it does not address situations which would require a delay in cleaning such as sufficient rainfall prior to the 14th day, precipitation during the time of scheduled cleaning, ambient air temperatures below 32°F, etc. These situations are clearly addressed in the FDCP. Section D.9 is revised as follows:

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

...

(a) - (b) ...

(c) The Permittee shall maintain, update as needed, and implement its Fugitive Dust **Control Plan (FDCP)** (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)~~**(1)** 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)~~**(2)** 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) - (j) ...

D.9.2 Record Keeping Requirements

(a) The Permittee shall maintain records of the activities required by the fugitive dust control plan ~~in accordance with Section C – General Reporting Requirements of this permit, and shall make the records available upon request to IDEM, OAQ and the U.S. EPA.~~

(b) Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

Change No. 43 The Quarterly Reports have been updated as follows:

EMERGENCY OCCURRENCE REPORT

...

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12). <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), no later than four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and |
|---|

- The Permittee must submit notice in writing or by facsimile no later than two (2) days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

...

Attach a signed certification to complete this report.

A certification is not required for this report.

Change No. 44 The Quarterly Reports have been updated as follows:

Part 70 Quarterly Report

...

Attach a signed certification **that meets the requirements of 326 IAC 2-7-6(1)** to complete this report.

Change No. 45 The Quarterly Deviation and Compliance Monitoring Report has been updated as follows:

PART 70 OPERATING PERMIT QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

...

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

...

Attach a signed certification **that meets the requirements of 326 IAC 2-7-6(1)** to complete this report.

BACT Air Quality Impact Analysis

See Appendix C of this Technical Support Document for an Air Quality Impact Analysis for this modification.

Endangered Species

The Clean Air Act (CAA) does not contain or express requirement for the applicant or the permitting agency to analyze or consider the impact of hazardous air pollutants on endangered species when applying for or making a decision on a PSD permit. The CAA only requires impacts to endangered species be considered when the US EPA modifies the HAPs list or promulgates a NESHAP. (42 USC 7412).

In addition, Indiana's state rules do not require the performance of studies or analyses to determine the effect of toxic emissions from a source on federal or state-listed endangered species in the PSD permitting process.

Endangered species are protected under state and federal laws, which prohibit the unlawful taking of an endangered species. IC 14-22-34 and 16 USC 701 et. seq. See Appendix D of this Technical Support Document for a detailed list of endangered and threatened species for Hendricks County, Indiana.

The OAQ is not aware of any federally-listed endangered species within the vicinity of this source or within the city of Pittsboro, Indiana. Based on the location of the plant and the air quality analysis done, the impact of the modification to this industrial area would not affect habitats of endangered species; therefore, emissions from this source will not adversely affect any federally-listed endangered species or any state-listed endangered species.

Public Health and Safety

The Office of Air Quality (OAQ) issues technically sound permits that are protective of public health. Within the boundaries of the law, the OAQ has conducted appropriate analysis of the impacts of this proposed facility on human health. State Implementation Plan (SIP) requirements are examples of health-based standards, because the SIP requirements were proposed by the state and approved by the U.S. EPA for the purposes of maintaining the National Ambient Air Quality Standards (NAAQS). These standards are health-based standards and based on the assessment of public health risks associated with certain levels of pollution in the ambient environment. The Clean Air Act (CAA) requires each state to develop air quality plans and outlines how the standards will be met.

U.S. EPA has established ambient levels that are protective of human health. Anticipated emissions can be modeled and the resulting ambient levels compared to the federal standard. If levels are not expected to increase above U.S. EPA's ambient standard, it is appropriate to conclude that the proposed facility will not pose an increased threat to public health.

Noise, Odor and Zoning

The Office of Air Quality (OAQ) does not have jurisdiction over noise pollution, odor and zoning.

Environmental Justice (EJ)

Based on the 2000 US Census, there are 12.5% of Indiana residents who identified themselves as racial minority. An area is classified as High Racial Minority if it falls between 18.75% to 24.99%. Hendricks County, IN, where Steel Dynamics, Inc. – Engineered Bar Products Division is located does not fall under this classification.

Based on the 1990 US Census, 28% of Indiana residents lived in households that received an income less than or equal to twice the poverty level. This is classified a Low Income Household. Hendricks County, IN, where Steel Dynamics, Inc. – Engineered Bar Products Division is located does not fall under this classification.

If the source being reviewed is going to be located in an area considered to be either a High Racial Minority or Low Income Household, the OAQ attempts to publish the notice for the public review in a non-English newspaper, and holds a public meeting prior to the issuing a final action. Since Hendricks County, where Steel Dynamics, Inc. – Engineered Bar Products Division is located is neither of these classifications, the OAQ will only publish the notice in a most circulated newspaper in the area.

For more information on Environmental Justice (EJ), please refer to the IDEM website under the "Your Community" and "Community Involvement" links.

Recommendation and Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 063-27213-00037 and Significant Permit Modification No. 063-27230-00037.

- (1) Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that the Significant Source Modification No. 063-27213-00037 and Significant Permit Modification No. 063-27230-00037 be approved.
- (2) A copy of the preliminary findings is also available on the Internet at: www.in.gov/idem/permits/air/pending.html.
- (3) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem/permits/guide/.

TSD Appendices

The following are the appendices of this TSD:

- (1) Appendix A – Emissions Calculations
- (2) Appendix B – PSD BACT Analyses
- (3) Appendix C – Air Quality Impact Analysis
- (4) Appendix D – Indiana Hendricks County Endangered, Threatened and Rare Species List

IDEM Contact

Questions regarding this proposed permit can be directed to:

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Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Source Modification No. 063-27213-00037 and Significant Permit Modification No. 063-27230-00037 in all correspondence.

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

Appendix A – Emission Calculations
Technical Support Document (TSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Company Name: Steel Dynamics, Inc. - Engineered Bar Products Division
Address City IN Zip: 8000 North County Road 225 East, Pittsboro, Indiana 46167
County: Hendricks
SIC Code: 3312
Part 70 Operating Permit No.: T 063-20969-00037
Issuance Date of Part 70 Operating Permit: January 7, 2009
Significant Source Modification (SSM) No.: 063-27213-00039
Significant Permit Modification (SPM) No.: 063-27230-00040
Permit Reviewer: Kimberly Cottrell
Date: November 9, 2009

Summary of Potential to Emit

The tables below summarize the changes to the potential to emit as submitted by SDI and compared to the PTE levels from Part 70 Operating Permit No. T 063-20969-00037. IDEM has reviewed these calculations and verified their accuracy.

Emission Unit	Previously Permitted Emission Rates					Capture Eff.	Control Eff.	Limited PTE			
	Throughput (tpy)	Pollutant	Emission Factor	Units	Source of EF			PM (TPY)	PM-10 (TPY)	NOx (TPY)	CO (TPY)
EAF Baghouse/LMS Baghouse Exhaust Flow Rate (dscf/min)	550,000 dscf/min 653,774 ACFM	PM	0.0018	gr/dscf	PSD Permit Limit (16628)	-	-	37.17	107.37	-	
		PM-10	0.0052	gr/dscf	PSD Permit Limit (16628)	-	-				
EAF & LMS	1,095,000	CO	2.0	lb/ton	PSD Permit Limit (16628)	99%	0%	-	-	1,084.05	
EAF Fugitive Emissions	1,095,000	PM	1.4	lb/ton	AP-42, Table 12.5-1	0%	0%	3.83	3.83	10.95	
		PM-10	1.4	lb/ton	AP-42, Table 12.5-1	0%	0%				
		CO	2.0	lb/ton	PSD Permit Limit (16628)	0%	0%				
LMS Fugitive Emissions	1,095,000	PM	0.61	lb/ton	EF based on previous permits	0%	0%	1.67	1.67	0	
		PM-10	0.61	lb/ton	EF based on previous permits	0%	0%				
LMS Ladle Preheaters and Dryers (5 heaters @ 7.5 MMBtu/hr) 1 mmcf = 1,020 MMBtu	37.5 MMBtu/hr	PM	0.0019	lb/MMBtu	AP-42, Chapter 1.4	0%	0%	0.31	1.25	8.21	
		PM-10	0.0076	lb/MMBtu	AP-42, Chapter 1.4	0%	0%			13.80	
		NOx	0.05	lb/MMBtu	AP-42, Chapter 1.4	0%	0%				
		CO	0.084	lb/MMBtu	AP-42, Chapter 1.4	0%	0%				
2 Tundish Preheaters (9 MMBtu/hr each) 3 Tundish Nozzle Preheaters (6 MMBtu/h) 2 Tundish Dryers (9 MMBtu/hr each) 1 mmcf = 1,020 MMBtu	42 MMBtu/hr	PM	0.0019	lb/MMBtu	AP-42, Chapter 1.4	0%	0%	0.35	1.40	9.20	
		PM-10	0.0076	lb/MMBtu	AP-42, Chapter 1.4	0%	0%			15.45	
		NOx	0.05	lb/MMBtu	AP-42, Chapter 1.4	0%	0%				
		CO	0.084	lb/MMBtu	AP-42, Chapter 1.4	0%	0%				
Total PTE (Based on PSD Permit 16628)							43.33	115.52	17.41	1,124.25	

Emission Unit	Revised Emission Rates					Capture Eff.	Control Eff.	Limited PTE			
	Throughput (tpy)	Pollutant	Emission Factor	Units	Source of EF			PM (TPY)	PM-10 (TPY)	NOx (TPY)	CO (TPY)
EAF Baghouse/LMS Baghouse Exhaust Flow Rate (dscf/min)	1,283,730 dscf/min 1,500,000 ACFM	PM	0.0018	gr/dscf	PSD Permit Limit (27213)	-	-	86.75	250.61	-	
		PM-10	0.0052	gr/dscf	PSD Permit Limit (27213)	-	-				
		PM-10	19.81	lb/hr							
EAF & LMS	1,095,000	CO	6.0	lb/ton	PSD Permit Limit (27213)	99%	0%	-	-	3,252.15	
EAF Fugitive Emissions	1,095,000	PM	1.4	lb/ton	AP-42, Table 12.5-1	0%	0%	3.83	3.83	32.85	
		PM-10	1.4	lb/ton	AP-42, Table 12.5-1	0%	0%				
		CO	6.0	lb/ton	PSD Permit Limit (27213)	0%	0%				
LMS Fugitive Emissions	1,095,000	PM	0.61	lb/ton	EF based on previous permits	0%	0%	1.67	1.67	0	
		PM-10	0.61	lb/ton	EF based on previous permits	0%	0%				
LMS Ladle Preheaters and Dryers (5 heaters @ 7.5 MMBtu/hr) 1 mmcf = 1,020 MMBtu	37.5 MMBtu/hr	PM	0.0019	lb/MMBtu	AP-42, Chapter 1.4	0%	0%	0.31	1.25	16.43	
		PM-10	0.0076	lb/MMBtu	AP-42, Chapter 1.4	0%	0%			13.80	
		NOx	0.1	lb/MMBtu	PSD Permit Limit (27213)	0%	0%				
		CO	0.084	lb/MMBtu	AP-42, Chapter 1.4	0%	0%				
2 Tundish Preheaters (9 MMBtu/hr each) 3 Tundish Nozzle Preheaters (6 MMBtu/h) 2 Tundish Dryers (9 MMBtu/hr each) 1 mmcf = 1,020 MMBtu	42 MMBtu/hr	PM	0.0019	lb/MMBtu	AP-42, Chapter 1.4	0%	0%	0.35	1.40	18.40	
		PM-10	0.0076	lb/MMBtu	AP-42, Chapter 1.4	0%	0%			15.45	
		NOx	0.1	lb/MMBtu	PSD Permit Limit (27213)	0%	0%				
		CO	0.084	lb/MMBtu	AP-42, Chapter 1.4	0%	0%				
Total PTE (Based on Revised PSD Limits under Permit 27213)							92.91	258.76	34.82	3,314.25	

Notes:

Original PSD Permit limits are from Permit #063-16628-00037
New PSD Permit limits for CO and PM-10 are included in proposed Significant Source Modification No. 063-27213-00038

Methodology

dscf/min = acfm x [(70 + 460) / (150 + 460) x (1-0.015)], where 150 degrees F was the modeled stack gas temperature, and a moisture content of 1.5 % is assumed.
EAF/LMS CO emissions = (equivalent emission factor - lb/ton metal) x (metal throughput - ton/yr) x (capture efficiency - %) x (1 - control efficiency - %) / (2000 lb/ton)
EAF/LMS Fugitive CO emissions = (equivalent emission factor - lb/ton metal) x (metal throughput - ton/yr) x (1 - capture efficiency - %) / (2000 lb/ton)
EAF/LMS baghouse PM/PM10 emissions = (grain loading - gr/dscf) x (flow rate - dscf/min) x (60 min/hr) x (8,760 hr/yr) / (2000 lb/ton) x (7000 grains/lb)
LMS Tundish Preheat emissions = (Emission Factor - lb/MMBtu) x (Capacity - MMBtu/hr) x (8,760 hr/yr) / (2000 lb/ton)

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

Appendix B – BACT Analyses
Technical Support Document (TSD)
Prevention of Significant Deterioration (PSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location
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Source Name:	Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location:	8000 North County Road 225 East, Pittsboro, Indiana
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	SSM 063-27213-00037
Significant Permit Modification No.:	SPM 063-27230-00037
Permit Reviewer:	Kimberly Cottrell

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Steel Dynamics, Inc. – Engineered Bar Products Division on December 3, 2008, relating to revising the CO BACT emission limit applicable to the combined Electric Arc Furnace (EAF) and Ladle Metallurgy Station (LMS) baghouse stack, increasing the nominal exhaust flow rate of the combined EAF/LMS baghouse stack (with resultant increase in PM and PM₁₀ emissions), re-evaluation of NO_x BACT for the Tundish Preheaters, LMS Ladle Preheaters/Dryers, Tundish Dryers, and Tundish Nozzle Preheaters, and resolution of outstanding issues with the operating permit conditions.

The following is a list of the emission unit for which emission limitations are modified as part of this review:

- (a) One (1) batch mode Electric Arc Furnace (EAF), with a nominal capacity of 125 tons of steel per hour, originally permitted in 1996 and permitted to be modified in 2004 and 2009, 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 2009, 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) Two (2) natural gas fueled low NO_x Tundish Preheaters, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.

- (d) Five (5) natural gas fueled low NO_x LMS Ladle Preheaters/Dryers, each with nominal capacity of 7.5 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (e) Two (2) natural gas fueled low NO_x Tundish Dryers, each with nominal capacity of 9 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.
- (f) Three (3) natural gas fueled low NO_x Tundish Nozzle Preheaters, with nominal total capacity of 6 MMBtu/hour and originally permitted in 1996 and permitted in 2003 and 2009 for modification.

Requirement for Best Available Control Technology (BACT)

326 IAC 2-2 requires a Best Available Control Technology (BACT) reevaluation to be performed whenever a BACT limit is revised.

Requirement for CO BACT

BACT for carbon monoxide (CO) was re-evaluated for the following emission units:

- (a) Electric Arc Furnace (EAF) and Ladle Metallurgy Station (LMS)
- (b) EAF Fugitive Emissions
- (c) LMS Fugitive Emissions

Requirement for PM/PM₁₀ BACT

BACT for particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM₁₀); was re-evaluated for the following emission units:

- (a) Electric Arc Furnace (EAF) and Ladle Metallurgy Station (LMS) Baghouse exhaust
- (b) EAF Fugitive Emissions
- (c) LMS Fugitive Emissions

Re-evaluation of NO_x BACT

BACT for nitrogen oxides (NO_x) was re-evaluated for the following emission units:

- (a) Tundish Preheaters
- (b) LMS Ladle Preheaters/Dryers
- (c) Tundish Dryers
- (d) Tundish Nozzle Preheaters

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to significant degradation of air quality, thereby protecting public health and the environment.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative control technology is projected to have equivalent or better emission reductions to the best available control technology. The source has not requested to use an innovative control technology; therefore, the OAQ will not evaluate or require any innovative controls for this BACT analysis. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. If the top option is selected as BACT and there are no significant environmental impacts, then the BACT Review ends with selection of the top option as BACT. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. If the top option is selected as BACT and there are no significant environmental impacts, then the BACT Review ends with selection of the top option as BACT. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

The Office of Air Quality (OAQ) makes BACT determinations by following the five steps identified above.

CO BACT Analysis - EAF and LMS

Step 1: Identify Potential Control Technologies

Emissions of carbon monoxide (CO) are generally controlled by oxidation. Combustion control technologies include thermal oxidation, catalytic oxidation, and flares. Operational changes may also reduce CO emissions when add-on control technology is not feasible. Operational changes include modification of the operating practices and optimization of the furnace system.

Eight (8) alternatives were evaluated for controlling CO emissions from the EAF/LMS:

- (A) Flaring of CO emissions
- (B) Post Combustion Reaction Chamber
- (C) CO Oxidation Catalysts and Catalytic Incineration
- (D) Oxygen Injection
- (E) Direct Shell Evacuation Control (DEC) System
- (F) Expert Furnace System Optimization Process (EFSOP)
- (G) Operating Practice Modification

- (A) Flaring of CO emissions
Flaring is a form of thermal oxidation and has been a proven technology in controlling CO emissions from furnaces but not EAFs. This technology can successfully oxidize up to 99% of the CO emissions, especially if an exhaust gas temperature of 1,300 of - 1,800°F, depending on the residence time, is maintained.

- (B) **Post Combustion Reaction Chamber,**
Post combustion reaction chambers, another form of thermal oxidation, has been a proven technology in controlling CO emissions from furnaces but not EAFs. Like flaring, this technology can successfully oxidize up to 99% of the CO emissions, especially at a relatively high temperature and residence time. This technology also works more efficiently without the presence of particulate matter in the exhaust gas stream which can foul the burners.
- (C) **CO Oxidation Catalysts and Catalytic Incineration**
Catalytic oxidizers and catalytic incineration use the same principle as thermal oxidation with the addition of catalyst to reduce the oxidation temperature. The optimal working temperature range for CO oxidation catalysts is approximately 850°F - 1,100°F with a minimum exhaust gas stream temperature of 500°F for minimally acceptable CO control. The optimal working temperature range for catalytic incineration is approximately 500°F - 600°F. Exhaust gases from the EAF will undergo rapid cooling as they are ducted from the furnace.
- (D) **Oxygen Injection**
Oxygen would be injected at the entrance of the DSE ductwork to increase oxidation of the available CO to CO₂.
- (E) **Direct Shell Evacuation (DSE) Control**
In the steel industry, DSE systems (i.e., “fourth hole” furnace control system) continue to be the primary control technology for controlling CO emissions from EAFs. A DSE system consists of a water-cooled duct connected to the EAF through the furnace roof’s “fourth hole”. This duct is connected to the melt shop canopy collector system. During melting and refining, a slight negative pressure is maintained within the furnace to withdraw exhaust gases through the DSE duct. At the point where the DSE duct meets the “fourth hole”, there is an adjustable gap that allows combustion air to enter, providing oxygen to oxidize the CO which is present.
- (F) **Expert Furnace System Optimization Process (EFSOP™)**
The Expert Furnace System Optimization Process (EFSOP™) designed by Goodfellows Technologies, Inc. (GTI) was designed to allow companies to optimize the energy requirements of their EAFs. Carbon monoxide produced in the EAF can be a valuable source of energy. When oxidized to CO₂, the reaction gives off heat which can be used to melt the steel. By monitoring CO, CO₂, H₂ and O₂ they can determine whether additional fuel or oxygen is necessary to promote the oxidation of CO in the furnace shell. By operating the furnace at optimum levels, it is thought that CO emissions at the exhaust may be lessened. In addition, GTI contends that although more heat is generated at the furnace shell, NO_x emissions may decrease as well because fuel consumption may be optimized.
- (G) **Operating Practice Modification**
Additional operating practice modifications means the use of less carbon in the raw materials to reduce CO formation.

Step 2: Eliminate Technically Infeasible Options

- (A) **Flaring of CO emissions**
The exhaust gas stream will be approximately 875,000 acf/min at 200°F. Due to the relatively large gas volumetric flow at a substantial temperature differential, this would necessitate using a considerable amount of auxiliary fuel which would in turn create more emissions. Therefore, flaring is considered technically infeasible or post combustion reaction chambers are considered technically infeasible for the following reasons:

- - The exhaust gases from the EAF/LMS will contain insufficient CO levels to support self-combustion thus CO in the exhaust will not self-combust as necessary for flaring or a post combustion chamber. Additional natural gas combustion would be needed to substantially raise the CO concentration to provide self-combustion.
- - In order to raise the exhaust gas temperature from 500°F to the minimum operating temperature required by a flare (1,128°F) or a post combustion chamber (850°F), additional heat input for flaring and for a post combustion chamber would be needed. This additional fuel requirement would result in additional CO emissions.

The OAQ is not aware of a steel mill where flaring has been used to control CO emissions from an EAF.

- (B) Post Combustion Reaction Chamber,
Due to the high particulate loading of the EAF exhaust gases, it would be necessary to operate a baghouse for particulate control prior to the thermal oxidizer. However, baghouses cannot handle the high temperatures associated with thermal oxidation of CO and the exhaust gas must be cooled to a minimum of 350°F prior to entering the baghouse. After the gas leaves the baghouse, it would need to undergo extreme heating to bring the temperature back up to the required thermal oxidation temperature. This would necessitate using a considerable amount of auxiliary fuel which would in turn create more emissions. Based on the above discussion, a post combustion reaction chamber is considered technically infeasible.

The OAQ is aware of one (1) case where post combustion reaction chamber has been determined as BACT for EAFs. IPSCO Steel, IA was issued a PSD permit on April 1996 (Project No. 95-314), which required installation of a post combustion chamber in addition to DSE system. IPSCO Steel was initially specified a CO limit of 0.91 pound per ton. However, in 2002, the CO limit was changed to 1.93 lb/ton.

Tuscaloosa Steel, AL has employed oxyfuel burners in the post combustion chamber to promote oxidation of CO. However, this system was not required as part of their BACT analysis, but has been used in trials to determine a means to meet their current BACT limitation of 2.0 lbs/ton. These burners have been removed due to continual maintenance because of particulate plugging.

- (C) CO Oxidation Catalysts and Catalytic Incineration
The temperature will be far below the minimum 500°F threshold for effective operation of either type of catalytic oxidation control technology. Additionally, the particulate loading in the exhaust gas stream is expected to be too high for efficient operation of the catalyst. Plugging and coating of the catalyst surface would significantly degrade the performance of the catalyst. Therefore, catalytic oxidizers and catalytic incineration are considered technically infeasible.

The OAQ is not aware of a steel mill where these technologies have been used to control CO emissions from an EAF.

- (D) Oxygen Injection
Oxygen injection is not a proven technology in controlling CO emissions from EAFs. One can only speculate how much additional reduction of CO it would contribute, especially if a DSE system is also used.

The OAQ is aware of only one (1) case where oxygen injection has been determined as BACT for controlling CO emissions from an EAF. Qualitech Steel, Indiana, was issued a PSD permit on October 31, 1996 which required to install six (6) oxygen injectors in addition to DSE system. However, during the review of Qualitech Steel's permit, there were many discussions about the spikes of CO that they expected to see from their operation and how they would control those spikes. In the final BACT determination, an oxygen injection system was required to alleviate the problems with CO spiking. This technology was unproven and received a much higher limit than other facilities because of the high carbon content of the raw materials and the uncertainty of control efficiency. The facility was required to install a CEM for CO, but was never able to certify the monitor. In this review, the BACT limit for CO will be revised and a CO CEM will be required to monitor CO emissions; however, oxygen Injection will not be considered because it is unproven technology.

- (E) Direct Shell Evacuation (DSE) Control
The DSE system allows excellent process emissions capture and combustion of CO, and requires the lowest air volume of other EAF capture devices. Therefore, DSE system control is considered technically feasible.
- (F) Expert Furnace System Optimization Process (EFSOP™)
Because the plants using Expert Furnace System Optimization Process (EFSOP™) are located outside of the United States, they have no CO emissions limitations at the stack. The companies are not required to have a post combustion chamber or any other technology to destruct CO emissions. It is likely that if this type of system is added to an uncontrolled EAF, there would be reductions in CO emissions. However, when a control device is already in place to oxidize the CO emissions escaping the furnace, there is no data to support a claim that greater CO emissions reductions would be realized with the addition of an optimization system. Goodfellows Technologies, Inc. (GTI) does not guarantee any emissions reduction with the use of EFSOP™.
- (G) Operating Practice Modification
Due to marketplace demands on the type of products produced and the required product quality, any additional operating practice modifications that will alter CO emissions from the proposed EAF is technically infeasible.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the above control technology review, the DSE system is considered technically feasible for CO from the EAF/LMS.

Step 4: Evaluate the Most Effective Controls and Document the Results

Emission Factors Applied at Other Steel Mills

While the expectation is that EAF emissions are similar for all steel mills, there are many variables in design, construction, and operation that greatly affect emission levels. Further, there can be significant differences in how emissions are captured and monitored, and how compliance is determined. This means that there is not a one-size-fits-all CO emission factor that can be applied to all EAFs at mini-mills. Recent BACT Determinations listed in the RBLC seem to acknowledge this, assigning higher emission factors to mills that produce products similar to those produced at SDI's mill, and lower emission factors to mills producing other types of steel.

Based on a review of the RBLC database and other permits, CO BACT limits have been increased at several mills in the past five years, reflecting the significant variability in CO emissions being seen within the steel-making industry. The twelve BACT emission factors listed in the RBLC since 2005 range from 2.0 to 7.5 lb/ton.

Among the key factors apparently affecting CO emissions are the steel grades and shapes produced. In particular, the manufacture of specialty bar quality (SBQ) steels appears to greatly influence potential CO emissions. Several of the facilities with higher CO emission factors manufacture SBQ products like SDI's mill. SBQ grades have very tight tolerances and specific chemistry requirements. In SBQ processes, metallurgical quality control protocols require the lancing of oxygen and carbon into the liquid steel toward the end of the heat; this may help explain why SBQ processes generally have higher CO emission limits.

The table below summarizes the CO BACT limits for EAF permits issued since SDI's permit was issued in 2003. Limits are arranged in descending order. The RBLC indicates a wide range of CO emission limitations (2.0 lb/ton - 7.5 lb/ton) for this type of control technology.

Table 1: Recent CO BACT Emission Factors for EAFs			
Source	Location	Date Issued	CO Emission Factor (lb/ton unless noted)
PROPOSED: SDI	Pittsboro, IN	pending	550 lb/hr
1. North Star BHP Steel	Fulton, OH	12/20/2005	7.5
2. Ellwood Quality Steels	Lawrence, PA	8/1/2007	6.0
3. Ellwood National Steel	Warren, PA	8/18/2006	6.0
4. Gerdau Ameristeel	Wilton, IA	5/29/2007	4.75
Qualitech *	Pittsboro, IN		4.7
5. Gerdau Ameristeel	Charlotte, NC	4/23/2008	4.4
6. Nucor Steel	Marion, OH	8/18/2005	4.06
7. Wheeling Pittsburgh Steel	Jefferson, OH	1/16/2005	4.0
8. Nucor Corp	Morgan, AL	6/12/2007	2.3
9. Nucor Steel	Tuscaloosa, FL	6/6/2006	2.2
10. Thyssenkrupp Steel	Mobile, AL	8/17/2007	2.0
11. Minnesota Steel Industries	Itasca, MN	5/4/2007	2.0
12. Republic Engineering Products	Stark, OH	8/30/2005	2.0

*The sources shown above as SDI and Qualitech in Pittsboro, IN, are one and the same plant under different ownerships.

The SDI facility and the first five mills listed in the above table are all SBQ mills. The remainder of the mills are considered merchant mills, and do not produce SBQ products. Given the variability in products, furnace design and emission capture and operational practices between different types of steel mills, only the emission rates for the SBQ mills are used for the remainder of this analysis.

4.4 lb/ton

SDI is proposing a limit of 550 pounds per hour (lbs/hr) based on a 24-hour averaging time as CO BACT for the SDI-Bar Products Division. At the current production rate of 125 tons/hour, this limit is equivalent to the 4.4 lb/ton achieved by the Charlotte, NC, Gerdau Ameristeel facility. Further analysis is provided below under "Basis for lb/hr Limit with 24-hour Averaging Time".

SDI, Hendricks, IN (formerly, Qualitech, IN)

The original CO limit for SDI, Hendricks, IN (formerly, Qualitech, IN) was 4.7 lb/ton.

The proposed BACT is more stringent than the BACT level of 4.7 lb/ton previously achieved by SDI, under the name of Qualitech.

Wilton, IA, Gerdau Ameristeel

The proposed BACT is more stringent than the BACT level of 4.75 lb/ton achieved by the Wilton, IA, Gerdau Ameristeel facility.

Ellwood National Steel, PA, & Ellwood Quality Steels, PA

The proposed BACT is more stringent than the BACT level of 6.0 lb/ton achieved by Ellwood National Steel and Ellwood Quality Steels.

North Star BHP Steel, OH

The proposed BACT is more stringent than the BACT level of 7.5 lb/ton achieved by North Star BHP Steel.

Basis for lb/hr Limit with 24-hour Averaging Time

During the 2003 permitting process, a Best Available Control Technology (BACT) review was performed because IDEM determined that the Electric Arc Furnace (EAF) modifications including startup by SDI would result in an increase in potential-to-emit of greater than 100 tons per year of carbon monoxide (CO). At that time, BACT was determined to be the use of a direct shell evacuation (DSE) system (commonly referred to as a “fourth hole” furnace control system) and an emission limit of 2.0 pounds of CO per ton (2.0 lb/ton) of steel produced. An equivalent emission limit of 250 pounds of CO per hour of operation (250 lb/hr) was also included in the Permit. The equivalent limit is based on the EAF nominal production capacity of 125 tons per hour multiplied by 2.0 lb/ton. Compliance is determined using a continuous emission monitoring system (CEMS) installed on the combined EAF/LMS baghouse stack. Compliance with the CO limit is based on a 3-hour block average.

The CO emission limits were based upon the BACT emission factor applied to several other steel mills across the country, as determined by a review of U.S. EPA’s RACT/BACT/LAER Clearinghouse (RBLC) database. The limits represented a significant reduction from the 4.7 lb/ton emission factor previously applied to the same EAF when Qualitech operated it.

As the plant began to ramp up, SDI began noting higher-than-expected CO levels, as measured by the CEMS. SDI first reported this observation to IDEM in the first quarter 2005 quarterly deviation report. After an exhaustive assessment of the steelmaking process, operational practices, and raw materials, SDI has been unable to achieve lower CO levels on a consistent basis.

CO CEMS Data Assessment

Data were reviewed for the recent three-year period from January 1, 2005 through December 31, 2007. Valid data are available for 25,383 out of the 26,280 hours during this period (96.6%), excluding down time for calibrations, audits, and maintenance. The following table illustrates the variability in lb/ton measurements on a monthly basis.

Table 2: Summary lb/ton Data, 2007				
Month	Average CO (lbs/hr)	CO Emissions (lbs)	Steel Produced (tons)	Average CO (lb/ton)
January	181.8	135,259	50,958	2.65
February	169.4	113,837	52,201	2.18
March	149.9	111,526	53,570	2.08
April	194.5	140,040	58,961	2.38
May	181.4	134,962	57,041	2.37
June	166.9	120,168	55,783	2.15
July	147.1	109,442	54,746	2.00
August	176.8	131,539	53,805	2.45
September	212.2	152,784	57,981	2.64
October	201.3	149,767	55,835	2.68
November	199.0	143,280	54,045	2.65
December	217.8	162,043	57,786	2.80

Table 2: Summary lb/ton Data, 2007				
Month	Average CO (lbs/hr)	CO Emissions (lbs)	Steel Produced (tons)	Average CO (lb/ton)
Total	183.3 (average)	1,604,647	662,712	2.42

The following table illustrates the variability in lb/ton measurements on a 24-hour basis, measured over a two-week period.

Table 3: Summary lb/ton Data, December 18- 31, 2007				
Date	Average CO (lbs/hr)	CO Emissions (lbs)	Steel Produced (tons)	Average CO (lb/ton)
12/18	58.8	1,411	103	13.70
12/19	42.3	1,015	896	1.13
12/20	183.2	4,397	2,050	2.14
12/21	229.6	5,510	2,434	2.26
12/22	129.6	3,110	200	15.55
12/23	192.1	4,610	1,915	2.41
12/24	181.6	4,358	432	10.09
12/25	0.4	10	0	NA
12/26	115.5	2,772	1,745	1.59
12/27	169.8	4,075	2,160	1.89
12/28	211.7	5,081	1,718	2.96
12/29	205.5	4,932	2,173	2.27
12/30	225.7	5,417	2,560	2.12
12/31	209.9	5,038	2,456	2.05
Total	154.0 (average)	51,744	20,842	2.48

The following table illustrates the variability in lb/ton measurements on a 3-hour block average basis, measured on December 31, 2007.

Table 4: Summary Lb/Ton Data, December 31, 2007				
3-hr Block Beginning	Average CO (lbs/hr)	CO Emissions (lbs)	Steel Produced (tons)	CO (lb/ton)
00 :00	150.5	452	326	1.39
03 :00	144.0	432	326	1.33
06 :00	197.6	593	318	1.86
09 :00	282.1	846	306	2.76
12 :00	300.5	902	325	2.78
15 :00	192.1	576	217	2.65
18 :00	236.1	708	326	2.17
21 :00	179.5	539	312	1.73
Total	210.3 (average)	5,047	2,456	2.05

The following table summarizes total CO emissions and lb/ton emission rates for the three-year period from January 1, 2005 through December 31, 2007. It is important to note that the total CO emissions were significantly below the permit allowable of 1,000 tons per year. Total CO emissions in 2007 were 802.9 tons.

	2005	2006	2007	Total
Total CO emissions (lbs)	1,487,448	1,382,328	1,605,708	4,475,484
Total Steel Produced (tons)	472,538	505,348	662,712	1,640,592
Lb CO/ton steel produced	3.15	2.74	2.42	2.73 (ave.)

The lb/hr data were reviewed in three-hour blocks because this is the measure currently used to determine compliance. Valid data are available for 8,486 out of 8,760 three-hour blocks (96.9%) during the three-year review period. A data query determined that the average 3-hour block average CO measured over the review period was 170.5 lb/hr. The highest 3-hour CO measurement was 1040.8 lb/hr on 12/27/2006.

The following table lists the maximum 5 CO values measured over 1-hour, 3-hour and 24-hour periods for each year during the 3-year review period.

	Rank	2005	2006	2007	Overall
	1	1189.5	2079.6	1088.7	2079.6
	2	1188.8	1502.3	1000.7	1502.3
1-Hour	3	1143.5	1392.0	963.4	1392.0
	4	1103.3	1366.7	909.0	1366.7
	5	1093.4	1364.0	847.1	1364.0
	1	961.4	1040.8	852.8	1040.8
	2	929.5	1007.0	722.6	1007.0
3-Hour	3	913.5	986.6	712.7	986.6
	4	906.5	983.9	670.0	983.9
	5	884.6	940.6	614.0	961.4
	1	720.4	600.3	469.9	720.4
	2	703.8	533.3	406.9	703.8
24-Hour	3	658.3	497.5	403.9	658.3
	4	632.9	467.2	401.0	632.9
	5	627.1	436.7	362.9	627.1

The following table summarizes data by measured value over 3-hour and 24-hour blocks for each year during the 3-year review period.

	2005		2006		2007	
	3-Hr	24-Hr	3-Hr	24-Hr	3-Hr	24-Hr
Target # Readings	2920	365	2920	365	2920	365
Actual # Readings	2805	357	2849	362	2832	361
Maximum Value	961.4	720.4	1040.8	600.3	852.8	469.9
2 nd High Value	929.5	703.8	1007.0	533.3	722.6	406.9
>1000	0	0	2	0	0	0
750-999	22	0	8	0	1	0
500-749	89	10	20	2	19	0

	Table 7: CO Data Summary Based on CEMS (lb/hr)					
	2005		2006		2007	
	3-Hr	24-Hr	3-Hr	24-Hr	3-Hr	24-Hr
250-499	545	45	345	31	590	56
0-249	2149	302	2474	329	2222	305

These data clearly reflect the need for either: an appropriate averaging time and limit that accounts for the variability of a batch process; or a significantly higher emission limit over the existing three hour averaging time period to assure compliance over all levels of operation with a reasonable margin of safety. While the average 3-hour CO value was 170.5 lb/hr, the values can spike to 5+ times that high (despite the proper operation of the equipment).

The NSR Draft Manual clearly stipulates that BACT shall be based on emission rates that are achievable in practice. SDI is applying the technology currently considered BACT at this mill. As explained below, it knows of no other technology or adjustment to the existing technology that would correct these CO levels evaluated on a 3-hr block timeframe.

Given the negligible impact of these CO emissions on ambient CO levels and the margin of safety between ambient CO levels and the NAAQS, IDEM believes it is appropriate for a lower emission limit averaged over a longer time period rather than a higher emission limit averaged over a shorter period of time. This approach is also consistent with the Significant Source Modification 063-22329-00037, issued to SDI on March 21, 2007, which applied a 24-hour averaging period for demonstrating compliance with the SO₂ limit. The CO emission limit of 550 lb/hr is equivalent to the most stringent CO BACT limit in the RBLC of 4.4 lb/ton achieved by Gerdau Ameristeel in Charlotte, NC.

Step 5: Select BACT

IDEM has determined the following to be BACT:

- (a) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 2,409 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month.
- (b) Carbon monoxide (CO) emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 550 pounds of CO per hour, based on a 24-hour block average.
- (c) The Permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and related equipment for measuring CO emissions rates in pounds per hour based on a 24-hour average from the common EAF Baghouse/LMS Baghouse stack.

PM and PM₁₀ BACT Analysis - EAF and LMS

Step 1: Identify Potential Control Technologies

Emissions of particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM₁₀) are generally controlled with add-on control equipment designed to capture the emissions prior to the time they are exhausted to the atmosphere. In cases where the material being emitted is organic, particulate matter may be controlled through a combustion process. Generally, PM and PM₁₀ emissions are controlled through one of the following mechanisms:

- (1) Fabric Filter Dust Collectors (Baghouses)

- (2) Electrostatic Precipitators (ESP)
- (3) Wet Scrubbers
- (4) Mechanical Collectors (such as Cyclones or Multiclones)

The choice of which technology is most appropriate for a specific application depends upon several factors, including particle size to be collected, particle loading, stack gas flow rate, stack gas physical characteristics (e.g., temperature, moisture content, presence of reactive materials), and desired collection efficiency.

- (A) Fabric Filter Dust Collectors (Baghouses)
Positive pressure baghouses operate at internal pressures greater than the atmospheric pressure. Typically, the fans are located before the fabric filters. This allows the fans to pull air from the EAF and push the dust laden air through the fabric filters and into the ambient air via a continuous ridge vent (old design) rather than a stack. The discharge area of a ridge vent is on the order of four times that of a single stack. Negative pressure baghouses operate at internal pressure less than atmospheric. The fans are located after the fabric filters. This allows the fans to pull the gas laden air from the EAF, through the fabric filters, and then push the air up through a central stack.
- (B) Electrostatic Precipitators (ESP)
ESPs use an electrostatic field to charge particulate matter contained in the gas stream and then attract and collect the particles on a collection surface of opposite charge. While ESPs have a very high removal efficiency (99% or better) for many sources of particulate, they have been proven as unsuitable for applications involving particulate with a high concentration of iron compounds such as those emitted from EAFs.
- (C) Wet Scrubbers
A wet scrubber is an air pollution control device that removes PM from waste gas streams primarily through the impaction, diffusion, interception and/or absorption of the pollutant onto droplets of liquid. The liquid containing the pollutant is then collected for disposal. There are numerous types of wet scrubbers that remove PM. Collection efficiencies for wet scrubbers vary with the particle size distribution of the waste gas stream. In general, collection efficiency decreases as the PM size decreases. Collection efficiencies also vary with scrubber type. Collection efficiencies range from greater than 99% for venturi scrubbers to 40-60% (or lower) for simple spray towers. Wet scrubbers are smaller and more compact than baghouses or ESPs. They have lower capital costs and comparable operation and maintenance (O&M) costs. Wet scrubbers are particularly useful in the removal of PM with the following characteristics:
 - (1) Sticky and/or hygroscopic materials (materials that readily absorb water);
 - (2) Combustible, corrosive and explosive materials;
 - (3) Particles which are difficult to remove in their dry form;
 - (4) PM in the presence of soluble gases; and
 - (5) PM in waste gas streams with high moisture content.

- (D) Mechanical Collectors (Cyclones or Multiclones)
Particulate removal in cyclone collectors is achieved through the action of inertial forces, especially centrifugal. As the gas stream enters the top of the cyclone, a vortex is induced as it is forced to travel a circular path. Centrifugal forces cause the heavier particles to concentrate near the outer wall of the cyclone and particle of lesser mass to remain closer to the center of the vortex. Frictional and gravitational forces then act on the particles closest to the wall, causing them to fall toward the bottom of the cyclone, where they are collected in a hopper. Within the lower segment of the cyclone, the direction of the gas-flow vortex is reversed, and an inner ascending vortex is formed. The inner vortex consists of comparatively particulate-free air, which is collected through an outlet duct at the top of the cyclone.

Step 2: Eliminate Technically Infeasible Options

- (A) Fabric Filter Dust Collectors (Baghouses)
Positive pressure baghouses or negative pressure baghouses have been used in the steelmaking industry. Fabric filters or baghouses are technically feasible for collecting fine particulate matter emissions associated with metals from EAFs or other types of furnaces that have high particulate emissions. They can also achieve the highest control efficiency, among other particulate control devices, as applied to EAFs.
- (B) Electrostatic Precipitators (ESP)
Due to the electromagnetic properties of small charged particles of iron compounds in an electric field, the particles adhere very strongly to the collection plates of an ESP and are extremely difficult to dislodge, resulting in an in-effectivity of the ESP. In addition, the exhaust gas stream from an EAF contains high levels of zinc (10% - 20%) and other metal compounds which can foul ESP electrodes; thereby, making the ESP ineffective. Therefore, ESP is considered technically infeasible for controlling particulate emissions from EAFs.

The OAQ is not aware of a steel mill where an ESP has been operated to control particulate emissions from an EAF.

- (C) Wet Scrubbers
High energy wet scrubbers are technically feasible and can achieve a high particulate collection efficiency (90% or better), but at the expense of a punitive pressure drop (ranging from 6 - 20 inches of water), higher operational utilities, generation of large quantities of sludge along with the associated problem of sludge handling, de-watering, and disposal.

The OAQ is not aware of a steel mill where a high energy wet scrubber has been operated to control particulate emissions from an EAF.

- (D) Mechanical Collectors (Cyclones or Multiclones)
Cyclone collectors are considered technically feasible. However, they achieve the lowest particulate removal efficiencies (less than 90%) of all particulate control devices, especially for submicron particulates that will be emitted from the EAF.

The OAQ is not aware of a steel mill where a cyclone collector has been operated to effectively control particulate emissions from an EAF.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the above control technology review, baghouses are considered BACT for PM and PM₁₀ from the EAF/LMS.

Step 4: Evaluate the Most Effective Controls and Document the Results

Evaluation of the limits in the RBLC indicates that 0.0032 grains per dry standard cubic feet has been considered BACT for negative pressure baghouses compared to 0.0018 grains per dry standard cubic feet for positive pressure baghouses. Although there was this distinction, baghouse manufacturer’s claim that there is no difference in filtering capability between these types of baghouses. The OAQ determines that the achievable control technology and emission limitation should be used to determine the best available control technology for a baghouse instead of a specific type of bag that can be used. The OAQ believes that the limitation of 0.0018 gr/dscf is the most stringent filterable PM limitation applied to an EAF baghouse and should be considered BACT regardless of what type of bags the permittee uses. Therefore, either type of baghouse should meet 0.0018 grains per dry standard cubic feet (gr/dscf) for filterable PM. It is the applicant’s responsibility to construct a control device which meets these stringent limitations.

Table 8: Comparison of EAF/LMS PM/PM₁₀ BACT Limits			
Source Name	PM Limit (gr/dscf)	Source Name	PM₁₀ Limit (gr/dscf)
PROPOSED: SDI, Hendricks, IN* (PM)	0.0018 19.81 lb/hr	PROPOSED: SDI, Hendricks, IN* (PM₁₀)	0.0052 57.22 lb/hr
Charter Steel, WI	0.0015		
Chaparral Steel, VA	0.0018		
Stafford Railsteel, AR	0.0018		
Nucor-Yamato, AR	0.0018		
Nucor Steel, AR	0.0018		
SDI, Whitley, IN (PM)	0.0018	SDI, Whitley, IN (PM ₁₀)	0.0052
Nucor Steel, NC	0.0018		
Keystone Steel, IL	0.0018		
Nucor Steel, IN	0.0018		
MacSteel, AR	0.0018		
CURRENT: SDI, Hendricks, IN* (PM)	0.0018 @760,000 ACFM	CURRENT: SDI, Hendricks, IN* (PM₁₀)	0.0052 @760,000 ACFM
Bethlehem Steel, PA	0.0020		
		SMI Steel, SC (PM ₁₀)	0.0020
Co-Steel Raritan, NJ	0.0030		
Qualitech, IN*	0.0032		
SDI, Dekalb, IN	0.0032		
Republic Tech, OH	0.0032		
Trico Steel, AL	0.0032		
Nucor Steel, UT (PM)	0.0033	Nucor Steel, UT (PM ₁₀)	0.0026
IPSCO, AL	0.0033		
Roanoke Electric Steel, VA	0.0034		
Ameristeel Corp, FL	0.0034		
Tuscaloosa Steel, AL	0.0035		
Atlantic Steel, GA	0.0036		
Ameristeel Corp, FL	0.0042		
		Florida Steel, TN (PM ₁₀)	0.0052
IPSCO, IA	0.0052		
Florida Steel, FL	0.0052		
Nucor Steel, SC	0.0052		
Cascade Steel, OR	0.0052		
Armco Steel, MD	0.0052		
Beta Steel, IN	0.0052		

Source Name	PM Limit (gr/dscf)	Source Name	PM₁₀ Limit (gr/dscf)
Nucor Steel, SC	0.0052		
		Arkansas Steel, AR (PM ₁₀)	0.0052

*The sources shown above as SDI, Hendricks, IN and Qualitech, IN are one and the same plant under different ownerships.

Charter Steel, WI

Charter Steel, WI has the lowest BACT limit in terms of grain loading, however, the grain loading limit is considered the secondary PSD BACT limit. The primary limit is in terms of lb/hr, which is 6.5 lb/hr at 550,000 tons/year capacity of the mill. The opacity limit is set at 20%. This grain loading will not be considered in the BACT analysis because the lb/hr is not comparable with other mills with bigger capacity. Also, most steel mills have 3% as opacity BACT limit.

Charter Steel, WI has PM BACT limit of 6.05 lb/hr at 550,000 ton/yr capacity, while SDI - Bar Products Division, Indiana will emit 8.48 lb/hr at 1,095,000 ton/yr capacity. Even at a lower grain loading, Charter Steel, WI has a higher emission rate (lb of PM per ton of steel) than SDI - Bar Products Division, Indiana.

Source Name	PM (lb/hr)	Maximum Capacity (ton/yr)
Charter, WI	6.05	8.48
SDI, Hendricks, IN	550,000	1,095,000

Nucor Steel, NC

Nucor Steel, NC, was initially permitted at 0.0032 gr/dscf for filterable PM in 1999. The permit has a provision that provides an opportunity to re-open the BACT review based on testing data that the existing limit can be revised. The PM limit was changed in December, 2002, to 0.0018 gr/dscf for filterable PM and 0.0052 gr/dscf for filterable and condensible PM₁₀.

It was confirmed that most of the permits do not clearly distinguished a BACT limit for filterable PM and Filterable and Condensible PM₁₀. The particulate limits indicated in this table are specified for filterable PM and PM₁₀ only, except for IPSCO Steel, IA where the limit applies to the total PM₁₀ (filterable and condensible portions combined). SDI, Whitley, IN is also one of the few sources with a separate limits for filterable and condensible particulates.

There are 9 steel mills sources that have 0.0018 gr/dscf as BACT limits for PM. SDI, Whitley, IN is one of these sources. SDI is proposing the same limit for the SDI-Bar Products Division, Indiana.

There are 10 steel mills with 0.0052 gr/dscf as BACT limits for particulate matter, 3 of these specified that it is for PM₁₀ only.

Step 5: Select BACT

SDI - Bar Products Division, Indiana, has proposed to increase the air flow rate through the evacuation system from 760,000 actual cubic feet per minute (ACFM) to 845,000 ACFM. This is an increase of 85,000 ACFM with an estimated increase in PM/PM₁₀ emissions of 126 tons per year.

The limitation of 0.0018 gr/dscf is still the most stringent filterable PM limitation applied to any source. Since there is limited information available to determine the filterable and condensable PM₁₀, the 0.0052 grain/dscf will still be considered as BACT.

- (a) 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) and 19.81 pounds per hour (lb/hr).
- (b) Filterable and condensable PM₁₀ emissions from the EAF Baghouse/LMS Baghouse stack shall not exceed 0.0052 gr/dscf and 57.22 pounds per hour (lb/hr).
- (c) 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).

NO_x BACT Analysis - tundish preheaters, LMS ladle preheaters/dryers, tundish dryers, and tundish nozzle preheaters
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The NO_x limit currently applicable to each of the tundish preheaters, LMS ladle preheaters/dryers, tundish dryers, and tundish nozzle preheaters is 0.05 lb/MMBtu. Because no add-on control technology is available to further reduce NO_x formation from open flame burners, SDI is unable to demonstrate compliance with the 0.05 lb/MMBtu NO_x limit; therefore, SDI is proposing to revise the NO_x BACT limit to 0.1 lb/MMBtu.

Step 1: Identify Potential Control Technologies

NO_x from open flame combustion units is primarily the result of “thermal NO_x” and, to a lesser extent, “fuel NO_x.” Thermal NO_x refers to the generation of NO_x from the oxidation of nitrogen in the air. Fuel NO_x refers to the generation of NO_x from the oxidation of nitrogen in the fuel. Unlike boilers and furnaces, where combustion air and temperature can be controlled, the engineering of open flame combustion units plays a very small role in the magnitude of NO_x emissions. Instead, the interaction of flame with ambient air dictates the NO_x production rate.

According to the RLBC, EPA’s Compilation of Air Pollutant Emission Factors, and the EPA’s Clean Air Technology Center (CATC) Technical Bulletins and Air Pollution Technology Fact Sheets, there are no reasonably available add-on options to control NO_x emissions from open flame combustion units. No other steel mills are using any add-on control technology to control combustion-related emissions from small combustion sources. Instead, these sources employ the following integral control/pollution prevention systems to control NO_x emissions:

- (a) Low NO_x Burners
- (b) Ultra-Low NO_x burners

Step 2: Eliminate Technically Infeasible Options

Ultra-low NO_x burners use sealed combustion chambers, like boilers and furnaces, where baffle design controls air staging and consequently mitigates NO_x generation. Ultra-low NO_x burners also reduce NO_x formation by recirculation of the exhaust gases to slow the dissipation of heat. As a result, the utilization of ultra-low NO_x burners requires considerable reconfiguration of the combustion equipment; this is technically infeasible for the tundish preheaters, LMS ladle preheaters/dryers, tundish dryers, and tundish nozzle preheaters, which flames must be used in open air in order to perform their function in the steel production process.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the above control technology review, low NO_x burners are considered BACT for NO_x from the tundish preheaters, LMS ladle preheaters/dryers, tundish dryers, and tundish nozzle preheaters.

Step 4: Evaluate the Most Effective Controls and Document the Results

The table below summarizes the NO_x limits for open flame combustion units. Limits are arranged in ascending order. The RBLC indicates that no other steel mills are using any add-on control technology to control combustion-related emissions from small combustion sources, and that all are subject to NO_x BACT limits of 0.1 lb/MMBtu with the employment of low NO_x burners.

Source	RBLC ID	Date of Permit Issuance	Size	Control	NO _x BACT Limit
Steel Dynamics – Pittsboro (IN)	NA	PROPOSED	6-9 MMBtu/hr	Low- NO _x Burners	0.1 lb/MMBtu
Steel Dynamics – Pittsboro (IN)	NA	8/29/2003	7.5 MMBtu/hr	Low- NO _x Burners	0.05 ⁽¹⁾ lb/MMBtu
Charter Steel, Inc. (OH)	OH-0276	6/10/2004	20 MMBtu/hr	None	0.098 ⁽²⁾ lb/MMBtu
Steel Dynamics – Columbia City (IN)	NA	2/25/2008	5-15 MMBtu/hr	Low- NO _x Burners	0.1 lb/MMBtu
Gerdau Ameristeel – Wilton (IA)	IA-0087	5/29/2007	5 MMBtu/hr	None	0.1 lb/MMBtu
Nucor Steel – Crawfordsville (IN)	NA	4/27/2006	12 MMBtu/hr	Low- NO _x Burners	0.1 lb/MMBtu
Steel Dynamics – Columbia City (IN)	NA	7/7/1999	10 MMBtu/hr	Low- NO _x Burners	0.1 lb/MMBtu

- (1) This entry is for the SDI facility at issue which is requesting the 0.1 lb/MMBtu NO_x limit.
- (2) The difference in this limit is statistically insignificant from the 0.01 lb/MMBtu NO_x BACT limit established in more recently-issued permits.

None of the entries in the RBLC designate whether the units are “open-flame” units, and natural gas-fired combustion units of this size are rarely included in the database because their emissions are not large enough to trigger PSD. Because no source has demonstrated compliance with a 0.05 lb/MMBtu emission rate, 0.1 lb/MMBtu is the lowest rate that is practically achievable for the tundish preheaters, LMS ladle preheaters/dryers, tundish dryers, and tundish nozzle preheaters. IDEM has determined that natural gas-fired combustion units of this size do not have add-on control technology and the NO_x limit of 0.1 lb/MMBtu proposed by SDI is consistent with those established by IDEM for similar sources.

Step 5: Select BACT

IDEM has determined the following to be BACT for the tundish preheaters, LMS ladle preheaters/dryers, tundish dryers, and tundish nozzle preheaters:

- (a) The NO_x emissions from each preheater and dryer shall not exceed 0.1 lb/MMBtu.
- (b) The Permittee shall equip and operate each preheater and dryer with natural gas fueled low NO_x burners.
- (c) The Permittee shall use pipeline natural gas.

IDEM Contact

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 Significant Source Modification No. 063-27213-00037 and Significant Permit Modification No. 063-27230-00037 in all correspondence.

Indiana Department of Environmental Management Office of Air Quality

Appendix C – Air Quality Analyses Technical Support Document (TSD) Prevention of Significant Deterioration (PSD) Significant Source Modification (SSM) of a Part 70 Source Significant Permit Modification (SPM) of 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
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T 063-20969-00037
Operation Permit Issuance Date:	January 7, 2009
Significant Source Modification No.:	063-27213-00037
Significant Permit Modification No.:	063-27230-00037
Permit Reviewer:	Kimberly Cottrell
Modeler:	Michael Mosier

Proposed Project

Steel Dynamics, Inc. (SDI) submitted a request for a revision of their CO, PM₁₀, and NO_x emission limits. SDI manufactures specialty bar quality (SBQ) steel bar products at their Pittsboro location.

Keramida Environmental, Inc. prepared the permit application for SDI. The Modeling Section in the Office of Air Quality (QAQ) received the permit application December 2008 and revised modeling results were received February 2009. This technical support document provides the air quality analysis review of the submitted modeling by Keramida Environmental, Inc., for SDI.

Analysis Summary

Based on the potential emissions after controls, a PSD air quality analysis was triggered for CO and PM₁₀. The significant impact analysis determined that modeling concentrations for CO and PM₁₀ did not exceed the significant impact levels. Based on the modeling results, the source will not have a significant impact upon federal air quality standards.

Air Quality Impact Objectives

The purpose of the air quality impact analysis in the permit application is to accomplish the following objectives. Each objective is individually addressed in this document in the sections outlined below.

- A. Establish which pollutants require an air quality analysis based on PSD significant emission rates.

- B. Provide analyses of actual stack heights with respect to Good Engineering Practice (GEP), the meteorological data used, a description of the model used in the analysis, and the receptor grid utilized for the analyses.
- C. Determine the significant impact level, the area impacted by the source's emissions and background air quality levels.
- D. Summarize the Air Quality Analysis

Section A - Pollutants Analyzed for Air Quality Impact

Applicability

The PSD requirements, 326 IAC 2-2, apply in attainment and unclassifiable areas and require an air quality impact analysis of each regulated pollutant emitted in significant amounts by a major stationary source or modification. Significant emission levels for each pollutant are defined in 326 IAC 2-2-1 and in the Code of Federal Regulations (CFR) 52.21(b) (23) (i).

Proposed Project Emissions

CO and PM₁₀ are the pollutants that will be emitted from the revision of SDI's emission limits. An air quality analysis is required for these pollutants because they exceed the significant emission rate as shown in Table 1:

Table 1: Significant Emission Rates for PSD			
Pollutant	Source Emission Rate (Facility Totals) (tons/year)	Significant Emission Rate (tons/year)	Preliminary AQ Analysis Required
PM ₁₀	142.3	40.0	Yes
CO	2190*	100.0	Yes

* Higher emission rates were modeled

Modeled emission rates were taken from Table 3-1, page 17 of the permit application and the latest modeling revision dated February 24, 2009.

Section B – Good Engineering Practice (GEP), Met Data, Model Used, Receptor Grid

Stack Height Compliance with Good Engineering Practice (GEP)

Applicability

Stacks should comply with GEP requirements established in 326 IAC 1-7-4. If stacks are lower than GEP, excessive ambient concentrations due to aerodynamic downwash may occur. Dispersion modeling credit for stacks taller than 65 meters (213 feet) is limited to GEP for the purpose of establishing emission limitations. The GEP stack height takes into account the distance and dimensions of nearby structures, which affect the downwind wake of the stack. The downwind wake is considered to extend five times the lesser of the structure's height or width. A GEP stack height is determined for each nearby structure by the following formula:

$$H_g = H + 1.5L$$

Where: Hg is the GEP stack height
 H is the structure height
 L is the structure's lesser dimension (height or width)

Existing Stack

Since the existing stack height of the unit for which the modification is proposed is below GEP stack height, the effect of aerodynamic downwash will be accounted for in the air quality analysis for the project.

Meteorological Data

The meteorological data used by Keramida Environmental, Inc. consisted of 1988 through 1992 surface data from the Indianapolis Airport Weather Service station merged with the mixing heights from Peoria, Illinois Airport National Weather Service station. The meteorological data was downloaded from Lakes Environmental and preprocessed using AERMET.

Model Description

Keramida Environmental Inc. used AERMOD, Version 07026. OAQ used the same model version to determine maximum off-property concentrations or impacts for each pollutant. All regulatory default options were utilized in the U.S. EPA approved model, as listed in the 40 Code of Federal Register Part 51, Appendix W "Guideline on Air Quality Models".

Receptor Grid

OAQ modeling used the same receptor grid generated by Keramida Environmental, Inc. The receptor grid extended out to approximately 12 km and consisted of 1205 receptors. Fence line receptors were closely spaced (100 meters) near the plant boundary to identify the influence of aerodynamic building downwash.

Section C - Significant Impact Level/Area (SIA) and Background Air Quality Levels

A significant impact analysis was conducted to determine if the source will exceed the PSD significant impact levels (concentrations). If the source's concentrations exceed these levels, further air quality analysis is required. Refined modeling for CO and PM₁₀ was not required because the results did not exceed significant impact levels. Significant impact levels are defined by the following time periods in Table 2 below with all maximum-modeled concentrations from the worst case operating scenarios.

Table 2: Significant Impact Analysis				
Pollutant	Time Averaging Period	Maximum Modeled Impacts (ug/m³)	Significant Impact Level (ug/m³)	Refined AQ Analysis Required
PM ₁₀	Annual	.18	1	No
PM ₁₀	24 Hour	2.77	5	No
CO	8 Hour	168.42	500	No
CO	1 Hour	868.59	2000	No

*First highest values per EPA NSR manual October 1990. Impacts are from SDI only.

Pre-construction Monitoring Analysis

Applicability

The PSD requirements, 326 IAC 2-2-4 require an air quality analysis of the new source or the major modification to determine if the pre-construction monitoring threshold is triggered.

The modeling results were compared to the PSD preconstruction monitoring thresholds. The results are shown in the table below.

Table 3: Preconstruction Monitoring Analysis				
Pollutant	Time Averaging Period	Maximum Modeled Impacts (ug/m³)	De-minimis Level (ug/m³)	Above De-Minimis Level
PM ₁₀	24 Hour	2.77	13	No

*First highest values per EPA NSR manual October 1990. Maximum modeled impacts are from SDI only.

For the criteria pollutant, PM₁₀ did not trigger the preconstruction monitoring. However, air quality monitors have already been established in the vicinity of the plant after it was constructed.

Section D - Summary of Air Quality Analysis

SDI has applied for a revision of their PM₁₀ and CO emission limits. Keramida Environmental, Inc., of Indianapolis, Indiana prepared the PSD application. Hendricks County is designated as attainment for all criteria pollutants. PM₁₀ and CO emission rates associated with the proposed facility exceeded the respective significant emission rates. Modeling results taken from the latest version of the AERMOD model showed PM₁₀ and CO impacts were predicted to be less than the significant impact levels. SDI did not trigger preconstruction monitoring for PM₁₀. The proposed modification will have no significant impact.

Indiana County Endangered, Threatened and Rare Species List

County: Hendricks

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Villosa lienosa	Little Spectaclecase		SSC	G5	S2
Reptile					
Sistrurus catenatus catenatus	Eastern Massasauga	C	SE	G3G4T3T4	S2
Bird					
Ardea herodias	Great Blue Heron			G5	S4B
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Dendroica cerulea	Cerulean Warbler		SSC	G4	S3B
Haliaeetus leucocephalus	Bald Eagle	LT,PDL	SE	G5	S2
Mammal					
Lynx rufus	Bobcat	No Status		G5	S1
Myotis sodalis	Indiana Bat or Social Myotis	LE	SE	G2	S1
Nycticeius humeralis	Evening Bat		SE	G5	S1
Taxidea taxus	American Badger			G5	S2
Vascular Plant					
Juglans cinerea	Butternut		WL	G3G4	S3
Poa paludigena	Bog Bluegrass		WL	G3	S3
High Quality Natural Community					
Forest - flatwoods central till plain	Central Till Plain Flatwoods		SG	G3	S2
Wetland - seep circumneutral	Circumneutral Seep		SG	GU	S1



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Michael P. Brooks
SDI Engineered Bar Products Division
8000N. CR. 225 E.
Pittsboro IN 46167

DATE: June 3, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Title V
063-27230-00037

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Barry T. Schneider VP/GM SDI Engineered Bar Products Division
Paul Dubenetzky Keramida Environmental
Jaime Saylor Hatchett & Hauck LLP
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

June 3, 2010

TO: Brownsburg Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: SDI Engineered Bar Products Division
Permit Number: 063-27230-00037

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	BMILLER 6/3/2010 Steel Dynamics, Inc. (SDI) - Engineered Bar Products Div 063-27230-00037 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	 Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

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											Remarks
1		Michael P. Brooks Steel Dynamics, Inc. (SDI) - Engineered Bar Produc 8000 N CR 225 E Pittsboro IN 46167 (Source CAATS) <i>(Via Confirmed Delivery)</i>									
2		Barry T Schneider VP/GM Steel Dynamics, Inc. (SDI) - Engineered Bar Produc 8000 N CR 225 E Pittsboro IN 46167 <i>(RO CAATS)</i>									
3		Ms. Maria Miller 1710 Cardinal Ln Brownsburg IN 46112 <i>(Affected Party)</i>									
4		Brownsburg Brown and Lincoln Twp Library 450 S Jefferson St Brownsburg IN 46112-1310 <i>(Library)</i>									
5		Ms. Cheryl Newton Chief Grant Section AR-18J US EPA Region V 77 W Jackson Blvd Chicago IL 60604 <i>(EPA)</i>									
6		Mr. Chris Wolcott 506 Lafayette Ave Crawfordsville IN 47933 <i>(Affected Party)</i>									
7		Mr. Robert Lake 8138 N CR 150 E Pittsboro IN 46167 <i>(Affected Party)</i>									
8		Mrs. Susan Ebershoff-Coles PO BOX 725 Danville IN 46122 <i>(Affected Party)</i>									
9		Director, Hendricks County Planning and Bldg Dept 355 S. Washington, P.O. Box 313 Danville IN 46122 <i>(Affected Party)</i>									
10		Mr. James Barnette 135 E Wall Street Pittsboro IN 46167 <i>(Affected Party)</i>									
11		Mr. Myron Mitchell 530 N. Meridian Street Pittsboro IN 46167 <i>(Affected Party)</i>									
12		Ms. Wenda Ellen VanWinkle-Hall ..Lilly.. 12601 E 86th St Indianapolis IN 46236 <i>(Affected Party)</i>									
13		Mr. Fred Davis 5125 E 450 N Brownsburg IN 46112 <i>(Affected Party)</i>									
14		Mr. James Butts 2293 Laurel Leaf Lane Avon IN 46123 <i>(Affected Party)</i>									
15		Mr. Walter Duncan 19 Redwood Court Brownsburg IN 46112 <i>(Affected Party)</i>									

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1		John & Dixie P.O. Box 346 North Salem IN 46165 (Affected Party)										
2		Larry and Becky Bischoff 10979 North Smokey Row Road Mooresville IN 46158 (Affected Party)										
3		Ms. Lynne & Charlotte Voigt 5961 N CR 375 E Pittsboro IN 46167-9342 (Affected Party)										
4		Ms. Cindy Boatman 1768 Frontage Rd Pittsboro IN 46167 (Affected Party)										
5		Ms. Marjorie Laflin 7445 N CR 150 E Pittsboro IN 46167 (Affected Party)										
6		James & Nancy Gentry 9726 N CR 275 E Pittsboro IN 46167 (Affected Party)										
7		Mr. David Hoggatt 6185 Brookshjre Dr Pittsboro IN 46167 (Affected Party)										
8		C. Robert & B. Joan Morgan 6416 N CR 250 E Pittsboro IN 46167 (Affected Party)										
9		Mr. Terry Northern P.O. Box 22 Pittsboro IN 46167 (Affected Party)										
10		Mr. George Williams 244 E Main St Pittsboro IN 46167 (Affected Party)										
11		Mr. Michael Vaughn 1768 Frontage Rd Pittsboro IN 46167 (Affected Party)										
12		Pittsboro Town Council P.O. Box 185 Pittsboro IN 46167 (Local Official)										
13		Fred & Iris Woods 1812 Frontage Rd Pittsboro IN 46167-9118 (Affected Party)										
14		Mr. Wayne Schroder Dick Corporation P.O. Box 10896 Pittsburgh PA 15236-0896 (Affected Party)										
15		Hendricks County Commissioners 355 S Washington Danville IN 46122 (Local Official)										

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											Remarks
1		Mark Business Director The Hendricks County Flyer 8109 Kingston St., #500 Avon IN 46123-8268 (Affected Party)									
2		Mr. Duane Wardle 2357 E. CR 651 N Pittsboro IN 46167 (Affected Party)									
3		Mr. Bill Bollman 1 Hickory Court Danville IN 46142 (Affected Party)									
4		Ms. Karla Faulkner 222 S. Maple Street, P.O. Box 175 Pittsboro IN 46167 (Affected Party)									
5		Ms. Kim McDonald 7557 N CR 150 E Pittsboro IN 46167 (Affected Party)									
6		Mr. Brad Berry 230 Deer Trace Court Pittsboro IN 46167 (Affected Party)									
7		Chris Metzger 88 Oak Hill Drive Brownsburg IN 46112 (Affected Party)									
8		Mr. David Mosier 7646 N CR 75E Lizton IN 46149-9314 (Affected Party)									
9		Ms. Jesse & Patsy Stambaugh 237 Deer Trace Court Pittsboro IN 46167 (Affected Party)									
10		Daryl & Lois Hoffman 7750 N. CR 75 E Lizton IN 46149 (Affected Party)									
11		Ms. Reba Evans 27 Woodsedge Ct. Pittsboro IN 46167 (Affected Party)									
12		Ms. Edna Bailey P.O. Box 56, 113 S. Meridian St Pittsboro IN 46167 (Affected Party)									
13		Ms. Cheryl Fowler 4881 Devonshire Dr Pittsboro IN 46167 (Affected Party)									
14		Ms. Kathryn Gentry 9726 N CR 275 E Pittsboro IN 46167 (Affected Party)									
15		Mr. Kenneth Yant 320 Osborne Avenue Pittsboro IN 46167 (Affected Party)									

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1		Millie 320 Osborne Avenue Pittsboro, IN 46167 (Affected Party)										
2		Ms. C. Green 7057 Bluffwood Court Brownsburg, IN 46112 (Affected Party)										
3		Mr. Ron Drake 8239 Captain Drive Avon IN 46123 (Affected Party)										
4		Mr. Lloyd McCormick 3881 E. Boone County Rd. Lebanon IN (Affected Party)										
5		Anna Hayden 9759 N. CR 150 E Pittsboro IN 46167 (Affected Party)										
6		Betty Bartley P.O. Box 149 Danville IN 46122 (Affected Party)										
7		Hendricks County Health Department 355 S Washington Street, Suite 210 Danville IN 46122-1759 (Health Department)										
8		Mr. Paul Dubenetzky Keramida Environmental, Inc. 401 N College Avenue Indianapolis IN 46202 (Consultant)										
9		Kevin Carnes 1816 Beechwood Dr Lafayette IN 47905 (Affected Party)										
10		Ms. Jaime K. Saylor Hatchett & Hauck, LLP 111 Monument Circle Ste. 301 Indianapolis IN 46204 (Consultant)										
11												
12												
13												
14												
15												

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