INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
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: February 4, 2013

RE: Steel Dynamics, Inc. - Flat Roll Division/033-32483-00043

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 approval 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) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER-MOD.dot 12/3/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Barry Smith
Steel Dynamics, Inc. - Flat Roll Division
4500 County Road 59
Butler, IN 46721

February 4, 2013

Re: 033-32483-00043
Minor Source Modification to:
Part 70 permit No.: T033-8068-00043

Dear Mr. Smith:

Steel Dynamics, Inc. - Flat Roll Division was issued Part 70 Operating Permit (T033-8068-00043) on October 4, 2006 for a stationary steel minimill. An application to modify the source was received on November 11, 2012. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

(a) Three (3) slag storage areas, approved in 2013 for construction, identified as Slag Area 1, 2, and 3, each with a nominal throughput of 400 tons per hour.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

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

The source may begin construction and operation when the minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, and ask for Kristen Willoughby or extension 3-3031, or dial (317) 233-3031.

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments
Permit, TSD, Calculations
JA/kw
cc: File – Dekalb County
U.S. EPA, Region V
Dekalb County Health Department
IDEM Northern Regional Office
Compliance and Enforcement Branch

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Minor Source Modification to a Part 70 Source

OFFICE OF AIR QUALITY

Steel Dynamics, Inc. - Flat Roll Division
4500 County Road 59
Butler, Indiana 46721

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

Minor Source Modification No..: 033-32483-00043	
Issued by: Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 4, 2013

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SDI Certification
SDI Emergency Occurrence Report Form
SDI Quarterly Deviation and Compliance Monitoring Report Form
SDI Quarterly Report Form
Fugitive Dust Control Plan

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**-** General Information, A.2 - Part 70 Source Definition, A.3 - Emission Units and Pollution Control Equipment Summary and A.4 - Insignificant Activities 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 minimill.

Source Address:	4500 County Rd 59, Butler, Indiana 46721
Phone Number:	260-868-8000
SIC Code:	3312
County Location:	DeKalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules 1 of 28 Source Categories Minor Source, Section 112 of the Clean Air Act

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

The source consists of:

(a) Steel Dynamics, Inc. - Flat Roll Division (SDI-Flat Roll), located at 4500 County Road 59, Butler, Indiana 46721; and

(b) Steel Dynamics, Inc. - Iron Dynamics Division (SDI-IDD), located at 4500 County Road 59, Butler, Indiana 46721.

Separate Part 70 permits will be issued to Steel Dynamics, Inc. - Flat Roll Division (033-8068-00043) and Steel Dynamics, Inc. - Iron Dynamics Division (033-12614-00076), solely for administrative purposes. For this permit, the Permittee is Steel Dynamics, Inc. - Flat Roll Division, the primary operation.

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

Steel Dynamics, Inc. - Flat Roll Division consists of the following emission units and pollution control devices:

Melt Shop Operations

(a) Electric Arc Furnaces (EAF)

Two (2) twin shell electric arc furnaces (EAF #1 South, permitted in 1994 for construction and EAF #2 North, permitted in 1997 for construction), each with a nominal capacity of 200 tons per hour, using a direct shell evacuation (DSE) system ("fourth hole" duct), an overhead roof exhaust system consisting of canopy hoods, DSE air gap for carbon monoxide (CO) emissions control, and low-NO_x/oxyfuel burners (combustion control) for nitrogen oxide (NO_x) emissions control. Particulate emissions from EAF #2 North are controlled by EAF Baghouse 2. All emissions from EAF #2 North exhaust to Stack 92. Particulate emissions from EAF #1 South are controlled by EAF Baghouse 1. All emissions from EAF #1 South exhaust to Stack 01.

(b) Continuous Casters

Two (2) continuous casters (CC #1 South, permitted in 1994 for construction and CC #2 North, permitted in 1997 for construction), each with a nominal capacity of 225 tons per hour. Particulate matter (PM/PM10) emissions are controlled by canopy hoods over each caster exhausting to the EAF baghouse through Stack 01.

(c) Miscellaneous natural gas combustion sources

(1) One (1) ladle dryout station (LDS), with a nominal heat input of 10 MMBtu per hour**,** permitted in 1994 for construction;

(2) Four (4) ladles preheat stations (LPS), with a nominal heat input of 10 MMBtu per hour each, three (3) permitted in 1994 and one (1) permitted in 1995 for construction;

(3) Three (3) natural gas fired tundish ladle dryers with a nominal heat input capacity of 1.5 MMBtu per hour each, one (1) permitted in 1994 and two (2) permitted in 1995 for construction;

(4) Two (2) natural gas-fired tundish preheaters with a nominal heat input capacity of 9.4 MMBtu per hour each, permitted in 1994 for construction; and

(5) Lancing and cutting of skulls, coils and steel scrap.

(d) Storage Silos and Bins

(1) Twelve (12) storage silos including the following:

(A) Three (3) EAF dust silos consisting of:

(i) Bin vent 5a for particulate matter control permitted in 1994 for construction,

(ii) Bin vent 5b for particulate matter control permitted in 1997 for construction and

(iii) Bin vent 5c for particulate matter control, permitted in 2007 for construction.

(B) Six (6) Lime/carbon silos with bin vents 22 through 27 for particulate matter control, permitted in 1994 and 1997 for construction, and

(C) Two (2) alloy silos with bin vents 28 and 29 for particulate matter control, permitted in 1994 for construction.

(D) One (1) carbon silo, approved in 2011 for construction, with a nominal throughput of 15 tons per hour, and using bin vent 93 as control.

(2) Enclosed, indoor and/or pneumatic conveying to control fugitive emissions.

(e) Slag pit digouts associated with each electric arc furnace.

(f) Melt shop building openings, dust handling system and melt shop roof monitors.

Ladle Metallurgical Stations

Two (2) Ladle Metallurgical Stations (LMS) (South permitted in 1994 for construction and North permitted in 1998 for construction), each with a nominal capacity of 200 tons per hour. Particulate (PM/PM10) emissions are controlled by the Ladle Metallurgical Furnaces (LMF)

baghouse (permitted in 1998 for construction, with a nominal air flow rate of 200,000 standard cubic feet per minute) exhausting through Stack 61. The LMS consists of the following:

(a) Three (3) Ladle Metallurgical furnaces (LMF), and

(b) Two (2) stir stations.

Hot Mill Operations - Tunnel Furnaces

(a) One (1) tunnel furnace, No. 1 South, permitted in 1994 for construction, using low NOx burners, with a nominal heat input capacity of 117.9 MMBtu per hour (nominal 92 MMBtu per hour in the heating zone and nominal 25.9 MMBtu per hour in the holding zone), exhausting through Stack 2.

(b) One (1) tunnel furnace, No. 2 North, permitted in 1997 for construction, using low NOx burners with a nominal heat input capacity of 92 MMBtu per hour in the heating zone, exhausting through Stack 42.

Cold Mill Operations – Pickling Line

One (1) pickling line, with a nominal capacity of 1.4 million ton per year, permitted in 1996 for construction, with a packed scrubber and covered tanks maintained under negative pressure, for Hydrochloric Acid (HCl) control, and a mist eliminator for PM/PM-10 control, exhausting to Stack 17.

Pickle Line Scale Breaker

One (1) scale breaker, permitted in 1996 for construction, with a nominal capacity of 1.4 million tons per year that removes scale from the rolled steel prior to the pickling process. Particulate (PM/PM10) emissions are controlled by a baghouse with a nominal air flow rate of 10,600 acfm and exhausting to Stack 60.

Pickle Line Boilers

Three (3) natural gas fired boilers Nos. 1, 2 and 3, two (2) permitted in 1996 for construction and one (1) permitted in 2006, equipped with low NOx burners, exhausting to Stacks 15, 16a and 16b. The nominal heat input for each boiler is 20.4 MMBtu per hour. Only two (2) boilers will be utilized at any given time.

Reversing Mill

One (1) cold reversing mill, with a nominal capacity of one (1.0) million tons per year, permitted in 1996 for construction, with a mist eliminator for particulate (PM/PM10) emissions control, exhausting to Stack 18.

Galvanizing Lines

(a) One (1) hot band galvanizing line with a nominal capacity of 400,000 tons of steel per year, permitted in 1996 for construction, heated by a low NOx burner natural gas fired heater with a nominal heat input of 45 MMBtu per hour, exhausting through Stack 19.

(b) Twenty-four (24), natural gas fired radiant tube heaters associated with the galvanizing line, permitted in 2002 for construction. Each heater has a nominal heat input of 0.3 MMBtu per hour, exhausting inside the building.

(c) One (1) cold rolled galvanizing line with a nominal capacity of 300,000 tons of steel per year, permitted in 1996 for construction, heated by a low NOx burner natural gas fired heater with a nominal heat input of 55 MMBtu per hour, exhausting to Stack 19.

Annealing Furnaces

Sixteen (16) low NOx burners, natural gas fired annealing furnaces and forty (40) annealing bases, permitted in 1996 for construction. Each furnace has a nominal heat input of four (4) MMBtu per hour, exhausting through roof pipes 30, 31 and 32.

Paint Line (Coil Coating Line)

(a) One (1) 2-side, 2-coat coil coating line, permitted in 2002 for construction, using roll coating method, with a nominal capacity of 55,000 pounds per hour of the flat rolled steel, using a 60 MMBtu per hour heat input capacity burner equipped thermal oxidizer to control VOC emissions and exhausting to Stack 78.

(b) Two (2) curing ovens, permitted in 2002 for construction, with a combined nominal heat input capacity of 16 MMBtu per hour using a 60 MMBtu per hour nominal heat input capacity burner equipped thermal oxidizer to control VOC emissions and exhausting to Stack 78.

Slag Handling Operation

The following slag handling operations are owned and operated by Edward C. Levy Company - Butler Mill Service.

(a) One (1) grizzly feeder with a nominal capacity of 300 tons per hour, permitted in 1994 for construction;

(b) One (1) 36" conveyor (#9), with a nominal capacity of 350 tons per hour, permitted in 1994 for construction;

(c) One (1) 30" conveyor (#7), with a nominal capacity of 350 tons per hour, permitted in 1994 for construction;

(d) Two (2) 5' by 12' Screens, each with a nominal capacity of 350 tons per hour, permitted in 1994 for construction;

(e) One (1) 24" conveyor (#6), with a nominal capacity of 100 tons per hour, permitted in 1994 for construction;

(f) One (1) 30" conveyor (#5), with a nominal capacity of 250 tons per hour, permitted in 1994 for construction;

(g) Three (3) 6' by 16' Screens, each with a nominal capacity of 250 tons per hour, permitted in 1994 for construction;

(h) One (1) 48" Conveyor (#1), with a nominal capacity of 75 tons per hour, permitted in 1994 for construction;

(i) One (1) 24" Stacker (#1), with a nominal capacity of 75 tons per hour, permitted in 1994 for construction;

(j) One (1) 24" Stacker (#2), with a nominal capacity of 125 tons per hour, permitted in 1994 for construction;

(k) One (1) 24" Conveyor (#12); with a nominal capacity of 40 tons per hour, permitted in 1994 for construction;

(l) One (1) 24" Stacker (#4), with a nominal capacity of 50 tons per hour, permitted in 1994 for construction;

(m) One (1) 4 ¼ Standard Crusher, with a nominal capacity of 50 tons per hour, permitted in 1994 for construction;

(n) One (1) 30" Conveyor (#8), with a nominal capacity of 25 tons per hour; permitted in 1994 for construction;

(o) Two (2) 30" Conveyors (#10 and #11), with a nominal capacity of 50 tons per hour each, permitted in 2003 for construction;

(p) One (1) jaw crusher, with a nominal capacity of 100 tons per hour, permitted in 2003 for construction, and

(q) Aggregate Storage Piles.

(r) Three (3) slag storage areas, approved in 2013 for construction, identified as Slag Area 1, 2, and 3, each with a nominal throughput of 400 tons per hour.

Fugitive emissions from parts of the slag handling operations are controlled as needed by water sprays.

Fugitive Dust Sources

(a) Paved roads,

(b) Parking areas,

(c) Unpaved roads, and

(d) Traveled open areas.

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

Steel Dynamics, Inc. - Flat Roll Division also includes the following insignificant activities:

1. Specifically regulated insignificant activities, which are specifically regulated as defined in 326 IAC 2-7-1(21): One (1) Temper Mill [326 IAC 6-3-2]

2. Other Insignificant Activities
   (a) Space heaters, process heaters, or boilers using the following fuels:
      (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
      (ii) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
   (b) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equal to or less than five hundred thousand (500,000) British thermal units per hour except where total capacity of equipment operated by one (1) stationary source as defined by subdivision (38) exceeds two million (2,000,000) British thermal units per hour.
   (c) Combustion source flame safety purging on startup.
   (d) Fuel dispensing activities, including the following:
      (i) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment.
      (ii) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less. A petroleum fuel, other than gasoline, dispensing facility

having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(e) The following VOC and HAP storage containers:
  (i) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.
  (ii) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

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

(g) Equipment used exclusively for filling drums, pails, or other packaging containers with the following: Lubricating oils, Waxes and Greases.

(h) Application of: oils; greases; lubricants; and nonvolatile material; as temporary protective coatings.

(i) Machining where an aqueous cutting coolant continuously floods the machining interface.

(j) Closed loop heating and cooling systems.

(k) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(l) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPS.

(m) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner or Operator, that is, an on-site sewage treatment facility.

(n) Any operation using aqueous solutions containing less than or equal to one percent (1%) by weight of VOCs excluding HAPs.

(o) Noncontact cooling tower systems with the following: Forced and induced draft cooling tower system not regulated under a NESHAP.

(p) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(q) Heat exchanger cleaning and repair.

(r) Process vessel degassing and cleaning to prepare for internal repairs.

(s) Covered conveyors for solid raw material, including the following:
  (i) Coal or coke conveying of less than or equal to three hundred sixty (360) tons per day.
  (ii) 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.

(t) Purging of gas lines and vessels that is related to routine 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.

(u) 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.

(v) Blow down for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(w) Activities associated with emergencies, including the following:
  (i) On-site fire training approved by the department.
  (ii) Emergency generators as follows: Gasoline generators not exceeding one hundred ten (110) horsepower and Diesel generators not exceeding one thousand six hundred (1,600) horsepower.
  (iii) Stationary fire pump engines.

(x) A laboratory as defined in 326 IAC 2-7-1(21)(D)

(y) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(z) Cleaners and solvents characterized as follows: Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38°C (100°F).

(aa) Brazing equipment, cutting torches, soldering equipment, and welding equipment related to manufacturing activities not resulting in emissions of HAPs.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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

(a) It is a major source, as defined in 326 IAC 2-7-1(22); and

(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) This permit, T033-8068-00043, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit

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

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

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

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

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

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

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, and 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 requirement 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 the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require a certification that meet 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(13)] [326 IAC 1-6-3]

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

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

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

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMP and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

Except for the construction authorizations in these permits, all terms and conditions applicable to this source contained in the following permits:

Permit Number	Issuance Date
033-3692-00043	October 7, 1994
033-4997-00043	November 16, 1995
033-5625-00043	August 8, 1996
033-8091-00043	June 25, 1997
033-9187-00043	March 24, 1998
033-9752-00043	August 18, 1998
033-9506-00043	September 1, 1998
033-15186-00043	February 11, 2002
033-15836-00043	December 31, 2002
033-16638-00043	January 21, 2003
033-16981-00043	January 21, 2003
033-23028-00043	October 26, 2007
033-24411-00043	December 19, 2007
033-27843-00043	July 10, 2009
033-28134-00043	December 30, 2009
033-28510-00043	February 11, 2011

issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. Except for the construction authorizations of these permits, these prior permits and all of their terms and conditions are hereby superseded.

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) 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 requirements of 326 IAC 2.

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

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

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

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

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

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

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

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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. In the event that the source is a sub-contractor and is combined with a larger Part 70 source, the larger Part 70 source may pay the Permittees' annual fees as part of the larger source billing and subject to the fee cap of the larger source. If, however, the larger Part 70 does not pay its annual Part permit fee, IDEM, OAQ will assess a separate fee in accordance with 326 IAC 2-7-19(c) to be paid by the Permittee. 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 Matter 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 manufacturing 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 except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust Stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 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.

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

C.8 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 61-52 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, no 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 no later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 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.10 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 units(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 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.12 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.13 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.14 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 of 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 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.15 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.8 - 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 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).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6][326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11][326 IAC 2-2]

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit no later than July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(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 purposes 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.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]

(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 (ll)) at an existing emissions unit, other than projects at a Clean Unit, which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee) and/or 326 IAC 2-3-1 (z) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1 (rr) and/or 326 IAC 2-3-1 (mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, document and maintain the following records:
- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
  - (i) Baseline actual emissions;
  - (ii) Projected actual emissions;
  - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1(mm)(2)(A)(iii) and
  - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(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 "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.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

(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 no 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 or the date of initial start-up, whichever is later, 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.17 - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll) at an existing emissions unit and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq)), for that regulated NSR pollutant, and

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

(f) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

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

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

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

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

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.19 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.

Alternative Operating Scenario

C.20 Alternative Operating Scenario

The Permittee may use propane gas as an alternative fuel for natural gas during emergency situations.

SECTION D.1 FACILITY OPERATION CONDITIONS (MELT SHOP)

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

Melt Shop Operations

(a) Electric Arc Furnaces (EAF)

Two (2) twin shell electric arc furnaces (EAF #1 South, permitted in 1994 for construction and EAF #2 North, permitted in 1997 for construction for construction), each with a nominal capacity of 200 tons per hour, using a direct shell evacuation (DSE) system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hoods, DSE air gap for carbon monoxide (CO) emissions control, and low-NO_x/oxyfuel burners (combustion control) for nitrogen oxide (NO_x) emissions control. Particulate emissions from EAF #2 North are controlled by EAF Baghouse 2. All emissions from EAF #2 North exhaust to Stack 92. Particulate emissions from EAF #1 South are controlled by EAF Baghouse 1. All emissions from EAF #1 South exhaust to Stack 01.

(b) Continuous Casters

Two (2) continuous casters (CC #1 South, permitted in 1994 for construction and CC #2 North, permitted in 1997 for construction), each with a nominal capacity of 225 tons per hour. Particulate (PM/PM10) emissions are controlled by canopy hoods over each caster exhausting to the EAF baghouse through Stack 01.

(c) Miscellaneous natural gas combustion sources

(1) One (1) ladle dryout station (LDS), with a nominal heat input of 10 MMBtu per hour**,** permitted in 1994 for construction;
(2) Four (4) ladle preheat stations (LPS), with a nominal heat input of 10 MMBtu per hour each, three (3) permitted in 1994 for construction and one (1) permitted in 1995 for construction;
(3) Three (3) natural gas-fired tundish dryers with nominal heat input capacity of 1.5 MMBtu per hour each one (1) permitted in 1994 and two (2) permitted in 1995 for construction;
(4) Two (2) natural gas-fired tundish ladle preheaters with a nominal heat input capacity of 9.4 MMBtu per hour each, permitted in 1994 for construction; and
(5) Lancing and cutting of skulls, coils and steel scrap.

(d) Storage Silos and Bins

(1) Twelve (12) outside storage silos including the following:
(A) Three (3) EAF dust silos, consisting of:
(i) Bin vent 5a for particulate matter control, permitted in 1994 for construction,
(ii) Bin vent 5b for particulate matter control, permitted in 1997 for construction;
(iii) Bin vent 5c for particulate matter control, permitted in 2007 for construction.
(B) Six (6) Lime/carbon silos with bin vents 22 through 27 for particulate matter control, permitted in 1994 and 1997 for construction, and
(C) Two (2) alloy silos with bin vents 28 and 29 for particulate matter control, permitted in 1994 for construction.
(D) One (1) carbon silo, approved in 2011 for construction, with a nominal throughput of 15 tons per hour, and using bin vent 93 as control.

(2) Enclosed, indoor and/or pneumatic conveying to control fugitive emissions.

(e) Slag pit dig outs associated with each electric arc furnace.

(f) Melt Shop building openings, dust handling system and Melt Shop roof monitors.

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

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

D.1.1 Particulate Matter (PM) Limitations [40 CFR Part 60, Subpart AAa]

Pursuant to 40 CFR 60, Subpart AAa (Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels Constructed After August 17, 1983), filterable particulate matter emissions from the EAF baghouses, due solely to EAF operations, shall not exceed 0.0052 grains per dry standard cubic feet.

D.1.2 Particulate (PM/PM-10) Limitations - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to PSD CP 033-8091-00043, issued June 25, 1997, PSD SSM 033-23028-00043 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements):

(1) The PM/PM10 emissions from EAF #1 South shall be controlled by a direct shell evacuation (DSE) system and canopy hood with 100 percent overall capture exhausted to EAF Baghouse 1 with a minimum 99.85 control efficiency for filterable PM/PM10, discharging through Stack 01. A negative pressure shall be maintained to draw particulate matter through the DSE duct. Baghouse 1 shall be operated at all times when the EAF #1 South is in operation.

(2) The PM/PM10 emissions from EAF #2 North shall be controlled by a direct shall evacuation (DSE) system and canopy hood with 100 percent overall capture and shall exhaust to EAF Baghouse 2 with a minimum 99.85 control efficiency for filterable PM/PM10, which discharges through Stack 92. A negative pressure shall be maintained to draw particulate matter through the DSE duct. Baghouse 2 shall be operated at all times when the EAF #2 North is in operation.

(3) The PM/PM10 emissions from EAF #2 North and EAF #1 South shall not exceed the limits in the following table:

Unit (Control)	**Filterable PM/PM10 Limits**		**Filterable and Condensable PM10 Limits**	
	(gr/dscf)	**(lb/hr)**	**(gr/dscf)**	**(lb/hr)**
EAF #1 South (EAF Baghouse 1)	**0.0018**	**20.1**	**0.0052**	**57.9**
EAF #2 North (EAF Baghouse 2)	**0.0018**	**15.3**	**0.0052**	**44.3**

(b) Pursuant to CP 033-9187-00043, March 24, 1998 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), PM/PM10 emissions from the continuous casters shall be controlled by canopy hoods and exhausted to EAF baghouse 1 and then to Stack 01. Baghouse 1 shall be operated at all times when the continuous casters are in operation.

(c) Pursuant to CP 033-3692-00043, issued October 7, 1994 and 326 IAC 2-2 (PSD Control Technology Review Requirements), the Permittee shall do the following as needed:

(1) Mechanically reduce skulls, coils and steel scrap in size.

(2) Oxygen lancing/cutting of any skulls, coils and steel scrap not mechanically reduced in size shall be conducted inside a building with adequate capture of emissions by a control system and a baghouse to control emissions.

(d) Pursuant to PSD SSM 033-23028-00076 and 326 IAC 2-2-3 (BACT), the filterable PM/PM10 emissions from EAF dust silo 5c shall not exceed 0.01 grains per dry standard cubic foot (gr/dscf).

D.1.3 Nitrogen Oxides (NO_x) Limitations - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the NO_x emissions from the EAFs using low-NOx natural gas fired burners shall not exceed 0.51 pounds per ton of steel produced. The total NOx emissions shall not exceed 204.0 pounds per hour.

(b) Pursuant to A 033-4997-00043, issued November 16, 1995 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the Ladle Dryout Station (LDS) shall be limited to the use of natural gas, shall not exceed 10 MMBtu per hour heat input and NOx emissions shall not exceed 0.10 lbs/MMBtu.

(c) Pursuant to A 033-4997-00043, issued November 16, 1995 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the four (4) Ladle Preheat Stations (LPS) shall be limited solely to the use of low-NOx natural gas-fired burners. The four (4) horizontal preheater stations combined shall not exceed 40 MMBtu per hour heat input and the NOx emissions shall not exceed 0.14 lbs/MMBtu.

(d) Pursuant to CP 033-3692-00043, issued October 7, 1994 and 326 IAC 2-2 (PSD -Control Technology Review; Requirements), the three (3) Tundish dryers shall use low-NOx burners. Each burner shall be limited to 1.5 MMBtu per hour heat input and the NOx emissions shall not exceed 0.10 lbs/MMBtu.

(e) Pursuant to A 033-4997-00043, issued November 16, 1995 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the two (2) Tundish Preheaters shall use low-NOx burners. Each burner shall not exceed 9.4 MMBtu per hour heat input and the NOx emissions shall not exceed 0.10 lbs/MMBtu.

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

(a) Pursuant to CP 033-9187-00043, issued March 24, 1998 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the combined SO_2 emissions from the LMF (Stack 61), EAF #1 South (Stack 01) and EAF #2 North (Stack 92) shall not exceed 0.2 pounds per ton of steel produced and 80 pounds of SO_2 per hour.

(b) Pursuant to CP 033-8091-00043, issued June 24, 1997 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the SO2 emissions from the EAFs shall be controlled by the use of high quality scrap and monitoring the sulfur content of the coke.

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

Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD – Control Technology Review; Requirements), the CO emissions from EAFs shall be controlled by an adjustment gap between the EAF direct shell evacuation system (DSE) and the remaining water cooled duct to common baghouse. The CO emissions from each EAF shall not exceed 2.0 pounds per ton of hot steel produced. The total emissions from EAF #1 South (Stack 1) and EAF #2 North (Stack 92) shall not exceed 800 pounds per hour. A negative pressure shall be maintained at the gap. The direct shell evacuation system, Baghouse 1, and Baghouse 2 shall be operated at all times when the EAFs are in operation.

D.1.6 Volatile Organic Compounds (VOC) Limitations - Best Available Control Technology [326 IAC 2-2][326 IAC 8-1-6]

Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD - Control Technology Review Requirements):

(a) VOC emissions from EAFs shall be controlled through a scrap management program. The Permittee shall implement the SMP, which shall be in writing and available for inspection. The SMP shall provide at a minimum:

(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.

(b) VOC emissions from the EAFs shall be limited to 0.13 pounds of VOC emissions per ton of steel produced. The total VOC emissions from EAF #1 South (Stack 1) and EAF #2 North (Stack 92) shall not exceed 52.0 pounds per hour.

D.1.7 Lead Limitations - Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD Control Technology Review Requirements), the total lead emissions from EAF Baghouse 1 (Stack 1) and EAF Baghouse 2 (Stack 92) shall not exceed 0.19 pounds per hour.

D.1.8 Mercury Limitations [326 IAC 2-2]

Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD Control Technology Review Requirements), the total mercury emissions from EAF Baghouse 1 and EAF Baghouse 2 shall not exceed 0.022 pounds per hour. Compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.9 Visible Emission Limitations - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), visible emissions from the EAF Baghouse 1 and EAF Baghouse 2 stack exhausts (Stack 1 and Stack 92, respectively) shall not exceed three percent (3%) opacity, based on a six (6) minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9). This condition will satisfy the NSPS 40 CFR Part 60 Subpart AAa, 40 CFR 60.272a.

(b) Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the fugitive emissions generated by the EAFs shall not exceed three percent (3%) opacity from any building opening as determined by a six (6) minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9). Three percent (3%) opacity is reflective of 100 percent capture.

(c) Pursuant to CP 033-3692-00043, issued October 7, 1994 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the EAF slag pit dig out operation located beneath each furnace shall not exceed five (5%) percent opacity. Each EAF slag pit dig out operation shall be controlled with the use of its associated EAF's baghouse.

(d) Pursuant to CP 033-3692-00043, issued October 7, 1994 and 326 IAC 2-2 (PSD -Control Technology Review Requirements), visible emissions from the building opening and EAF dust handling system shall not exceed three percent (3%) opacity based on a six-minute average(24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(e) Pursuant to A 033-4997-00043, issued November 16, 1995 and 326 IAC 2-2 (PSD - Control Technology Review Requirements), the carbon and flux additive system conveyors and transfer points shall be enclosed and vented indoors.

(f) Pursuant to PSD SSM 033-23028-00076 and 326 IAC 2-2-3 (BACT), visible emissions of the exhaust from EAF dust silo 5c shall not exceed three percent (3%) opacity, based on a six (6) minute average (24 readings taken in accordance with EPA Method 9, Appendix A).

D.1.10 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

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

D.1.11 Visible Emissions Limitations (NSPS) [40 CFR Part 60.272(a)]

(a) Pursuant to 40 CFR 60.272(a)(2), the visible emissions from the EAF Baghouse 1 and EAF Baghouse 2 stack exhausts (Stack 1 and Stack 92, respectively) shall not exceed three percent (3%) opacity, based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(b) Pursuant to 40 CFR 60.272(a)(3), the visible emissions from the melt shop due solely to the operations of the electric arc furnace shall not exceed six percent (6%) opacity, based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(c) Pursuant to 40 CFR 60.272(b), the visible emissions from the EAF dust handling system shall not exceed ten percent (10%) opacity, based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

D.1.12 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the carbon silo shall not exceed 25.16 pounds per hour from bin vent 93 when operating at a process weight rate of 15 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.1.13 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the EAFs, continuous casters (#1 and #2), EAF dust silo 5c and associated control devices. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

Compliance Determination Requirements

D.1.14 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11][40 CFR 60, Subpart AAa]

(a) In order to demonstrate compliance with Condition D.1.2(a) - Particulate (PM/PM10) Limitations - Best Available Control Technology, the Permittee shall perform PM/PM10 testing on the EAF #1 South and EAF #2 North (Stack 01 and Stack 92) utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration

(b) In order to demonstrate compliance with Conditions D.1.3(a) - Nitrogen Oxides (NO_x) Limitations - Best Available Control Technology, the Permittee shall perform NOx testing on EAF #1 South and EAF #2 North (Stack 01 and Stack 92), utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(c) In order to demonstrate compliance with Conditions D.1.4(a) - Sulfur Dioxide (SO_2) Limitations - Best Available Control Technology, the Permittee shall perform simultaneous, SO2 testing on EAF #1 South, EAF #2 North and the LMF (Stack 01, Stack 92 and LMF Stack 61), utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(d) In order to demonstrate compliance with Conditions D.1.5 - Carbon Monoxide (CO) Limitations - Best Available Control Technology, the Permittee shall perform CO testing on EAF #1 South and EAF #2 North (Stack 01 and Stack 92) utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(e) In order to demonstrate compliance with Condition~~s~~ D.1.6(b) - Volatile Organic Compounds (VOC) Limitations - Best Available Control Technology, the Permittee shall perform VOC testing on EAF #1 South and EAF #2 North (Stack 01 and Stack 92) utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(f) In order to demonstrate compliance with Conditions D.1.7 - Lead Limitations - Best Available Control Technology and D.1.8 - Mercury Limitations, the Permittee shall perform lead and mercury testing on EAF #1 South (Stack 01) and EAF #2 North (Stack 92) utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(g) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Condition C.8 - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.15 Particulate Control

(a) Bin vent filter 5c shall control emissions from EAF dust silo 5c at all times necessary to meet the requirements of Condition D.1.2(d) – Particulate (PM/PM-10) Limitations – Best Available Control Technology.

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

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

D.1.16 Visible Emission Notations

(a) Pursuant to CP 033-8091-00043, issued June 25, 1997, and PSD SSM 033-23028-00043, visible emission notations of the melt shop building openings, dust handling system, melt shop roof monitors and bin vent filter 5c shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, at least eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Condition C.14- Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition.

D.1.17 New Source Performance Standards – Emission Monitoring [40 CFR 60.273a]

Pursuant to 326 IAC 12 and 40 CFR 60.273a:

(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]

D.1.18 New Source Performance Standards – Monitoring of Operations [40 CFR 60.274a]

Pursuant to 326 IAC 12 and 40 CFR 60.274a:

(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]

Record Keeping and Reporting Requirements

D.1.19 Record Keeping Requirements

(a) To document the compliance status with the Conditions D.1.3 - Nitrogen Oxides (NO_x) Limitations - Best Available Control Technology, D.1.4 - Sulfur Dioxide (SO_2) Limitations - Best Available Control Technology, D.1.5 - Carbon Monoxide (CO) Limitations - Best Available Control Technology, and D.1.6(b) - Volatile Organic Compounds (VOC) Limitations - Best Available Control Technology, the Permittee shall record the metal throughput for the EAF operations.

(b) To document compliance with Conditions D.1.9 - Visible Emission Limitations - Best Available Control Technology and D.1.16 - Visible Emissions Notations, the Permittee shall maintain records of visible emission notations required by Condition D.1.16 - Visible Emissions Notations. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) Condition C.17 - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.1.20 Record Keeping and Reporting Requirements [40 CFR 60.276a]

Pursuant to 326 IAC 12 and 40 CFR 60.276a:

(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]

D.1.21 Reporting Requirements [40 CFR 60.276a][326 IAC 3-5-7]

(a) If the Permittee elects to operate a COMs under Condition D.1.17 - New Source Performance Standards - Emission Monitoring, then the Permittee shall submit to IDEM, OAQ a quarterly excess emissions report, if applicable, based on the continuous opacity monitor (COM) data, pursuant to 326 IAC 3-5-7. These reports shall be submitted no later than thirty (30) calendar days following the end of each calendar quarter being reported. Condition C.18 - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition.

(b) The reports submitted by the Permittee 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).

D.1.22 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 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 facilities as specified in Table 1 of 40 CFR 63, Subpart YYYYY in accordance with schedule in 40 CFR 63 Subpart YYYYY.

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

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

D.1.23 National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities [40 CFR Part 63, Subpart YYYYY]

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

(1) 40 CFR 63.10680(a), (b)(1), (c) and (d)
(2) 40 CFR 63.10681(a)
(3) 40 CFR 63.10685(a), (b)(1), (b)(2)(i)(iv), (c)(1), and (c)(2)
(4) 40 CFR 63.10686(a), (b), (d)(1) – (d)(4), (d)(6), (e)
(5) 40 CFR 63.10692
(6) Table 1 to 40 CFR 63, Subpart YYYYY

SECTION D.2 FACILITY OPERATION CONDITIONS (LADLE METALLURGICAL)

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

Ladle Metallurgical Stations

Two (2) Ladle Metallurgical Stations (LMS) (South permitted in 1994 for construction and North permitted in 1998 for construction), each with a nominal capacity of 200 tons per hour. Particulate (PM/PM10) emissions are controlled by the Ladle Metallurgical Furnaces (LMF) baghouse (permitted in 1998 for construction, with a nominal air flow rate of 200,000 standard cubic feet per minute) exhausting through Stack 61. The LMS consists of the following:

(a) Three (3) Ladle Metallurgical furnaces (LMF), and

(b) Two (2) stir stations,

(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 Particulate (PM/PM-10) Limitations - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP 033-9187-00043, issued March 24, 1998 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), PM/PM-10 emissions from the ladle metallurgical stations (LMS) and stir stations shall be captured by a side draft hood and exhausted to the LMF baghouse to Stack 61.

(b) Pursuant to CP 033-9187-00043, March 24, 1998 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), PM/PM-10 filterable emissions from the LMF Stack 61 shall not exceed 0.0032 grains per dry standard cubic foot and 5.49 pounds per hour.

D.2.2 Nitrogen Oxides (NO_x) Limitations- Best Available Control Technology [326 IAC 2-2]

Pursuant to CP 033-9187-00043 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), the NOx emissions from the LMF Stack 61 shall not exceed 0.025 pounds per ton and 10 pounds of NOx emissions per hour.

D.2.3 Carbon Monoxide (CO) Limitations- Best Available Control Technology [326 IAC 2-2]

Pursuant to CP 033-9187-00043, issued March 24, 1998 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), CO emissions from LMF Stack 61 shall not exceed 0.1 pounds per ton of steel produced and 40 pounds of CO per hour.

D.2.4 VOC Minor Limitations [326 IAC 2-2]

Pursuant to CP 033-9187-00043, issued March 24, 1998, and Significant Permit Modification No. 033-28134-00043, VOC emissions from the LMF Stack 61 shall not exceed 0.0082 pounds per ton and 3.28 pounds of VOC per hour.

Compliance with these emission limits will ensure that the VOC emissions from CP 033-9187-00043 are less than forty (40) tons per year and therefore will render the requirements of 326 IAC 2-2 not applicable to CP 033-9187-00043 for VOC.

D.2.5 Visible Emission Limitations - Best Available Control Technology [326 IAC 2-2]

Pursuant to CP 033-9187-00043, issued March 24, 1998 and 326 IAC 2-2 (PSD - Control Technology Review; Requirements), visible emissions from the LMF baghouse Stack 61 shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

D.2.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the LMF and the associated control devices. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

Compliance Determination Requirements

D.2.7 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.2.1- Particulate (PM/PM-10) Limitations – Best Available Control Technology, the Permittee shall perform PM/PM10 testing on the LMF Stack 61 utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(b) In order to demonstrate compliance with Condition D.2.2 - Nitrogen Oxide (NOx) Limitations - Best Available Control Technology, the Permittee shall perform NOx testing on the LMF Stack 61 utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(c) In order to demonstrate compliance with Conditions D.2.4 - Carbon Monoxide (CO) Limitations - Best Available Control Technology, the Permittee shall perform CO testing on the LMF Stack 61 utilizing methods as approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(d) Not later than twelve (12) months after issuance of Significant Permit Modification No. 033-28134-00043 and in order to demonstrate compliance with Condition D.2.4 – VOC Minor Limitations, the Permittee shall perform VOC testing on the LMF Stack 61, utilizing testing methods approved by the Commissioner at least once every two and one-half (2.5) years from the date of the most recent valid compliance demonstration.

(e) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Condition C.8 - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.2.8 Particulate Control [326 IAC 2-7-6(6)]

(a) The LMF baghouse shall be operated at all times when the LMSs and stir stations are in operation.

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

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

D.2.9 Visible Emission Notations

(a) Pursuant to CP 033-9187-00043, issued March 24, 1998, visible emission notations of the LMF Baghouse Stack 61 exhaust, shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, at least eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Condition C.14- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.2.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the LMF at least once per day when the LMF is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 10.0 inches of water or a range established during the latest Stack test, the Permittee shall take reasonable response steps. Condition C.14- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Condition C.11 - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

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

D.2.11 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.9 **-** Visible Emission Notations, the Permittee shall maintain records of visible emission notations of the LMF Stack 61 exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.2.10 **-** Parametric Monitoring, the Permittee shall maintain records of the pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(c) Condition C.17 - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.3 FACILITY OPERATION CONDITIONS

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

Hot Mill Operations – Tunnel Furnaces

(a) One (1) tunnel furnace, No. 1 South, permitted in 1994 for construction, using low NOx burners, with a nominal heat input capacity of 117.9 MMBtu per hour (nominal 92 MMBtu per hour in the heating zone and nominal 25.9 MMBtu per hour in the holding zone), exhausting through Stack 2.

(b) One (1) tunnel furnace, No. 2 North, permitted in 1997 for construction, using low NOx burners with a nominal heat input capacity of 92 MMBtu per hour in the heating zone, exhausting through Stack 42.

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

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

D.3.1 Nitrogen Oxides (NOx) Limitations - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP 033-3692-00043, issued October 7, 1994 and 326 IAC 2-2 (PSD- Control Technology Review; Requirements), Tunnel Furnace No. 1 shall be equipped with low NOx natural gas fired burners -and NOx emissions shall not exceed 0.17 pounds per MMBtu. The total emissions per hour shall not exceed 20.0 pounds per hour through Stack 2.

(b) Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD- Control Technology Review; Requirements), Tunnel Furnace No. 2 heating zone shall be equipped with low NOx natural gas fired burners and NOx emissions shall not exceed 0.10 pounds per MMBtu. The total emissions per hour shall not exceed 9.2 pounds per hour through Stack 42.

D.3.2 Visible Emissions Limitations - Best Available Control Technology [326 IAC 2-2]

(a) Pursuant to CP 033-3692-00043, issued October 7,1994 and 326 IAC 2-2 (PSD- Control Technology Review; Requirements), visible emissions from Tunnel furnace No. 1 (Stack 2), shall not exceed five percent (5%). The opacity shall be determined by 40 CFR 60, Appendix A, Method 9.

(b) Pursuant to CP 033-8091-00043, issued June 25, 1997 and 326 IAC 2-2 (PSD- Control Technology Review; Requirements), visible emissions from Tunnel Furnace No. 2 (Stack 42), shall not exceed three percent (3%) opacity based on a six (6) minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9.).

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the Tunnel Furnace No. 1 and Tunnel Furnace No.2 natural gas fired burners. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

SECTION D.4 FACILITY OPERATION CONDITIONS (PICKLE LINE)

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

Cold Mill Operations - Pickling Line

One (1) pickling line, with a nominal capacity of 1.4 million ton per year, permitted in 1996 for construction, with a packed scrubber and covered tanks maintained under negative pressure, for Hydrochloric Acid (HCl) control, and a mist eliminator for PM/PM-10 control, exhausting to Stack 17.

(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 Particulate Matter Emissions Limitations - Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the pickle line particulate matter emissions shall be controlled by a scrubber and the filterable particulate matter emissions from Stack 17 shall not exceed 1.23 pounds per hour. The scrubber shall be operated at all times when the pickle line is in operation.

D.4.2 Hydrochloric Acid (HCl) Pickling HAP Minor Emission Limitation [40 CFR 63, Subpart CCC]

Pursuant to CP 033-5625-00043, issued August 8, 1996, the hydrochloric acid mist from the pickle line shall be controlled by a scrubber and mist eliminator. Emissions shall not exceed 0.32 pounds per hour. The scrubber and mist eliminator shall be operated at all times when the pickle line is in operation.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the pickle line, scrubber and mist eliminator. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

Compliance Determination Requirements

D.4.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to comply with condition D.4.2 - Hydrochloric Acid (HCL) Pickling HAP Minor Emission Limitation, the Permittee shall perform a hydrochloric acid test on the pickle line Stack 17, utilizing methods as approved by the Commissioner at least once five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Condition C.8 - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.4.5 Parametric Monitoring

(a) The Permittee shall record the flow rate of the packed scrubber used in conjunction with the Pickling Line, at least once per day when the Pickling Line is in operation. When for any one reading, the flow rate of the scrubber is below a minimum of six (6) gallons per minute (gpm) or a minimum flow rate established during the latest Stack test, the Permittee shall take reasonable response steps. Condition C.14- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable steps required by this condition. A flow rate that is below the above mentioned minimum is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The instrument used for determining the flow rate shall comply with Condition C.11 - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

D.4.6 Scrubber Failure Detection

In the event, a scrubber failure has been observed:

(a) For a scrubber controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Condition B.11 - Emergency Provisions).

(b) For a scrubber controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Condition B.11 - Emergency Provisions).

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

D.4.7 Record Keeping Requirements

(a) To document compliance with Condition D.4.5 **-** Parametric Monitoring, the Permittee shall maintain records of the once per day pickle line scrubber flow rate during normal operation. The Permittee shall include in its daily record when a flow rate reading is not taken and the reason for the lack of a flow rate reading (e.g. the process did not operate that day).

(b) Condition C.17 - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.5 FACILITY OPERATION CONDITIONS (PICKLE LINE BOILERS)

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

Pickle Line Scale Breaker

One (1) scale breaker, permitted in 1996 for construction, with a nominal capacity of 1.4 million tons per year that removes scale from the rolled steel prior to the pickling process. Particulate (PM/PM10) emissions are controlled by a baghouse with a nominal air flow rate of 10,600 acfm and exhausting to Stack 60.

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

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

D.5.1 Particulate Matter Emissions - Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to 326 IAC 2-2 BACT, the pickle line scale breaker particulate matter PM/PM10 emissions shall be controlled by a baghouse with an outlet grain loading of 0.003 gr/dscf and PM/PM10 emissions shall not exceed 1.19 lb/hr.

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

A Preventive Maintenance Plan is required for the scale breaker and baghouse. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

Compliance Determination Requirements

D.5.3 Particulate Control

The scale breaker baghouse shall be in operation at all times the scale breaker is in operation.

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

D.5.4 Visible Emission Notations

(a) Visible emission notations of the pickle line scale breaker Stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, at least eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Condition C.14- Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition.

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

D.5.5 Record Keeping Requirements

(a) To document compliance with Condition D.5.4 **-** Visible Emission Notations, the Permittee shall maintain records of the once per day visible emission notations. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g. the process did not operate that day).

(b) Condition C.17 - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.6 FACILITY OPERATION CONDITIONS (PICKLE LINE BOILERS)

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

Pickle Line Boilers

Three (3) natural gas fired boilers Nos. 1, 2 and 3, two (2) permitted in 1996 for construction and one (1) permitted in 2006, equipped with low NOx burners, exhausting to Stacks 15, 16a and 16b. The nominal heat input for each boiler is 20.4 MMBtu per hour. Only two (2) boilers will be utilized at any given time.

(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.6.0 Particulate Emission Limitations [326 AC 6-2-4] and Nitrogen Oxides (NOx) Limitations – Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) and 326 IAC 2-2 (BACT), only two of the three boilers Nos. 1, 2 and 3, shall be utilized at any time.

D.6.1 Particulate Emission Limitations [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the particulate emissions shall not exceed 0.42 pound per MMBtu heat input from the pickle line boilers with a combined heat input of 40.8 MMBtu per hour.

D.6.2 Nitrogen Oxides (NOx) Limitations - Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the NOx emissions from the pickle line boilers shall not exceed 81 pounds per million cubic feet (MMCF) of gas burned.

D.6.3 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

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

D.6.4 Particulate (PM/PM-10) and Sulfur Dioxide (SO_2) Limitations (NSPS) [40 CFR 60, Subpart Dc] [326 IAC 12-1]

Pursuant to CP 033-5625-00043, issued August 8, 1996, 40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial Boilers Commercial-Institutional Steam Generating Boilers) and 326 IAC 12-1, the pickle line boilers shall burn natural gas only in order to minimize particulate and sulfur dioxide emissions.

D.6.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the pickle line boilers. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

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

D.6.6 Record Keeping Requirements

(a) To document compliance with Condition D.6.4 **-** Particulate (PM/PM-10) and Sulfur Dioxide (SO_2) Limitations (NSPS), the Permittee shall maintain records of the natural gas usage for the boilers.

(b) To document compliance with Condition D.6.2 - Nitrogen Oxide (NOx) Limitations - Best Available Control Technology, the Permittee shall maintain records of when Boiler No. 3 is used as a backup for Boiler No. 1 or Boiler No. 2.

(c) Condition C.17 - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.7 FACILITY OPERATION CONDITIONS (REVERSING MILL)

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

Reversing Mill

One (1) cold reversing mill, with a nominal capacity of one (1.0) million tons per year, permitted in 1996 for construction, with a mist eliminator for particulate (PM/PM10) emissions control, exhausting to Stack 18.

(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 Particulate Matter Emissions - Best Available Control Technology (BACT) [326 IAC 2-2

Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the filterable particulate matter emissions from the cold reversing mill shall be controlled by a mist eliminator. Particulate matter emissions from Stack 18 shall not exceed 7.2 pounds per hour.

Compliance Determination Requirements

D.7.2 Particulate Control

The reversing mill mist eliminator shall be in operation at all times the reversing mill is in operation.

SECTION D.8 FACILITY OPERATION CONDITIONS (GALVANIZING LINE)

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

Galvanizing Lines

(a) One (1) hot band galvanizing line with a nominal capacity of 400,000 tons of steel per year, permitted in 1996 for construction, heated by a low NOx burner natural gas fired heater with a nominal heat input of 45 MMBtu per hour, exhausting through Stack 19.

(b) Twenty-four (24), natural gas fired radiant tube heaters associated with the galvanizing line, permitted in 2002 for construction. Each heater has a nominal heat input of 0.3 MMBtu per hour, exhausting inside the building.

(c) One (1) cold rolled galvanizing line with a nominal capacity of 300,000 tons of steel per year, permitted in 1996 for construction, heated by a low NOx burner natural gas fired heater with a nominal heat input of 55 MMBtu per hour, exhausting to Stack 19.

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

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

D.8.1 Particulate Matter Emissions - Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the hot band and cold roll galvanizing lines heaters shall burn natural gas only.

D.8.2 Nitrogen Oxides (NOx) - Best Available Control Technology (BACT) [326 IAC 2-2]

(a) Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the NOx emissions from the hot band galvanizing line heater shall not exceed 200 pounds per MMCF of natural gas burned.

(b) Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the hot band galvanizing line heater shall use low-NOx burners.

(c) Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the NOx emissions from the cold roll galvanizing line heater shall not exceed 200 pounds per MMCF of natural gas burned.

(d) Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the cold roll galvanizing line heater shall use low-NOx burners.

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the hot band line and cold roll line heaters and low NOx burners. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

SECTION D.9 FACILITY OPERATION CONDITIONS (ANNEALING)

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

Annealing Furnaces

Sixteen (16) low NOx burners, natural gas fired annealing furnaces and forty (40) annealing bases, permitted in 1996 for construction. Each furnace has a nominal heat input of four (4) MMBtu per hour, exhausting through roof pipes 30, 31 and 32.

(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 Particulate Matter Emissions - Best Available Control Technology (BACT) [326 IAC 2-2]

Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the annealing furnaces shall burn natural gas only.

D.9.2 Nitrogen Oxides (NOx) - Best Available Control Technology (BACT) [326 IAC 2-2]

(a) Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the NOx emissions from the annealing furnaces shall not exceed 200 pounds per MMCF of natural gas burned.

(b) Pursuant to CP 033-5625-00043, issued August 8, 1996 and 326 IAC 2-2 (BACT), the annealing furnaces shall be low-NOx burners.

D.9.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the annealing furnaces and low NOx burners. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

SECTION D.10 FACILITY OPERATION CONDITIONS (PAINT LINE)

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

Paint Line (Coil Coating Line)

(a) One (1) 2-side, 2-coat coil coating line, permitted in 2002 for construction, using roll coating method, with a nominal capacity of 55,000 pounds per hour of the flat rolled steel, using a 60 MMBtu per hour heat input capacity burner equipped thermal oxidizer to control VOC emissions and exhausting to Stack 78.

(b) Two (2) curing ovens, permitted in 2002 for construction, with a combined nominal heat input capacity of 16 MMBtu per hour using a 60 MMBtu per hour nominal heat input capacity burner equipped thermal oxidizer to control VOC emissions and exhausting to Stack 78.

(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 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit [326 IAC 2-2][40 CFR Subpart SSSS]

Pursuant to SSM 033-15836-00043, issued December 31, 2002 and 326 IAC 2-2 (Prevention of Significant Deterioration) to maintain the minor status for this modification, the VOC emissions shall be limited as follows:

(a) For the 2-side, 2-coat, coil-coating line the input of VOC shall be limited to less than 3894 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month. This VOC usage limitation in conjunction with the operation of thermal oxidizer at 99% overall control efficiency limits VOC emissions from the coil coating line to less than 38.94 tons per twelve (12) consecutive month period.

(b) The combined heat input rate for the two curing ovens shall not exceed 16 million Btu per hour and that for the thermal oxidizer shall not exceed 60 million Btu per hour. This limits the VOC emissions from the curing ovens to less than 0.02 tons per twelve (12) consecutive month period.

(c) The items (a) and (b) combined, limits the VOC emissions from the 2-side, 2-coat coil coating line modification to less than 40 tons per 12 consecutive months period, with compliance demonstrated at the end of each month. This limit pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration) makes this modification minor under this rule.

(d) Pursuant to PSD SSM 033-23028-00043, issued October 26, 2007:

(1) The single HAP emissions from the coil coating line shall be limited to less than 10 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

(2) The combined HAP emissions from the coil coating line shall be limited to less than 14.6 tons per twelve (12) consecutive month period, with compliance demonstrated at the end of each month.

(3) The thermal oxidizer for the coil coating line shall be in operation whenever the coating line is in operation.

Compliance with these limits and requirements, in conjunction with HAP limits on SDI - IDD's rotary hearth furnace and SDI - Flat Roll Division's pickle line, limits the source-wide PTE of a single HAP and a combination of HAPs to less than ten (10) and twenty-five (25) tons per twelve (12) consecutive month period, respectively, and renders the requirements of 40 CFR Part 63, Subpart SSSS not applicable.

D.10.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-4]

(a) Pursuant to SSM 033-15836-00043, issued December 21, 2002 and 326 IAC 8-2-4 (Coil Coating Operations), the volatile organic compound (VOC) discharge to the atmosphere shall be limited to 2.6 pounds VOC per gallon of coating less water delivered to the coating applicator from prime and topcoat or single coat operations.

(b) Pursuant to 326 IAC 8-1-2 (b), the coil coating line VOC emissions shall be limited to no greater than the equivalent emissions, 4.02 pounds of VOC per gallon of coating solids, allowed in (a).

The equivalency emissions are determined by the following equation:

$$E = L / (1 - (L/D))$$

Where:

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating.
D = Density of VOC in coating in pounds per gallon of VOC.
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

Actual solvent density shall be used to determine compliance of the coil coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(c) Pursuant to 326 IAC 8-1-2(c) the overall control efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency of 46.04% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
O = Equivalent overall efficiency of the capture system and control device as a percentage.

D.10.3 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60, Subpart TT.

D.10.4 Metal Coil Surface Coating NSPS [326 IAC 12-1-1] [40 CFR 60, Subpart TT]

This facility is subject to 40 CFR 60, Subpart TT, which is incorporated by reference in 326 IAC 12-1-1. Permittee shall not cause to be discharged into the atmosphere more than:

(a) 1.17 pounds of VOC per gallon of coating solids applied for each calendar month for 2-side, 2-coat, coating line that continuously uses a thermal oxidizer operated at the most recently demonstrated overall efficiency.

-or-

(b) 10 percent of the VOCs applied for each calendar month (90 percent emission reduction) for each affected facility that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency.

D.10.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the coil coating operation and associated control device. Condition B.10 - Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

Compliance Determination Requirements

D.10.6 Permanent Total Enclosure

In order to maintain the minor status for the 2-side, 2-coat, coil coating line, the Permittee shall use a permanent total enclosure:

(a) The capture system for the 2-side, 2-coat, coil coating line shall meet the criteria for a Permanent Total Enclosure as described in 40 CFR 51, Method 204.

-or-

(b) Verify 100% capture through other methods as approved by the Commissioner.

D.10.7 Thermal Oxidizer

The thermal oxidizer shall operate with a control efficiency of not less than 99% at all times that the 2-side, 2-coat, coil coating line is in operation. This efficiency is necessary to ensure compliance with conditions D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit, D.10.2 - Volatile Organic Compounds (VOC), and D.10.4 - Metal Coil Surface Coating NSPS.

D.10.8 Testing Requirements [326 IAC 12, 40 CFR 60.463]

(a) The Permittee shall conduct a performance test for each calendar month for each affected facility according to the procedures under condition D.10.8(c), (d), (e), and (f).

(b) 40 CFR 60.8(d) and (f) do not apply to the performance test.

(c) The Permittee shall determine the overall reduction efficiency (R) for the capture system and the control device to determine compliance with condition D.10.4(b).

The Permittee may use the most recently determined overall reduction efficiency (R) for the performance test, providing control device and capture system operating conditions have not changed. The procedure in paragraphs (c) (1), (2), and (3) of this section, shall be repeated when directed by the Administrator, IDEM, OAQ or when the Permittee elects to operate the control device or capture system at conditions different from the initial performance test.

(1) Determine the fraction (F) of total VOC's emitted by an affected facility that enters the control device using the following equation:

$$F = \frac{\sum_{i=1}^{l} C_{bi} Q_{bi}}{\sum_{i=1}^{l} C_{bi} Q_{bi} + \sum_{i=1}^{p} C_{fi} Q_{fi}}$$

Where:

C_b = the VOC concentration in each gas stream entering the control device (parts per million by volume, as carbon).
Q_b = the volumetric flow rate of each gas stream entering the control device (dry standard cubic meters per hour).
C_{fi} = the VOC concentration in each gas stream emitted directly to the atmosphere (parts per million by volume, as carbon).
Q_{fi} = the volumetric flow rate of each gas stream emitted directly
l = the number of gas streams entering the control device, and
p = the number of gas streams emitted directly to the atmosphere.

(2) Determine the destruction efficiency of the control device (E) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{i=1}^{n} C_{bi} Q_{bi} - \sum_{i=1}^{m} C_a Q_a}{\sum_{i=1}^{n} C_{bi} Q_{bi}}$$

Where:

C_a = the VOC concentration in each gas stream leaving the control device and entering the atmosphere (parts per million by volume, as carbon).
Q_a = the volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour).
n = the number of gas streams entering the control device, and
m = the number of gas streams leaving the control device and entering the atmosphere.

The Permittee shall construct the VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in § 60.466.

(3) Determine overall reduction efficiency (R) using the following equation:

$$R = EF$$

If the overall reduction efficiency (R) is equal to or greater than 0.90, the affected facility is in compliance and no further computations are necessary. If the overall reduction efficiency (R) is less than 0.90, the average total VOC emissions to the atmosphere per unit volume of coating solids applied (N) shall be computed as specified in sections (d) and (e) below.

(d) Calculate the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility as follows:

(1) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied (G) during each calendar month for each affected facility, except as provided under paragraph (c)(1)(iv) of 40 CFR 60.463 as follows:

(A) Calculate the mass of VOC's used (Mo+Md) during each calendar month for each affected facility by the following equation:

$$M_o + M_d = \sum_{i=1}^{n} L_{ci} D_{ci} W_{oi} + \sum_{j=1}^{m} L_{dj} D_{dj}$$

Where:

M_o = Mass of VOC's in coatings consumed, as received in kilogram (kg)
M_d = Mass of VOC-solvent added to the coatings, in kg
L_c = the volume of each coating consumed, as received in liters
L_d = the volume of each VOC-solvent added to the coatings in liters (l)
W_o = the proportion of VOC's in each coating, as received (fraction by weight)
D_d = density of each VOC-solvent added to the coatings (kg/l)
$\sum L_{dj} D_{dj}$ = will be 0 if no VOC solvent is added to the coatings, as received
n = the number of different coatings used during calendar month, and
m = the number of different VOC solvents added to coatings used during the calendar month.

(A) Calculate the total volume of coating solids used (Ls) in each calendar month for each affected facility by the following equation:

$$L_s = \sum_{i=1}^{n} V_{si} L_{ci}$$

Where

V_s = the proportion of solids in each coating, as received (fraction by volume).
L_c = the volume of each coating consumed, as received in liters
L_s = total volume of solids used in a calendar month
n = the number of different coatings used during the calendar month.

(e) Calculate the volume-weighted average mass of VOC's used per unit volume of coating solids applied (G) during the calendar month for each affected facility by the following equation:

$$G = \frac{M_o + M_d}{L_s}$$

(f) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month by the following equation:

$$N = G\,(1-R)$$

(g) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/l of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

D.10.9 Testing Requirements [326 IAC 3-6] [326 IAC 2-7-6(1), (6)]

(a) In order to demonstrate compliance with Conditions D.10.1- Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit and D.10.2 - Volatile Organic Compounds (VOC), the Permittee shall perform VOC emissions and thermal oxidizer control efficiency testing utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) The Permittee shall determine the hourly average temperature and duct pressure or fan amperage for the thermal oxidizer from the most recent valid stack test that demonstrates compliance with the limits in conditions D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit and D.10.2 - Volatile Organic Compounds (VOC) as approved by IDEM.

(c) In order to demonstrate compliance with Condition D.10.1(d) **-** Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit, within 180 days of the end of the month in which it is determined that VOC emissions equal or exceed nine (9) tons for any twelve (12) consecutive month period, the Permittee shall perform inlet and outlet HAP testing on the thermal oxidizer controlling emissions from the coil coating line (Step #1). Testing shall be done utilizing Method 18 or other methods approved by the Commissioner, for the HAP used at the source that has the lowest destruction efficiency, as estimated by the manufacturer and approved by IDEM or using an estimation method approved by IDEM. If the VOC emissions equal or exceed nine (9) tons for any twelve (12) consecutive month period more than once in a period of 4.5 years, then a subsequent test shall be conducted within 5 years from the date of the last valid compliance demonstration (Step #2). If within 4.5 years after the second valid compliance demonstration the VOC emissions do not equal or exceed nine (9) tons for any twelve (12) consecutive month period, then the Permittee is not required to repeat inlet and outlet HAP testing until the VOC emissions equal or exceed nine (9) tons for any twelve (12) consecutive month period at which time the Permittee shall repeat Step #1. If within 4.5 years after the second valid compliance demonstration the VOC emissions equal or exceed nine (9) tons for any twelve (12) consecutive month period, then the Permittee shall repeat Step #2.

(d) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Condition C.8 - Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

D.10.10 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP)

Pursuant to SSM 033-15836-00043, issued December 1, 2002, and PSD SSM 033-23028-00043:

(a) Compliance with Condition D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit shall be demonstrated at the end of each month. This shall be based on the total volatile organic compound emitted for the previous month, and adding it to previous 11 months total VOC emitted so as to arrive at the VOC emission rate for 12 consecutive months period. The VOC emissions for a month can be arrived at using the following equation for VOC usage:

VOC emitted = [(VOC input) x (100 – Overall control efficiency of thermal oxidizer)] + [uncontrolled VOC]

Where VOC input is based on the formulation data supplied by the coating manufacturer. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(b) If VOC emissions from the 2-side, 2-coat coil line exceed nine (9) tons for any twelve consecutive month period, or the Permittee chooses to demonstrate compliance with Condition D.10.1(d) **-** Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit using the HAP control efficiency, the Permittee shall determine the single and combination HAP emissions for each month using the following methodology:

HAP emitted = [(HAP input) x (100 - Overall control efficiency of thermal oxidizer)] + [uncontrolled HAP]

Where:

HAP input is based on the formulation data supplied by the coating manufacturer.

Until the initial Method 18 stack test is performed, an overall control efficiency of 99% shall be used in the equation above.

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

D.10.11 Thermal Oxidizer [326 IAC 12, 40 CFR 60.464]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer to continuously record the combustion temperature of any effluent gases incinerated to achieve compliance with D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit, D.10.2 - Volatile Organic Compounds (VOC) and D.10.4 - Metal Coil Surface Coating NSPS. This system shall have an accuracy of ±2.5^{o}C or ±0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater.

(b) The Permittee shall record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in the thermal oxidizer used to control VOC emissions from an affected facility remains more than 28°C (50°F) below the temperature at which compliance with limit in D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit, D.10.2 - Volatile Organic Compounds (VOC) and D.10.4 - Metal Coil Surface Coating NSPS was demonstrated during the most recent measurement of thermal oxidizer efficiency required by D.10.7 - Thermal Oxidizer - Prevention of Significant Deterioration (PSD) and D.10.8 - Testing Requirements.

(c) The records required by 40 CFR 60.7 shall identify each such occurrence and its duration.

(d) The Permittee shall observe the duct pressure or fan amperage at least once per day when the thermal oxidizer is in operation. The duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.

(e) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in Condition D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP), as approved by IDEM.

(f) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature as observed during the compliant stack test.

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

D.10.12 Record Keeping and Reporting Requirements [326 IAC 12, 40 CFR 60.465]

(a) The Permittee shall identify, record, and submit a written report to IDEM, OAQ every calendar quarter of each instance in which the volume-weighted average of the total mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under D.10.4 **-** Metal Coil Surface Coating NSPS. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to IDEM, OAQ, quarterly.

(b) The Permittee shall include in the quarterly reports, instances when the thermal oxidizer temperature drops as defined under D.10.11 - Thermal Oxidizer. If no such periods occur, the owner or operator shall state this in the report.

(c) The Permittee shall maintain at the source, for a period of at least two (2) years, records of all data and calculations used to determine monthly VOC emissions from each affected facility and to determine the monthly emission limit, where applicable. The Permittee shall maintain, at the source, daily records of the thermal oxidizer combustion temperature.

D.10.13 Record Keeping Requirements

(a) To document the compliance status with Condition D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

Records may include, for example, purchase orders, invoices, and material safety data sheets (MSDS) or any other information necessary to verify the type and amount used.

(3) The total VOC usage for each month.

(b) To document the compliance status with Conditions D.10.1 - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit and D.10.11- Thermal Oxidizer, the Permittee shall maintain records in accordance with (1) through (2) below.

(1) The continuous temperature records (on a three hour average basis) for the thermal oxidizer and the average temperature used to demonstrate compliance during the most recent compliant stack test. The Permittee shall include in its continuous record when a temperature is not taken and the reason for the lack of a temperature recording (e.g. the process was not in operation).

(2) Daily records of the duct pressure or fan amperage. The Permittee shall include in its daily record when a pressure or amperage reading is not taken and the reason for the lack of pressure or amperage reading (e.g. the process did not operate that day).

(c) If VOC emissions from the 2-side, 2-coat coil coating line equal or exceed nine (9) tons for any twelve (12) consecutive month period, or the Permittee chooses to determine compliance with the HAP limits in Condition D.10.1(d) - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit using the HAP control efficiency, the Permittee shall thereafter maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and

sufficient to establish compliance with the HAP emission limits established in Condition D.10.1(d) - Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit.

(1) The amount and HAP content of each coating material and solvent used. Records may include, for example, inventory records and Material Safety Data Sheets (MSDS) necessary to verify the type and amount used.

(2) A log of the dates of use.

(3) The single and combined HAP usage for each month.

(4) The weight of the single and combined HAPs emitted for each compliance period.

(d) Condition C.17 - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.10.14 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.10.1- Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Minor Limit shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days after the end of the quarter being reported. Condition C.18 - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.11 FACILITY OPERATION CONDITIONS (SLAG PROCESSING

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

A Slag Handling Operation owned and operated by Edward C. Levy Company - Butler Mill Service.

(a) One (1) grizzly feeder with a nominal capacity of 300 tons per hour, permitted in 1994 for construction;

(b) One (1) 36" conveyor (#9), with a nominal capacity of 350 tons per hour, permitted in 1994 for construction;

(c) One (1) 30" conveyor (#7), with a nominal capacity of 350 tons per hour, permitted in 1994 for construction;

(d) Two (2) 5' by 12' Screens, each with a nominal capacity of 350 tons per hour, permitted in 1994 for construction;

(e) One (1) 24" conveyor (#6), with a nominal capacity of 100 tons per hour, permitted in 1994 for construction;

(f) One (1) 30" conveyor (#5), with a nominal capacity of 250 tons per hour, permitted in 1994 for construction;

(g) Three (3) 6' by 16' Screens, each with a nominal capacity of 250 tons per hour, permitted in 1994 for construction;

(h) One (1) 48" Conveyor (#1), with a nominal capacity of 75 tons per hour, permitted in 1994 for construction;

(i) One (1) 24" Stacker (#1), with a nominal capacity of 75 tons per hour, permitted in 1994 for construction;

(j) One (1) 24" Stacker (#2), with a nominal capacity of 125 tons per hour, permitted in 1994 for construction;

(k) One (1) 24" Conveyor (#12); with a nominal capacity of 40 tons per hour, permitted in 1994 for construction;

(l) One (1) 24" Stacker (#4), with a nominal capacity of 50 tons per hour, permitted in 1994 for construction;

(m) One (1) 4 ¼ Standard Crusher, with a nominal capacity of 50 tons per hour, permitted in 1994 for construction;

(n) One (1) 30" Conveyor (#8), with a nominal capacity of 25 tons per hour; permitted in 1994 for construction;

(o) Two (2) 30" Conveyors (#10 and #11), with a nominal capacity of 50 tons per hour each, permitted in 2003 for construction;

(p) One (1) jaw crusher, with a nominal capacity of 100 tons per hour, permitted in 2003 for construction, and

(q) Aggregate Storage Piles.

(r) Three (3) slag storage areas, approved in 2013 for construction, identified as Slag Area 1, 2, and 3, each with a nominal throughput of 400 tons per hour.

Fugitive emissions from the slag handling operations are controlled as needed by water sprays.

(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 Fugitive Dust Limitations (BACT) [326 IAC 2-2]

(a) Pursuant to CP 033-3692-00043 issued October 7, 1994, the fugitive dust control plan shall be implemented to reduce emissions from slag processing by at least 95 percent based on a filterable PM10 emission basis.

(b) Pursuant to CP 033-3692-00043, issued October 7, 1994, the fugitive dust control plan shall be implemented to reduce emissions from storage piles by eighty (80) percent.

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

D.11.2 Record Keeping Requirements

(a) To document compliance with Condition D.11.1 **-** Fugitive Dust Limitations (BACT), the Permittee shall maintain records of the times and type of fugitive dust control measures applied to the slag handling and storage piles, as specified in the Fugitive Dust Control Plan.

(b) Condition C.17- General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.12 FACILITY OPERATIONS CONDITIONS (FUGITIVE DUST)

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

Fugitive Dust Sources consisting of but not limited to the following:

(a) Paved roads,

(b) Parking areas,

(c) Unpaved roads and

(d) Traveled open areas.

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

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

D.12.1 Fugitive Dust Limitations (BACT) [326 IAC 2-2] [326 IAC 6-5]

Pursuant to CP 033-3692-00043, issued October 7, 1994, the fugitive dust control plan shall be implemented to reduce emissions from the paved roads, parking lots, unpaved roads, and traveled open areas by eighty (80%) percent.

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

D.12.2 Record Keeping Requirements

(a) To document compliance with Condition D.12.1 - Fugitive Dust Limitations (BACT), the Permittee shall maintain records of the times and type of fugitive dust control measures (dust suppressants, water sprays and vacuum/sweeping of paved areas) used as specified in the Fugitive Dust Control Plan.

(b) Condition C.17 General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.13 FACILITY OPERATION CONDITIONS

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

Insignificant Activities

1. Specifically regulated insignificant activities as define in 326 IAC 2-7-1(21): One (1) Temper Mill [326 IAC 6-3-2]

2. Other Insignificant activities
   - (a) Space heaters, process heaters, or boilers using the following fuels:
     - (i) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
     - (ii) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
   - (b) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equal to or less than five hundred thousand (500,000) British thermal units per hour except where total capacity of equipment operated by one (1) stationary source as defined by subdivision (38) exceeds two million (2,000,000) British thermal units per hour.
   - (c) Combustion source flame safety purging on startup.
   - (d) Fuel dispensing activities, including the following:
     - (i) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment.
     - (ii) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less. A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
   - (e) The following VOC and HAP storage containers:
     - (i) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.
     - (ii) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
   - (f) Refractory storage not requiring air pollution control equipment.
   - (g) Equipment used exclusively for filling drums, pails, or other packaging containers with the following: Lubricating oils, Waxes and Greases.
   - (h) Application of: oils; greases; lubricants; and nonvolatile material; as temporary protective coatings.
   - (i) Machining where an aqueous cutting coolant continuously floods the machining interface.
   - (j) Closed loop heating and cooling systems.
   - (k) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
   - (l) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPS.

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

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

Insignificant Activities (continued):

(m) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner or Operator, that is, an on-site sewage treatment facility.
(n) Any operation using aqueous solutions containing less than or equal to one percent (1%) by weight of VOCs excluding HAPs.
(o) Noncontact cooling tower systems with the following: Forced and induced draft cooling tower system not regulated under a NESHAP.
(p) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
(q) Heat exchanger cleaning and repair.
(r) Process vessel degassing and cleaning to prepare for internal repairs.
(s) Covered conveyors for solid raw material, including the following:
  (i) Coal or coke conveying of less than or equal to three hundred sixty (360) tons
  (ii) 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.
(t) Purging of gas lines and vessels that is related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
(u) 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.
(v) Blow down for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
(w) Activities associated with emergencies, including the following:
  (i) On-site fire training approved by the department.
  (ii) Emergency generators as follows: Gasoline generators not exceeding one hundred ten (110) horsepower and Diesel generators not exceeding one thousand six hundred (1,600) horsepower.
  (iii) Stationary fire pump engines.
(x) A laboratory as defined in 326 IAC 2-7-1(21)(D)
(y) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
(z) Cleaners and solvents characterized as follows: Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 °C (100 °F).
(aa) Brazing equipment, cutting torches, soldering equipment, and welding equipment related to manufacturing activities not resulting in emissions of HAPs.

(The information describing the processes 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]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission pound per hour limitation from the temper mill shall be calculated using the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Steel Dynamics, Inc. - Flat Roll Division
Source Address: 4500 County Road 59, Butler, IN 46721
Part 70 Permit No.: T033-8068-00043

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
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Steel Dynamics, Inc. - Flat Roll Division
Source Address: 4500 County Road 59, Butler, IN 46721
Part 70 Permit No.: T033-8068-00043

This form consists of 2 pages

- This is an emergency as defined in 326 IAC 2-7-1(12)
- 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 Section); 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? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, HCl, 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Steel Dynamics, Inc. - Flat Roll Division
Source Address: 4500 County Road 59, Butler, IN 46721
Part 70 Permit No.: T033-8068-00043

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
COMPLIANCE AND ENFORCEMENT BRANCH
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

Part 70 Quarterly Report

Source Name: Steel Dynamics, Inc. - Flat Roll Division
Source Address: 4500 County Road 59, Butler, IN 46721
Part 70 Permit No.: T033-8068-00043
Facility: 2-side, 2-coat, coil coating line (paint line)
Parameter: single HAP emission
Limits: 10 tons per 12 consecutive month period with compliance demonstrated on a monthly basis

Quarter _____ YEAR:_____

	Column 1	Column 2	Column 3 Column 1 + Column 2
Month	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviations occurred in this quarter.
☐ Deviation/s occurred in this quarter.

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

Part 70 Quarterly Report

Source Name: Steel Dynamics, Inc. - Flat Roll Division
Source Address: 4500 County Road 59, Butler, IN 46721
Part 70 Permit No.: T033-8068-00043
Facility: 2-side, 2-coat, coil coating line (paint line)
Parameter: combination of HAP emissions
Limits: 14.6 tons per 12 consecutive month period with compliance demonstrated on a monthly basis

Quarter _____ YEAR:_____

	Column 1	Column 2	Column 3 Column 1 + Column 2
Month	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviations occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 N. Senate Avenue
Indianapolis, IN 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT QUARTERLY REPORT

Source Name: Steel Dynamics, Inc. - Flat Roll Division
Source Address: 4500 County Road 59, Butler, IN 46721
Part 70 Permit No.: T033-8068-00043
Facility: 2-side, 2-coat, coil coating line (paint line)
Parameter: VOC usage for the coil coating line (paint line)
Limits: 3894 tons per 12 consecutive month period with compliance demonstrated on a monthly basis

Quarter _____ YEAR:_____

	Column 1	Column 2	Column 3 Column 1 + Column 2
Month	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviations occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Fugitive Dust Control Plan

Steel Dynamics, Inc. - Flat Roll Division
4500 County Road 59
Butler, Indiana

Section 1 – Introduction

The following control plan, when implemented, is designed to reduce uncontrolled fugitive dust based on PM10 mass emissions basis from paved roadways and parking lots, unpaved roadways and traveled open areas, storage piles, and slag processing operations.

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.

Section 2 – Paved Roads and Parking Lots

Except as provided below, paved roads and parking lots shall be controlled by the use of a vehicular vacuum sweeper or by water application and shall be performed at least once every 14 day period. Upon request of the Assistant Commissioner, Steel Dynamics, Inc. - Flat Roll Division shall sample and provide to IDEM surface material silt content and surface dust loadings in accordance with field and laboratory procedures provided in the document: C. Cowherd, Jr. et. al., Iron and Steel Plat Open Dust Source Fugitive Emission Evaluation, PE-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.

The period listed above for cleaning of the paved road segments and parking lots may be extended by one day for each time:

(a) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled cleaning.
(b) It is raining at the time of the scheduled cleaning.
(c) It is below freezing at the time of the scheduled cleaning.

Section 3 – Unpaved Roads

Unpaved maintenance roads outside of the slag processing area shall be treated to control at least 90 percent instantaneous control based on a PM10 mass emission basis. All unpaved roads shall be treated with a commercially produced dust suppressant specifically manufactured for that purpose, and shall be approved in writing, by the Indiana Department of Environmental Management for the use in the State of Indiana as a chemical dust suppressant. As an alternative, Steel Dynamics, Inc. - Flat Roll Division may pave previously unpaved road sections and apply paved road cleaning measures to these newly pave roads at frequencies similar to existing paved roads in the immediate area.

All roads at the slag handling processing facility shall be unpaved and treated by plant personnel with an asphaltic emulsion at a rate of at least 0.16 gallons per square yard, once per month based on average daily 70-80 vehicles of travel.

Asphalt emulsion products (AE-30) or equivalent shall be applied on a frequency of once per month, April through October, unless conditions require frequency to increase or as required

by IDEM or USEPA, to insure fugitive dust control. Snow cover, inclement weather and freezing/thawing shall preclude application November through March.

Equivalent suppressant shall require written approval from IDEM shall be applied at a rate equivalent to 0.16 gallons per square yard. The initial treatment and subsequent treatments shall immediately follow the first application rates and frequencies shall be sufficient to provide at least 85 percent instantaneous control efficiency.

The above dosage may be too high to be absorbed by the road in one step. In this case, application may be done in two or more stages using lower concentrations but with corresponding increase in treatment frequency.

Treating of unpaved road segments 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 treatment.
(b) Road segments are saturated with water such that chemical dust suppressants cannot be accepted by the surface.
(c) Road segments are frozen or covered by ice, snow or standing water.
(d) The road segment or area is closed or abandoned. Abandoned roads will be barricaded.
(e) It is raining at the time of the scheduled treatment.

Section 4 – Open Aggregate Piles

Open aggregate piles consist of slag in various stages of processing. To maintain product quality and chemical stability, watering the stockpiles shall be the primary means of dust control. Water must be limited as to keep the moisture content of the product within standards.

Wind erosion – When visible emissions exceed 5 percent opacity from any piles, the affected piles shall be sprayed as required by water to eliminate wind erosion. Water added to the product during processing provides added procedures specified in Section 7.

Section 5 – Slag Processing

Emissions from slag processing operations shall be controlled through the application of water. Visible emissions shall not exceed 10% by Method 9, 6-minute average evident from any batch drop, continuous drop, screening or crushing operation.

Section 6 – Material Spill control

Incidents of material spillage leading to visible fugitive dust shall be investigated and properly cleaned up.

Section 7 – Unpaved Roadway and Unpaved Area Opacity Limits

Visible emissions from any unpaved road segment or unpaved area shall not exceed 5 percent opacity as averaged over any consecutive 3-minute period. All visible emission observations shall be determined in accordance with 40 CFR 60 Appendix A Method 9, except as otherwise provided below:

(a) In viewing fugitive emissions generated by vehicular traffic, the observer shall be positioned in accordance with the provisions of paragraph 2.1 of Method 9 except that the observer need not position himself with his back to the sun.

(b) The observer shall begin reading when a vehicle crosses his line of sight which shall be approximately perpendicular to the trajectory of that vehicle. The observer shall continue to observe and record visible emission opacities at 15-second intervals along that same line of sight until no less than twelve consecutive opacity readings have been obtained.

Indiana Department of Environmental Management
Office of Air Quality

Attachment B
to a Part 70 Operating Permit Renewal

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

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

Applicability and Compliance Dates

§ 63.10680 Am I subject to this subpart?

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

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

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

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

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

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

§ 63.10681 What are my compliance dates?

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

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

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

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

Standards and Compliance Requirements

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

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

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

(i) Specifications that scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace.

(ii) A requirement in your scrap specifications for removal (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel.

(iii) Procedures for determining if the requirements and specifications in paragraph (a)(1) of this section are met (such as visual inspection or periodic audits of scrap providers) and procedures for taking corrective actions with vendors whose shipments are not within specifications.

(iv) The requirements of paragraph (a)(1) of this section do not apply to the routine recycling of baghouse bags or other internal process or maintenance materials in the furnace. These exempted materials must be identified in the pollution prevention plan.

(2) *Restricted metallic scrap*. For the production of steel other than leaded steel, you must not charge to a furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, lead-containing components, chlorinated plastics, or free organic liquids. For the production of leaded steel, you must not charge to the furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, chlorinated plastics, or free organic liquids. This restriction does not apply to any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed or cleaned to the extent practicable such that the materials do not include lead components, chlorinated plastics, or free organic liquids. This restriction does not apply to motor vehicle scrap that is charged to recover the chromium or nickel content if you meet the requirements in paragraph (b)(3) of this section.

(b) *Mercury requirements*. For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment. For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or

shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches*. You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the permitting authority for approval. You must operate according to this plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permitting authority may change the approval status of the plan upon 90-days written notice based upon the semiannual compliance report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from that scrap as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the permitting authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers that motor vehicle scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section).

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to your facility during the previous year and the basis for the estimate. The permitting authority may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap provider to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the permitting authority will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the permitting authority that provide the number of mercury switches removed or the weight of mercury recovered from the switches,

the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregated form and does not have to be submitted for each scrap provider, contract, or shipment. The permitting authority may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Vehicle Mercury Switch Recovery Program and the Vehicle Switch Recovery Program mandated by Maine State law are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from the motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the permitting authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or provide other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

(c) *Recordkeeping and reporting requirements.* In addition to the records required by §63.10, you must keep records to demonstrate compliance with the requirements for your pollution prevention plan in paragraph (a)(1) of this section and/or for the use of only restricted scrap in paragraph (a)(2) of this section and for mercury in paragraphs (b)(1) through (3) of this section as applicable. You must keep records documenting compliance with paragraph (b)(4) of this section for scrap that does not contain motor vehicle scrap.

(1) If you are subject to the requirements for a site-specific plan for mercury under paragraph (b)(1) of this section, you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted inspections or taken other means of corroboration as required under paragraph (b)(1)(ii)(C) of this section. You may include this information in the semiannual compliance reports required under paragraph (c)(3) of this section.

(2) If you are subject to the option for approved mercury programs under paragraph (b)(2) of this section, you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(3) You must submit semiannual compliance reports to the Administrator for the control of contaminants from scrap according to the requirements in §63.10(e). The report must clearly identify any deviation from the requirements in paragraphs (a) and (b) of this section and the corrective action taken. You must identify which compliance option in paragraph (b) of this section applies to each scrap provider, contract, or shipment.

§ 63.10686 What are the requirements for electric arc furnaces and argon-oxygen decarburization vessels?

(a) You must install, operate, and maintain a capture system that collects the emissions from each EAF (including charging, melting, and tapping operations) and argon-oxygen decarburization (AOD) vessel and conveys the collected emissions to a control device for the removal of particulate matter (PM).

(b) Except as provided in paragraph (c) of this section, you must not discharge or cause the discharge into the atmosphere from an EAF or AOD vessel any gases which:

(1) Exit from a control device and contain in excess of 0.0052 grains of PM per dry standard cubic foot (gr/dscf); and

(2) Exit from a melt shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.

(c) If you own or operate a new or existing affected source that has a production capacity of less than 150,000 tons per year (tpy) of stainless or specialty steel (as determined by the maximum production if specified in the source's operating permit or EAF capacity and maximum number of operating hours per year), you must not discharge or cause the discharge into the atmosphere from an EAF or AOD vessel any gases which:

(1) Exit from a control device and contain particulate matter (PM) in excess of 0.8 pounds per ton (lb/ton) of steel. Alternatively, the owner or operator may elect to comply with a PM limit of 0.0052 grains per dry standard cubic foot (gr/dscf); and

(2) Exit from a melt shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.

(d) Except as provided in paragraph (d)(6) of this section, you must conduct performance tests to demonstrate initial compliance with the applicable emissions limit for each emissions source subject to an emissions limit in paragraph (b) or (c) of this section.

(1) You must conduct each PM performance test for an EAF or AOD vessel according to the procedures in §63.7 and 40 CFR 60.275a using the following test methods in 40 CFR part 60, appendices A–1, A–2, A–3, and A–4:

(i) Method 1 or 1A of appendix A–1 of 40 CFR part 60 to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A–1 of 40 CFR part 60 to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B of appendix A–3 of 40 CFR part 60 to determine the dry molecular weight of the stack gas. You may use ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses” (incorporated by reference—see §63.14) as an alternative to EPA Method 3B.

(iv) Method 4 of appendix A–3 of 40 CFR part 60 to determine the moisture content of the stack gas.

(v) Method 5 or 5D of appendix A–3 of 40 CFR part 60 to determine the PM concentration. Three valid test runs are needed to comprise a PM performance test. For EAF, sample only when metal is being melted and refined. For AOD vessels, sample only when the operation(s) are being conducted.

(2) You must conduct each opacity test for a melt shop according to the procedures in §63.6(h) and Method 9 of appendix A–4 of 40 CFR part 60. When emissions from any EAF or AOD vessel are combined with emissions from emission sources not subject to this subpart, you must demonstrate compliance with the melt shop opacity limit based on emissions from only the emission sources subject to this subpart.

(3) During any performance test, you must monitor and record the information specified in 40 CFR 60.274a(h) for all heats covered by the test.

(4) You must notify and receive approval from the Administrator for procedures that will be used to determine compliance for an EAF or AOD vessel when emissions are combined with those from facilities not subject to this subpart.

(5) To determine compliance with the PM emissions limit in paragraph (c) of this section for an EAF or AOD vessel in a lb/ton of steel format, compute the process-weighted mass emissions (E_p) for each test run using Equation 1 of this section:

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

Where:

E_p= Process-weighted mass emissions of PM, lb/ton;

C = Concentration of PM or total metal HAP, gr/dscf;

Q = Volumetric flow rate of stack gas, dscf/hr;

T = Total time during a test run that a sample is withdrawn from the stack during steel production cycle, hr;

P = Total amount of metal produced during the test run, tons; and

K = Conversion factor, 7,000 grains per pound.

(6) If you own or operate an existing affected source that is subject to the emissions limits in paragraph (b) or (c) of this section, you may certify initial compliance with the applicable emission limit for one or more emissions sources based on the results of a previous performance test for that emissions source in lieu of the requirement for an initial performance test provided that the test(s) were conducted within 5 years of the compliance date using the methods and procedures specified in paragraph (d)(1) or (2) of this section; the test(s) were for the affected facility; and the test(s) were representative of current or anticipated operating processes and conditions. Should the permitting authority deem the prior test data unacceptable to demonstrate compliance with an applicable emissions limit, the owner or operator must conduct an initial performance test within 180 days of the compliance date or within 90 days of receipt of the notification of disapproval of the prior test, whichever is later.

(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	

Citation	Subject	Applies to subpart YYYYY?	Explanation
§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	Yes	

Citation	Subject	Applies to subpart YYYYY?	Explanation
	Delegations		
§§63.13–63.16	Addresses, Incorporations by Reference, Availability of Information, Performance Track Provisions	Yes	

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Steel Dynamics, Inc. - Flat Roll Division
Source Location:	4500 County Rd 59, Butler, IN 46721
County:	Dekalb
SIC Code:	3312
Operation Permit No.:	T 033-8068-00043
Operation Permit Issuance Date:	October 4, 2006
Minor Source Modification No.:	033-32483-00043
Minor Permit Modification No.:	033-32660-00043
Permit Reviewer:	Kristen Willoughby

Source Definition

The source consists of:

(a) Steel Dynamics, Inc. - Flat Roll Division (SDI-Flat Roll), located at 4500 County Road 59, Butler, Indiana 46721; and

(b) Steel Dynamics, Inc. - Iron Dynamics Division (SDI-IDD), located at 4500 County Road 59, Butler, Indiana 46721.

Separate Part 70 permits will be issued to Steel Dynamics, Inc. - Flat Roll Division (033-8068-00043) and Steel Dynamics, Inc. - Iron Dynamics Division (033-12614-00076), solely for administrative purposes. For this permit, the Permittee is Steel Dynamics, Inc. - Flat Roll Division, the primary operation.

Existing Approvals

The source was issued Part 70 Operating Permit No. T033-8068-00043 on October 4, 2006. The source has since received the following approvals:

Permit Type	Permit Number	Issuance Date
Significant Source Modification	033-23028-00043	October 26, 2007
Significant Permit Modification	033-24411-00043	December 19, 2007
Significant Permit Modification	033-27843-00043	July 10, 2009
Significant Permit Modification	033-28134-00043	December 30, 2009
Significant Permit Modification	033-28510-00043	February 11, 2011
Minor Source Modification	033-30828-00043	September 13, 2011
Minor Permit Modification	033-30847-00043	November 7, 2011

County Attainment Status

The source is located in Dekalb County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Dekalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Dekalb County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$, $SO_{2,}$ 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.

(c) Other Criteria Pollutants
Dekalb County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a an iron and steel mill plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit 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:

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	>100
PM_{10}	>100
$PM_{2.5}$	>100
SO_2	>100
VOC	>100
CO	>100
NO_x	>100
GHGs as CO_2e	>100,000
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, emissions of GHGs are equal to or greater than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, 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).

(c) These emissions are based upon Minor Permit Modification No. 033-30847-00043.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Steel Dynamics, Inc. - Flat Roll Division on November 5, 2012, relating to the addition of three (3) new slag storage areas and associated roads. The following is a list of the proposed emission units:

(a) Three (3) slag storage areas, approved in 2013 for construction, identified as Slag Area 1, 2, and 3, each with a nominal throughput of 400 tons per hour.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70

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

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

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	23.71
PM_{10}	6.82
$PM_{2.5}$	0.85
SO_2	--
VOC	--
CO	--
NO_X	--
Single HAPs	--
Total HAPs	--

This source modification is subject to 326 IAC 2-7-10.5(e), modifications with the potential to emit less than twenty-five (25) tons per year and equal to or greater than five (5) tons per year of either particulate matter (PM) or particulate matter less than ten (10) microns (PM_{10}). Additionally, the modification will be incorporated into the Part 70 Operating Permit through a minor permit modification issued pursuant to 326 IAC 2-7-12(b), because the modification does not a involve a case-by-case determination of an emission limitation.

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

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**VOC**	**CO**	**NO_X**	**GHGs**
New Processes and Road Segments								
Slag Storage Area - Pile Loading and Erosion	0.42	0.20	0.03	--	--	--	--	--
Slag Storage Area - Transfers	0.74	0.35	0.05	--	--	--	--	--
Unpaved Roads	3.52	0.79	0.08	--	--	--	--	--
Total PTE of New Units	4.65	1.34	0.16	--	--	--	--	--
ATPA for Affected Road Segments								
Baseline Actual Emissions (Paved and Unpaved Roads)	20.85	4.20	0.99	--	--	--	--	--
Projected Actual Emissions (Paved and Unpaved Roads)	29.84	6.06	1.34	--	--	--	--	--
Total ATPA Emissions	9.00	1.86	0.38	--	--	--	--	--
Emissions Increase Due to Project (Hybrid Test)	13.67	3.20	0.55	--	--	--	--	--
Significant Level	25	15	10	40	40	100	40	75,000 CO_2e

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

The Permittee has provided information as part of the application for this approval that based on Actual to Projected Actual test in 326 IAC 2-2-2 this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1. The information provided in the Actual to Projected Actual test shows that the project increases are less than 50% of the PSD significant level. Therefore, there is not a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A)) that this project will exced the PSD significant level for any one (1) pollutant. IDEM, OAQ has not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will not be required to keep records and report in accordance with Source obligation in 326 IAC 2-2-8.

The potential to emit of this modification is greater than twenty-five (25) tons per year. The Permittee is currently required pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations) to implement their Fugitive Dust Control Plan (FDCP) to reduce emissions from the paved roads, parking lots, unpaved roads, traveled open areas, and storage piles. The Permittee estimates that implementation of their FDCP gives an 80% control of fugitive dust. Implementation of the FDCP shall ensure particulate emissions from this project are below 25 tons per year and the requirements of 326 IAC 2-2 are not applicable.

Project Aggregation

Three (3) separate projects are currently the subject of permitting at IDEM:

1. Galvanizing Line 1 Modernization Project: Steel Dynamics, Inc. - Flat Roll Division submitted an application on September 28, 2012, relating to the modernization of the hot band galvanizing line which consists of the installation of new burners permitted as part of this project. Additionally, the Permittee is updating the burner descriptive information for the hot band galvanizing line and the cold rolled galvanizing line due to adding insignificant burners in 2002. This modernization will increase the nominal production capacity for the line and allow the hot band galvanizing line to operate as either a hot band galvanizing line or a cold rolled galvanizing line.

2. Argon Stirrer Project: Steel Dynamics, Inc. - Flat Roll Division submitted an application on July 26, 2012, relating to the modification of the ladle metallurgical stations (LMS) such that each ladle metallurgical furnace (LMF) has its own stirrer. Currently LMF1 and LMF2 share a stir station and need to transfer material from LMF1 and LMF2 to the stir station. This project will eliminate the transfer step and allow the stirring to be done in each LMF. This elimination will allow an increase in actual production of 30,000 tons of steel coils per year based on anticipated customer demand.

3. Slag Storage Project: Steel Dynamics, Inc. - Flat Roll Division submitted an application on November 5, 2012, relating to the addition of three (3) slag storage areas. Slag is sold for roadway projects. There has been a decrease in slag demand due to cancellation of several road projects. Historically, slag has been collected by customers from the existing slag processing area and transported off-site. Due to the change in market demand, additional storage is needed on site for the slag.

New Source Review Circumvention (3M Project Aggregation) memo of John Rasnic, OAQPS, March 16, 1992

Rasnic raises 5 issues.

1. Filing more than one minor source or minor modification application associated with emission increases at a single plant within a short period of time may constitute strong evidence of an intent to circumvent the requirements of preconstruction review.

   Response: Adding the ATPA emissions increase with the Could Have Accommodated emissions of the Galvanizing Line 1 Modernization project to the ATPA emissions increase with the Could Have Accommodated emissions of the Argon Stirrer project and the ATPA emissions increase without Could Have Accommodated emissions of the Slag Storage project does not reach the PSD Significance Levels. There is no evidence of intent to circumvent the requirements of preconstruction review.

2. If a project would not be funded or if it would not be economically viable if operated on an extended basis (at least a year) without the other projects, this should be considered evidence of circumvention.

   Response: The Galvanizing Line 1 Modernization project and the Argon Stirrer project are funded with capital monies. Both of the capital projects were evaluated separately. They are separately funded. Each has a separate budget. Each was funded because of an acceptable payback by each.

   The Slag Storage project was evaluated and budgeted for by Levy Co (a contractor of Steel Dynamics, Inc.). Levy has a separate budget and evaluation process from Steel Dynamics, Inc.

3. If reported production levels are necessary to meet projected production demands but are higher than permitted levels, this is additional evidence of circumvention.

   Response: Steel Dynamics, Inc. - Flat Roll Division can achieve the projected actual production rates presented in the Argon Stirrer project permit application without relying on any future modifications to the emission units in either of the galvanizing lines. It is reasonable to expect that some or all of the increase in melt shop steel production projected to occur as a result of the Argon Stirrer Project could be further processed at the Galvanization Line 1 utilizing existing equipment capacity and methods of operation. It is not possible for Steel Dynamics, Inc. - Flat Roll Division to accurately project future demand for every steel product. Therefore, Steel Dynamics, Inc. - Flat Roll Division has calculated projected actual emissions for the cold mill by scaling total past actual emissions from cold mill equipment by the increase in total steel production, effectively assuming the same steel product mix for projected emissions as the baseline. Any

changes to the product mix that could increase future cold mill emissions above the levels presented in this analysis would be due to changes in consumer demand.

Due to a decrease in market demand, additional on site storage is needed for slag. This storage is needed based on current production levels. It is reasonable to expect that some or all of the increase in slag generated due to the increase in melt shop steel production projected to occur as a result of the Argon Stirrer Project could be processed in the new slag storage process areas. Therefore, Steel Dynamics, Inc. - Flat Roll Division has calculated projected actual emissions for these new slag storage processing areas by assuming all increased slag generated will be stored in the new piles.

4. Statements of representatives of the source about the source's plans for operation can be evidence to show intent to circumvent preconstruction review requirements.

   Response: First, no such statements have been made. Second, no such statements would be valid if made. All of Steel Dynamics, Inc. - Flat Roll Division's intentions and communications concerning the results of the three projects have been true, accurate and complete.

5. It is reasonable to expect that company management would coordinate the planning and coordination of projects considering their intrinsic relationship with each other and their impact on the economic viability of the plant.

   Response: Each project was planned and approved internally (either by Steel Dynamics, Inc. or Levy Co.) as a stand alone project. The financial justification for the capital approval for each project was not dependant on any other past, present, or future project. The board, which approves funding for projects, only meets once a quarter. Therefore, multiple projects could be discussed/ approved at one time depending on how long it took to get information for each project, approval from management to submit the project, and develop the proposal.

Federal Rule Applicability Determination

There is no change in the federal rule applicability due to this modification.

NSPS:

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

CAM:

(c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

   (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

   (2) is subject to an emission limitation or standard for that pollutant; and

   (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The proposed processes do not utilize a control device, as definied in 40 CFR 64.1. Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new processes as part of this modification.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)
This project will emit less than the PSD significant level. Therefore, the requirements of 326 IAC 2-2 do not apply. PSD is discussed under the Permit Level Determination – PSD section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of hot band and cold roll galvanizing lines heaters will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

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 attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

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.

There are no new Compliance Determination or Compliance Monitoring Requirements applicable to this modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T033-8068-00043. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Summary of Model Updates

While there are model updates applicable to this source, they are not being made as part of this modification. An application for a Part 70 Operating Permit Renewal was submitted on December 28, 2010. The model updates will be made in the Part 70 Operating Permit Renewal.

Modification No. 1:

Section A.3 - Emission Units and Pollution Control Equipment Summary and Section D.11 Facility Description have been updated to include the new slag storage areas as follows:

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

Steel Dynamics, Inc. - Flat Roll Division consists of the following emission units and pollution control devices:

****

Slag Handling Operation

The following slag handling operations are owned and operated by Edward C. Levy Company - Butler Mill Service.

* * *

(r) Three (3) slag storage areas, approved in 2013 for construction, identified as Slag Area 1, 2, and 3, each with a nominal throughput of 400 tons per hour.

Fugitive emissions from parts of the slag handling operations are controlled as needed by water sprays.

****

SECTION D.11 FACILITY OPERATION CONDITIONS (SLAG PROCESSING)

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

A Slag Handling Operation owned and operated by Edward C. Levy Company - Butler Mill Service.

***

(r) Three (3) slag storage areas, approved in 2013 for construction, identified as Slag Area 1, 2, and 3, each with a nominal throughput of 400 tons per hour.

Fugitive emissions from the slag handling operations are controlled as needed by water sprays.

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

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 033-32483-00043 and Minor Permit Modification No. 033-32660-00043. The staff recommend to the Commissioner that this Part 70 Minor Source and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Kristen Willoughby at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-3031 or toll free at 1-800-451-6027 extension 3-3031.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations
Slag Storage Project

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Summary of PTE Increase

Uncontrolled Potential to Emit of the Modification

	Pollutant		
	PM	**PM_{10}**	**$PM_{2.5}$**
Slag Storage Area - Pile Loading and Erosion (tpy)	1.94	0.92	0.14
Slag Storage Area - Transfers (tpy)	4.16	1.93	0.31
Unpaved Roads (tpy)	17.60	3.97	0.40
Total (tpy)	**23.71**	**6.82**	**0.85**

Appendix A: Emissions Calculations
Slag Storage Project - ATPA

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Past Actual to Potential Emissions Increase Calculations

Calculation Methodology
- Affected Paved and Unpaved Roads are only for those segments affected by the project. Baseline emissions are calculated as the baseline period PTE scaled by the ratio of baseline period production to potential steel production. Projected emissions conservatively represent the post-project PTE, which does not include new road segments for traffic to the Slag Storage Area.
- Slag Storage Area and Processing and New Unpaved Roads are new unit, so baseline emissions are zero and project emissions are the PTE.

PM Baseline Period Production	2,918,624 tpy	2010-2011
PM10 Baseline Period Production	2,918,624 tpy	2010-2011
PM2.5 Baseline Period Production	2,918,624 tpy	2010-2011
Potential Steel Production	3,504,000 tpy	

Project Emissions Increases - PM	Exisiting Affected Emission Sources				New Units		
Emission Unit Description	Baseline Actual Emissions (tpy)	24-Month Baseline Period	Projected Actual Emissions	ATPA	Baseline Actual Emissions (tpy)	PTE (tpy)	Hybrid Test (tpy)
Slag Storage Area - Pile Loading and Erosion *	--	--	--	--	0.00	0.42	0.42
Slag Storage Area - Transfers *	--	--	--	--	0.00	0.74	0.74
New Unpaved Roads *	--	--	--	--	0.00	3.52	3.52
Affected Paved Roads	19.46	2010-11	26.24	6.78	--	--	6.78
Affected Unpaved Roads	1.39	2010-11	3.60	2.22	--	--	2.22

* Based on Controlled Emission Calculations

Total Emissions Increase (tpy): 13.67
SER (tpy): 25
Exceeds SER: NO

Project Emissions Increases - PM10	Baseline Actual Emissions				New Units		
Emission Unit Description	Baseline Actual Emissions (tpy)	24-Month Baseline Period	Projected Actual Emissions	ATPA	Baseline Actual Emissions (tpy)	PTE (tpy)	Hybrid Test (tpy)
Slag Storage Area - Pile Loading and Erosion *	--	--	--	--	0.00	0.20	0.20
Slag Storage Area - Transfers *	--	--	--	--	0.00	0.35	0.35
New Unpaved Roads *	--	--	--	--	0.00	0.79	0.79
Affected Paved Roads	3.89	2010-11	5.25	1.36	--	--	1.36
Affected Unpaved Roads	0.31	2010-11	0.81	0.50	--	--	0.50

* Based on Controlled Emission Calculations

Total Emissions Increase (tpy): 3.20
SER (tpy): 15
Exceeds SER: NO

Project Emissions Increases - PM2.5	Baseline Actual Emissions				New Units		
Emission Unit Description	Baseline Actual Emissions (tpy)	24-Month Baseline Period	Projected Actual Emissions	ATPA	Baseline Actual Emissions (tpy)	PTE (tpy)	Hybrid Test (tpy)
Slag Storage Area - Pile Loading and Erosion *	--	--	--	--	0.00	0.03	0.03
Slag Storage Area - Transfers *	--	--	--	--	0.00	0.05	0.05
New Unpaved Roads	--	--	--	--	0.00	0.08	0.08
Affected Paved Roads	0.96	2010-11	1.29	0.33	--	--	0.33
Affected Unpaved Roads	0.03	2010-11	0.08	0.05	--	--	0.05

Total Emissions Increase (tpy): 0.55
SER (tpy): 10
Exceeds SER: NO

Uncontrolled / Unlimited Potential to Emit (ton/yr)								
Process	PM	PM10	PM2.5	SO2	VOC	CO	NOx	GHGs
New Processes and Road Segments								
Slag Storage Area - Pile Loading and Erosion	1.94	0.92	0.14	--	--	--	--	--
Slag Storage Aread - Transfers	4.16	1.93	0.31	--	--	--	--	--
Unpaved Roads	17.60	3.97	0.40	--	--	--	--	--
Total PTE of New Units	23.71	6.82	0.85	--	--	--	--	--
ATPA for Affected Road Segments								
Baseline Actual Emission (Paved and Unpaved Roads)	20.85	4.21	0.99	--	--	--	--	--
Projected Actual Emissions (Paved and Unpaved Roads)	29.84	6.06	1.37	--	--	--	--	--
Total ATPA Emissions	8.99	1.86	0.38	--	--	--	--	--
Emissions Increase Due to Project (Hybrid Test)	32.70	8.67	1.23	--	--	--	--	--
Significant Level	*25*	*15*	*10*	*40*	*40*	*100*	*40*	*75,000*

Appendix A: Emissions Calculations
Slag Transfer (Controlled)

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Slag Storage Area - Transfers Controlled PTE

Material	PM Particle Size Multiplier (k)	PM_{10} Particle Size Multiplier (k)	$PM_{2.5}$ Particle Size Multiplier (k)	Wind Speed (U) (mph)	Moisture Content (M) (%)	Basis
EAF Slag, Ladle Brick, and Mill Scale	0.74	0.35	0.053	8.6	3.0	AP-42, Section 13.2.4. M is the slag moisture content using water sprays as required in the fugitive dust plan and U is the annual average wind speed from 2011 Climatological Data for Fort Wayne Intl Airport. (http://www7.ncdc.noaa.gov/IPS/lcd/lcd.html)

Process Step	Hourly Process Rate (tph)	Annual Process Rate (tpy)	Material
Slag Storage Areas - Unloading			
Slag Area 1, 2, 3 to Front End Loader	350	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)
Front End Loader to Customer Trucks	350	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)
Slag Storage Areas - Loading			
Dump Truck to Feed Bin	400	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)
Feed Bin to Stacker	400	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)

Process Step	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)	Basis
Slag Storage Areas - Unloading				
Slag Area 1, 2, 3 to Front End Loader				Negligible emissions from gathering material from the ground with front end loader
Front End Loader to Customer Trucks	2.72E-03	1.28E-03	1.95E-04	AP-42, Section 13.2.4, Equation 1: Emission Factor (lb/ton) = k(0.0032)* (U/5)^1.3 / (M/2)^1.4
Slag Storage Areas - Loading				
Dump Truck to Feed Bin	2.72E-03	1.28E-03	1.95E-04	AP-42, Section 13.2.4, Equation 1: Emission Factor (lb/ton) = k(0.0032)* (U/5)^1.3 / (M/2)^1.4
Feed Bin to Stacker	1.40E-04	4.60E-05	1.30E-05	AP-42, Section 11.19.2, Table 11.19.2-2 for Conveyor Transfer Controlled (SCC 3-05-020-06).

Process Step	PM Emission Rate (lb/hr)	PM_{10} Emission Rate (lb/hr)	$PM_{2.5}$ Emission Rate (lb/hr)	PM Emission Rate (tpy)	PM_{10} Emission Rate (tpy)	$PM_{2.5}$ Emission Rate (tpy)
Slag Storage Areas - Unloading						
Slag Area 1, 2, 3 to Front End Loader						
Front End Loader to Customer Trucks	0.95	0.45	0.07	0.36	0.17	0.03
Slag Storage Areas - Loading						
Dump Truck to Feed Bin	1.09	0.51	0.08	0.36	0.17	0.03
Feed Bin to Stacker	0.06	0.02	0.01	0.02	0.01	0.002
Total Slag Transfers PTE	**2.09**	**0.98**	**0.15**	**0.74**	**0.35**	**0.05**

Potential to Emit (tpy)			
	PM	PM_{10}	$PM_{2.5}$
At Ap-42 moisture	4.16	1.93	0.31
At 3% moisture	0.74	0.35	0.05
Control Efficiency Calculated Based on Above	18%	18%	17%

Methodology
Emission Rate (lb/hr) = Emission Factor (lb/ton) * Hourly Process Rate (ton/hr)
Emission Rate (tpy) = Emission factor (lb/ton) * Annual Process Rate (tpy) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Slag Transfer (Uncontrolled)

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Slag Storage Area - Transfers Uncontrolled PTE

Material	PM Particle Size Multiplier (k)	PM_{10} Particle Size Multiplier (k)	$PM_{2.5}$ Particle Size Multiplier (k)	Wind Speed (U) (mph)	Moisture Content (M) (%)	Basis
EAF Slag, Ladle Brick, and Mill Scale	0.74	0.35	0.053	8.6	0.92	AP-42, Section 13.2.4. M is the AP-42 Section 13.2.4 average moisture content for slag. U is the annual average wind speed from 2011 Climatological Data for Fort Wayne Intl Airport. (http://www7.ncdc.noaa.gov/IPS/lcd/lcd.html)

Process Step	Hourly Process Rate (tph)	Annual Process Rate (tpy)	Material
Slag Storage Areas - Unloading			
Slag Area 1, 2, 3 to Front End Loader	350	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)
Front End Loader to Customer Trucks	350	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)
Slag Storage Areas - Loading			
Dump Truck to Feed Bin	400	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)
Feed Bin to Stacker	400	265,000	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)

Process Step	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)	Basis
Slag Storage Areas - Unloading				
Slag Area 1, 2, 3 to Front End Loader				Negligible emissions from gathering material from the ground with front end loader
Front End Loader to Customer Trucks	1.42E-02	6.72E-03	1.02E-03	AP-42, Section 13.2.4, Equation 1: Emission Factor (lb/ton) = k(0.0032)* (U/5)^1.3 / (M/2)^1.4
Slag Storage Areas - Loading				
Dump Truck to Feed Bin	1.42E-02	6.72E-03	1.02E-03	AP-42, Section 13.2.4, Equation 1: Emission Factor (lb/ton) = k(0.0032)* (U/5)^1.3 / (M/2)^1.4
Feed Bin to Stacker	3.00E-03	1.10E-03	3.11E-04	AP-42, Section 11.19.2, Table 11.19.2-2 for Conveyor Transfer (SCC 3-05-020-06)

Notes

AP-42 Section 11.19.2 EF not available for PM2.5, so PM2.5 estimated using the PM10 EF and the ratio of the PM2.5/PM10 EF for controlled operations.

Process Step	PM Emission Rate (lb/hr)	PM_{10} Emission Rate (lb/hr)	$PM_{2.5}$ Emission Rate (lb/hr)	PM Emission Rate (tpy)	PM_{10} Emission Rate (tpy)	$PM_{2.5}$ Emission Rate (tpy)
Slag Storage Areas - Unloading						
Slag Area 1, 2, 3 to Front End Loader						
Front End Loader to Customer Trucks	4.97	2.35	0.36	1.88	0.89	0.13
Slag Storage Areas - Loading						
Dump Truck to Feed Bin	5.69	2.69	0.41	1.88	0.89	0.13
Feed Bin to Stacker	1.20	0.44	0.12	0.40	0.15	0.04
Total Slag Transfers PTE	**11.86**	**5.48**	**0.89**	**4.16**	**1.93**	**0.31**

Methodology

Emission Rate (lb/hr) = Emission Factor (lb/ton) * Hourly Process Rate (ton/hr)
Emission Rate (tpy) = Emission factor (lb/ton) * Annual Process Rate (tpy) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Pile Loading and Erosion (Controlled)

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Slag Storage Area - Pile Loading and Erosion Controlled PTE

Material	PM Particle Size Multiplier (k)	PM_{10} Particle Size Multiplier (k)	$PM_{2.5}$ Particle Size Multiplier (k)	Wind Speed (U) (mph)	Moisture Content (M) (%)	Basis
EAF Slag, Ladle Brick, and Mill Scale	0.74	0.35	0.053	8.6	3.0	AP-42, Section 13.2.4. M is the slag moisture content using water sprays as required in the fugitive dust plan and U is the annual average wind speed from 2011 Climatological Data for Fort Wayne Intl Airport. (http://www7.ncdc.noaa.gov/IPS/lcd/lcd.html)

Slag Storage Areas - Pile Loading	Hourly Process Rate (tph)	Annual Process Rate (tpy)	Maximum Pile Area (m^2)	Material
Slag Area 1, 2, 3	400	265,000	93,182	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)

Slag Storage Areas - Pile Loading	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)	Basis
Slag Area 1, 2, 3 - Stacker or Front End Loader to Pile	2.72E-03	1.28E-03	1.95E-04	AP-42, Section 13.2.4, Equation 1: Emission Factor (lb/ton) = k(0.0032)* (U/5)^1.3 / (M/2)^1.4

Slag Storage Areas - Pile Erosion	PM Emission Factor Daily/ Hourly (g/m^2)	PM_{10} Emission Factor Daily/ Hourly (g/m^2)	$PM_{2.5}$ Emission Factor Daily/ Hourly (g/m^2)	PM Emission Factor Annual (g/m^2)	PM_{10} Emission Factor Annual (g/m^2)	$PM_{2.5}$ Emission Factor Annual (g/m^2)	Basis
Slag Area 1, 2, 3	5.69E-01	2.84E-01	4.27E-02	5.69E-01	2.84E-01	4.27E-02	See Emission Factors for Storage Pile Erosion sheet for methodology.

Slag Storage Areas	PM Emission Rate (lb/hr)	PM_{10} Emission Rate (lb/hr)	$PM_{2.5}$ Emission Rate (lb/hr)	PM Emission Rate (tpy)	PM_{10} Emission Rate (tpy)	$PM_{2.5}$ Emission Rate (tpy)
Pile Loading						
Slag Area 1, 2, 3 - Stacker or Front End Loader to Pile	1.09	0.51	0.08	0.36	0.17	0.03
Pile Erosion						
Slag Area 1, 2, 3	116.89	58.34	8.77	0.06	0.03	4.39E-03
Total Pile Loading and Erosion Controlled PTE	**117.98**	**58.86**	**8.85**	**0.42**	**0.20**	**0.03**

Potential to Emit (tpy)			
	PM	PM_{10}	$PM_{2.5}$
At Ap-42 moisture	1.88	0.89	0.13
At 3% moisture	0.36	0.17	0.03
Control Efficiency Calculated Based on Above	19%	19%	19%

Note: The controlled and uncontrolled emissions from pile erosion are the same. Therfore, these emission are not included above.

Methodology

Slag Areas - Loading

Emission Rate (lb/hr) = Emission Factor (lb/ton) * Hourly Process Rate (ton/hr)

Emission Rate (tpy) = Emission Factor (lb/ton) *Annual Process Rate (tpy) / 2000 (lb/ton)

Slag Areas - Erosion

Emission Rate (lb/hr) = Daily/Hourly Emission Factor (g/m^2) * Maximum Pile Area (m^2) / 453.59237 (g/lb)

Emission Rate (tpy) = Annual Emission Factor (g/m^2) * Maximum Pile Area (m^2) / 453.59237 (g/lb) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Pile Loading and Erosion (Uncontrolled)

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Slag Storage Area - Pile Loading and Erosion Uncontrolled PTE

Material	PM Particle Size Multiplier (k)	PM_{10} Particle Size Multiplier (k)	$PM_{2.5}$ Particle Size Multiplier (k)	Wind Speed (U) (mph)	Moisture Content (M) (%)	Basis
EAF Slag, Ladle Brick, and Mill Scale	0.74	0.35	0.053	8.6	0.92	AP-42, Section 13.2.4. M is the AP-42 Section 13.2.4 average moisture content for slag. U is the annual average wind speed from 2011 Climatological Data for Fort Wayne Intl Airport (http://www7.ncdc.noaa.gov/IPS/lcd/lcd.html)

Slag Storage Areas - Pile Loading	Hourly Process Rate (tph)	Annual Process Rate (tpy)	Maximum Pile Area (m^2)	Material
Slag Area 1, 2, 3	400	265,000	93,182	EAF Slag (100%) or EAF Slag (70%), Ladle Brick (15%), Mill Scale (15%)

Slag Storage Areas - Pile Loading	PM Emission Factor (lb/ton)	PM_{10} Emission Factor (lb/ton)	$PM_{2.5}$ Emission Factor (lb/ton)	Basis
Slag Area 1, 2, 3 - Stacker or Front End Loader to Pile	1.42E-02	6.72E-03	1.02E-03	AP-42, Section 13.2.4, Equation 1: Emission Factor (lb/ton) = k(0.0032)* (U/5)^1.3 / (M/2)^1.4

Slag Storage Areas - Pile Erosion	PM Emission Factor Daily/ Hourly (g/m^2)	PM_{10} Emission Factor Daily/ Hourly (g/m^2)	$PM_{2.5}$ Emission Factor Daily/ Hourly (g/m^2)	PM Emission Factor Annual (g/m^2)	PM_{10} Emission Factor Annual (g/m^2)	$PM_{2.5}$ Emission Factor Annual (g/m^2)	Basis
Slag Area 1, 2, 3	5.69E-01	2.84E-01	4.27E-02	5.69E-01	2.84E-01	4.27E-02	See Emission Factors for Storage Pile Erosion sheet for methodology.

Slag Storage Areas	PM Emission Rate (lb/hr)	PM_{10} Emission Rate (lb/hr)	$PM_{2.5}$ Emission Rate (lb/hr)	PM Emission Rate (tpy)	PM_{10} Emission Rate (tpy)	$PM_{2.5}$ Emission Rate (tpy)
Pile Loading						
Slag Area 1, 2, 3 - Stacker or Front End Loader to Pile	5.69	2.69	0.41	1.88	0.89	0.13
Pile Erosion						
Slag Area 1, 2, 3	116.89	58.34	8.77	0.06	0.03	4.39E-03
Total Pile Loading and Erosion Uncontrolled PTE	**122.58**	**61.03**	**9.18**	**1.94**	**0.92**	**0.14**

Methodology

Slag Areas - Loading

Emission Rate (lb/hr) = Emission Factor (lb/ton) * Hourly Process Rate (ton/hr)

Emission Rate (tpy) = Emission Factor (lb/ton) *Annual Process Rate (tpy) / 2000 (lb/ton)

Slag Areas - Erosion

Emission Rate (lb/hr) = Daily/Hourly Emission Factor (g/m^2) * Maximum Pile Area (m^2) / 453.59237 (g/lb)

Emission Rate (tpy) = Annual Emission Factor (g/m^2) * Maximum Pile Area (m^2) / 453.59237 (g/lb) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Projected Road Emissions

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Affected Paved Roads Emission Calculations (Future PTE)
AP-42 Chapter 13.2.1 (1/11)

Unmitigated Emission Factor (lb/mile) = [k * (sL)^0.91 * W^1.02] (AP-42, Chapter 13.2.1, Equation 1)
where k = particle size multiplier (lb/VMT)
sL = road surface silt loading (g/m2)
W = average weight (tons) of the vehicles traveling on the road

Uncontrolled/Unmitigated Emissions (tons/yr) = Unmitigated Emission Factor (lb/mile) * miles/yr / 2,000 (lb/ton)
Controlled/Unmitigated Emissions (tons/yr) = Uncontrolled/Unmitigated Emissions (tons/yr) * (1 - Control Efficiency (%))

Constants		
PM[a]	PM_{10}[a]	$PM_{2.5}$[a]
k (lb/VMT)	k (lb/VMT)	k (lb/VMT)
0.011	0.0022	0.00054

Road Segment	Road Type	W (tons)[c]	sL (g/m^2)[d]	Segment Length[e] (miles)	Trips/Year	Miles/Year	Unmitigated PM Emission Factor (lb/mile)	Unmitigated PM_{10} Emission Factor (lb/mile)	Unmitigated $PM_{2.5}$ Emission Factor (lb/mile)	Column	
A-B	Paved	13	0.6	0.17	403,184	138,050	0.10	0.02	4.82E-03	1a	1a -> 2a
M-N	Paved	25	4.9	0.07	137,303	18,728	1.25	0.25	0.06	1b	1b -> 2b
N-O	Paved	24	4.9	0.03	142,069	9,092	1.20	0.24	0.06	1c	1c -> 2c
O-P	Paved	24	4.9	0.08	159,037	25,350	1.20	0.24	0.06	1d	1d -> 2d
P-Q	Paved	24	4.9	0.05	143,344	15,424	1.21	0.24	0.06	1e	1e -> 2e
Q-R	Paved	20	4.9	0.04	181,087	12,893	0.97	0.19	0.05	1f	1f -> 2f
R-S	Paved	20	4.9	0.05	181,087	19,739	0.97	0.19	0.05	1g	1g -> 2g
S-T	Paved	19	4.9	0.02	189,597	8,266	0.93	0.19	0.05	1h	1h -> 2h
T-U	Paved	19	4.9	0.09	187,534	32,181	0.92	0.18	0.05	1i	1i -> 2i
U-B	Paved	19	4.9	0.27	187,520	100,361	0.92	0.18	0.05	1j	1j -> 2j
O-AAA	Paved	24	4.9	0.07	23,445	3,479	1.17	0.23	0.06	1k	1k -> 2k

Column	Control Efficiency[f] (%)	Uncontrolled Unmitigated PM Emissions (tons/yr)	Uncontrolled Unmitigated PM_{10} Emissions (tons/yr)	Uncontrolled Unmitigated $PM_{2.5}$ Emissions (tons/yr)	Controlled Unmitigated PM Emissions (tons/yr)	Controlled Unmitigated PM_{10} Emissions (tons/yr)	Controlled Unmitigated $PM_{2.5}$ Emissions (tons/yr)
2a	80	6.77	1.35	0.33	1.35	0.27	0.07
2b	80	11.66	2.33	0.57	2.33	0.47	0.11
2c	80	5.48	1.10	0.27	1.10	0.22	0.05
2d	80	15.21	3.04	0.75	3.04	0.61	0.15
2e	80	9.32	1.86	0.46	1.86	0.37	0.09
2f	80	6.24	1.25	0.31	1.25	0.25	0.06
2g	80	9.56	1.91	0.47	1.91	0.38	0.09
2h	80	3.83	0.77	0.19	0.77	0.15	0.04
2i	80	14.83	2.97	0.73	2.97	0.59	0.15
2j	80	46.25	9.25	2.27	9.25	1.85	0.45
2k	80	2.04	0.41	0.10	0.41	0.08	0.02
	Total	**131.21**	**26.24**	**6.44**	**26.24**	**5.25**	**1.29**

Notes:
[a] From AP-42 Chapter 13.2.1, Table 13.2.1-1.
[b] From Emission Factor Documentation for AP-42, Chapter 13.2.1, Section 2.2.4 (Jan 2011). These values provide a conservative estimate of these correction factors.
[c] Vehicle weight for customer trucks based on average weight from truck scale data from January to March 2012 and slag storage area data.
[d] From AP-42, Chapter 13.2.1, Table 13.2.1-3 (average silt loading from iron and steel production). Silt loading default value is for integrated steel mills. Half of the default value is used for roadways (except facility entrance) because several silt generating activities at integrated mills, such as coal/coke storage and processing, are not present at secondary steel mills. Per Emission Factor Documentation for AP-42, Section 13.2.1 (01/11), paved road testing at an integrated iron and steel plant (Section 4.2.1.6) showed that main access routes with mostly "foreign vehicles" (i.e., cars and semi trucks rather than plant haul trucks and other equipment) more closely resemble urban roads rather than industrial road in terms of emissions characteristics. Therefore, silt loading for the facility entrance, which consists almost entirely of "foreign" vehicles, was conservatively set to the ubiquitous baseline silt loading in AP-42 Table 13.2.1-2 for public roads with average daily traffic of less than 500 vehicles.
[e] Segment lengths obtained from Butler facility map.
[f] Control efficiency required by MSM No. T033-30828-00047, Condition D.12.1.

Methodology:
Miles/Year = Segment Length (miles) x Trips per Year x 2 One-way Trips

Steel Dynamics, Inc. - Flat Roll Division
Butler, IN
Projected Road Emissions Continued

Affected Unpaved Roads Emission Calculations (Future PTE)
AP-42 Chapter 13.2.2 (11/06)

Unmitigated Emission Factor (lb/mile) = [k * (s/12)^a * (W/3)^b] (AP-42, Chapter 13.2.2, Equation 1a)
where k = particle size multiplier (lb/VMT)
s = surface material silt content (%)
W = average weight (tons) of the vehicles traveling on the road
a = constant
b = constant

Uncontrolled/Unmitigated Emissions (tons/yr) = Unmitigated Emission Factor (lb/mile) * miles/yr / 2,000 (lb/ton)
Controlled/Unmitigated Emissions (tons/yr) = Uncontrolled/Unmitigated Emissions (tons/yr) * (1 - Control Efficiency (%))

Constants[a]								
PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
k (lb/VMT)	k (lb/VMT)	k (lb/VMT)	a	a	a	b	b	b
4.9	1.5	0.15	0.7	0.9	0.9	0.45	0.45	0.45

Road Segment	Road Type	W (tons)[c]	s[d]	Segment Length[e] (miles)	Trips/Year	Miles/Year	Unmitigated PM Emission Factor (lb/mile)	Unmitigated PM_{10} Emission Factor (lb/mile)	Unmitigated $PM_{2.5}$ Emission Factor (lb/mile)	Column	
M-AAA	Unpaved	26	2.6	0.08	20,585	3,351	4.43	1.00	0.10	1a	1a -> 2a
BBB-XXX	Unpaved	28	2.6	0.11	6,114	1,389	4.55	1.03	0.10	1b	1b -> 2b
XXX-SSS	Unpaved	24	2.6	0.06	20,938	2,617	4.26	0.96	0.10	1c	1c -> 2c
SSS-DDD	Unpaved	28	2.6	0.07	6,114	811	4.55	1.03	0.10	1d	1d -> 2d

Column	Control Efficiency[f] (%)	Uncontrolled Unmitigated PM Emissions (tons/yr)	Uncontrolled Unmitigated PM_{10} Emissions (tons/yr)	Uncontrolled Unmitigated $PM_{2.5}$ Emissions (tons/yr)	Controlled Unmitigated PM Emissions (tons/yr)	Controlled Unmitigated PM_{10} Emissions (tons/yr)	Controlled Unmitigated $PM_{2.5}$ Emissions (tons/yr)
2a	80	7.42	1.67	0.17	1.48	0.33	0.03
2b	80	3.16	0.71	0.07	0.63	0.14	0.01
2c	80	5.58	1.26	0.13	1.12	0.25	0.03
2d	80	1.85	0.42	0.04	0.37	0.08	0.01
Total		**18.01**	**4.06**	**0.41**	**3.60**	**0.81**	**0.08**

[a] AP-42 Section 13.2.2, Table 13.2.2-2
[b] Traffic does not include front-end loader movement within the existing slag area because slag that would have otherwise been moved via front-end loader to piles within the existing slag area will now be moved to the new slag area, with no change in traffic.
[c] Vehicle weight for customer trucks based on average weight from truck scale data from January to March 2012 and slag storage area data.
[d] Indiana default silt content for National Emission Inventory, per AP-42 Section 13.2.2 Related Information. (http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-2.html) This value is used for affected unpaved roads outside of the slag processing area.
[e] Segment lengths obtained from Butler facility map.
[f] Control efficiency required by MSM No. T033-30828-00047, Condition D.12.1.

Methodology:
Miles/Year = Segment Length (miles) x Trips per Year x 2 One-way Trips

Steel Dynamics, Inc. - Flat Roll Division
Butler, IN
Projected Road Emissions Continued

New Unpaved Roads Emission Calculations (Future PTE)
AP-42 Chapter 13.2.2 (11/06)

Unmitigated Emission Factor (lb/mile) = [k * (s/12)^a * (W/3)^b] (AP-42, Chapter 13.2.2, Equation 1a)
where k = particle size multiplier (lb/VMT)
s = surface material silt content (%)
W = average weight (tons) of the vehicles traveling on the road
a = constant
b = constant

Uncontrolled/Unmitigated Emissions (tons/yr) = Unmitigated Emission Factor (lb/mile) * miles/yr / 2,000 (lb/ton)
Controlled/Unmitigated Emissions (tons/yr) = Uncontrolled/Unmitigated Emissions (tons/yr) * (1 - Control Efficiency (%))

Constants[a]								
PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
k (lb/VMT)	k (lb/VMT)	k (lb/VMT)	a	a	a	b	b	b
4.9	1.5	0.15	0.7	0.9	0.9	0.45	0.45	0.45

Road Segment	Road Type	W (tons)[c]	s[d]	Segment Length[e] (miles)	Trips/Year	Miles/Year	Unmitigated PM Emission Factor (lb/mile)	Unmitigated PM_{10} Emission Factor (lb/mile)	Unmitigated $PM_{2.5}$ Emission Factor (lb/mile)	Column	
P-XXX	Unpaved	22	2.6	0.05	14,824	1,459	4.14	0.93	0.09	1a	1a -> 2a
SSS-TTT	Unpaved	22	2.6	0.06	14,824	1,684	4.14	0.93	0.09	1b	1b -> 2b
TTT-UUU	Unpaved	22	2.6	0.09	14,824	1,404	4.14	0.93	0.09	1c	1c -> 2c
BBB-QQQ	Unpaved	55	2.6	0.12	4,484	1,104	6.24	1.41	0.14	1d	1d -> 2d
BBB-WWW	Unpaved	58	2.6	0.05	3,754	412	6.36	1.43	0.14	1e	1e -> 2e
QQQ-UUU	Unpaved	55	2.6	0.12	4,484	1,104	6.24	1.41	0.14	1f	1f -> 2f

Column	Control Efficiency[f] (%)	Uncontrolled Unmitigated PM Emissions (tons/yr)	Uncontrolled Unmitigated PM_{10} Emissions (tons/yr)	Uncontrolled Unmitigated $PM_{2.5}$ Emissions (tons/yr)	Controlled Unmitigated PM Emissions (tons/yr)	Controlled Unmitigated PM_{10} Emissions (tons/yr)	Controlled Unmitigated $PM_{2.5}$ Emissions (tons/yr)
2a	80	3.02	0.68	0.07	0.60	0.14	0.01
2b	80	3.48	0.79	0.08	0.70	0.16	0.02
2c	80	2.90	0.65	0.07	0.58	0.13	0.01
2d	80	3.44	0.78	0.08	0.69	0.16	0.02
2e	80	1.31	0.30	0.03	0.26	0.06	0.01
2f	80	3.44	0.78	0.08	0.69	0.16	0.02
Total for New Road Segments		**17.60**	**3.97**	**0.40**	**3.52**	**0.79**	**0.08**

[a] AP-42 Section 13.2.2, Table 13.2.2-2
[b] Traffic does not include front-end loader movement within the existing slag area because slag that would have otherwise been moved via front-end loader to piles within the existing slag area will now be moved to the new slag area, with no change in traffic.
[c] Vehicle weight for customer trucks based on average weight from truck scale data from January to March 2012 and slag storage area data.
[d] Indiana default silt content for National Emission Inventory, per AP-42 Section 13.2.2 Related Information. (http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-2.html) This value is used for affected unpaved roads outside of the slag processing area.
[e] Segment lengths obtained from Butler facility map.
[f] Control efficiency required by MSM No. T033-30828-00047, Condition D.12.1.

Methodology:
Miles/Year = Segment Length (miles) x Trips per Year x 2 One-way Trips

Appendix A: Emissions Calculations
Baseline Road Emissions

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Affected Paved Roads Emission Calculations (Baseline PTE)

AP-42 Chapter 13.2.1 (1/11)

Unmitigated Emission Factor (lb/mile) = [k * (sL)^0.91 * W^1.02] (AP-42, Chapter 13.2.1, Equation 1)
Mitigated Emission Factor (lb/mile) = [k * (sL)^0.91 * W^1.02 + C] * [1-P/4N] (AP-42, Chapter 13.2.1, Equation 2)
where k = particle size multiplier (lb/VMT)
sL = road surface silt loading (g/m2)
W = average weight (tons) of the vehicles traveling on the road

Uncontrolled/Unmitigated Emissions (tons/yr) = Unmitigated Emission Factor (lb/mile) * miles/yr / 2,000 (lb/ton)
Controlled/Unmitigated Emissions (tons/yr) = Uncontrolled/Unmitigated Emissions (tons/yr) * (1 - Control Efficiency (%))

Constants		
PM[a]	PM_{10}[a]	$PM_{2.5}$[a]
k (lb/VMT)	k (lb/VMT)	k (lb/VMT)
0.011	0.0022	0.00054

Road Segment	Road Type	W (tons)[c]	sL (g/m^2)[d]	Segment Length[e] (miles)	Trips/Year	Miles/Year	Unmitigated PM Emission Factor (lb/mile)	Unmitigated PM_{10} Emission Factor (lb/mile)	Unmitigated $PM_{2.5}$ Emission Factor (lb/mile)	Column	
A-B	Paved	13	0.6	0.17	388,360	132,975	0.10	0.02	0.00	1a	1a -> 2a
M-N	Paved	25	4.9	0.07	122,479	16,706	1.26	0.25	0.06	1b	1b -> 2b
N-O	Paved	24	4.9	0.03	127,245	8,144	1.22	0.24	0.06	1c	1c -> 2c
O-P	Paved	25	4.9	0.08	129,388	20,625	1.22	0.24	0.06	1d	1d -> 2d
P-Q	Paved	25	4.9	0.05	128,520	13,829	1.22	0.24	0.06	1e	1e -> 2e
Q-R	Paved	19	4.9	0.04	166,263	11,838	0.96	0.19	0.05	1f	1f -> 2f
R-S	Paved	19	4.9	0.05	166,263	18,123	0.96	0.19	0.05	1g	1g -> 2g
S-T	Paved	18	4.9	0.02	174,773	7,620	0.91	0.18	0.04	1h	1h -> 2h
T-U	Paved	18	4.9	0.09	172,730	29,640	0.91	0.18	0.04	1i	1i -> 2i
U-B	Paved	18	4.9	0.27	172,696	92,427	0.91	0.18	0.04	1j	1j -> 2j
O-AAA	Paved	26	4.9	0.07	8,621	1,279	1.28	0.26	0.06	1k	1k -> 2k

Column	Control Efficiency[f] (%)	Uncontrolled Unmitigated PM Emissions (tons/yr)	Uncontrolled Unmitigated PM_{10} Emissions (tons/yr)	Uncontrolled Unmitigated $PM_{2.5}$ Emissions (tons/yr)	Controlled Unmitigated PM Emissions (tons/yr)	Controlled Unmitigated PM_{10} Emissions (tons/yr)	Controlled Unmitigated $PM_{2.5}$ Emissions (tons/yr)
2a	80	6.36	1.27	0.31	1.27	0.25	0.06
2b	80	10.54	2.11	0.52	2.11	0.42	0.10
2c	80	4.95	0.99	0.24	0.99	0.20	0.05
2d	80	12.60	2.52	0.62	2.52	0.50	0.12
2e	80	8.44	1.69	0.41	1.69	0.34	0.08
2f	80	5.66	1.13	0.28	1.13	0.23	0.06
2g	80	8.66	1.73	0.43	1.73	0.35	0.09
2h	80	3.48	0.70	0.17	0.70	0.14	0.03
2i	80	13.43	2.69	0.66	2.69	0.54	0.13
2j	80	41.87	8.37	2.06	8.37	1.67	0.41
2k	80	0.82	0.16	0.04	0.16	0.03	0.01
	Total	**116.83**	**23.37**	**5.74**	**23.37**	**4.67**	**1.15**

Notes:
[a] From AP-42 Chapter 13.2.1, Table 13.2.1-1.
[b] From Emission Factor Documentation for AP-42, Chapter 13.2.1, Section 2.2.4 (Jan 2011). These values provide a conservative estimate of these correction factors.
[c] Vehicle weight for customer trucks based on average weight from truck scale data from January to March 2012.
[d] From AP-42, Chapter 13.2.1, Table 13.2.1-3 (average silt loading from iron and steel production). Silt loading default value is for integrated steel mills. Half of the default value is used for roadways (except facility entrance) because several silt generating activities at integrated mills, such as coal/coke storage and processing, are not present at secondary steel mills. Per Emission Factor Documentation for AP-42, Section 13.2.1 (01/11), paved road testing at an integrated iron and steel plant (Section 4.2.1.6) showed that main access routes with mostly "foreign vehicles" (i.e., cars and semi trucks rather than plant haul trucks and other equipment) more closely resemble urban roads rather than industrial road in terms of emissions characteristics. Therefore, silt loading for the facility entrance, which consists almost entirely of "foreign" vehicles, was conservatively set to the ubiquitous baseline silt loading in AP-42 Table 13.2.1-2 for public roads with average daily traffic of less than 500 vehicles.
[e] Segment lengths obtained from Butler facility map.
[f] Control efficiency required by CP No. 033-3692-00047, Condition D.12.1.

Methodology:
Miles/Year = Segment Length (miles) x Trips per Year x 2 One-way Trips

Steel Dynamics, Inc. - Flat Roll Division
Butler, IN
Baseline Road Emissions Continued

Affected Unpaved Roads Emission Calculations (Baseline PTE)

AP-42 Chapter 13.2.2 (11/06)

Unmitigated Emission Factor (lb/mile) = [k * (s/12)^a * (W/3)^b] (AP-42, Chapter 13.2.2, Equation 1a)
where k = particle size multiplier (lb/VMT)
s = surface material silt content (%)
W = average weight (tons) of the vehicles traveling on the road
a = constant
b = constant

Uncontrolled/Unmitigated Emissions (tons/yr) = Unmitigated Emission Factor (lb/mile) * miles/yr / 2,000 (lb/ton)
Controlled/Unmitigated Emissions (tons/yr) = Uncontrolled/Unmitigated Emissions (tons/yr) * (1 - Control Efficiency (%))

Constants[a]								
PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
k (lb/VMT)	k (lb/VMT)	k (lb/VMT)	a	a	a	b	b	b
4.9	1.5	0.15	0.7	0.9	0.9	0.45	0.45	0.45

Road Segment	Road Type	W (tons)[c]	s[d]	Segment Length[e] (miles)	Trips/Year	Miles/Year	Unmitigated PM Emission Factor (lb/mile)	Unmitigated PM_{10} Emission Factor (lb/mile)	Unmitigated $PM_{2.5}$ Emission Factor (lb/mile)	Column	
M-AAA	Unpaved	35	2.6	0.08	5,761	938	5.09	1.15	0.11	1a	1a -> 2a
BBB-DDD	Unpaved	28	2.6	0.21	6,114	2,608	4.55	1.03	0.10	1b	1b -> 2b

Column	Control Efficiency[f] (%)	Uncontrolled Unmitigated PM Emissions (tons/yr)	Uncontrolled Unmitigated PM_{10} Emissions (tons/yr)	Uncontrolled Unmitigated $PM_{2.5}$ Emissions (tons/yr)	Controlled Unmitigated PM Emissions (tons/yr)	Controlled Unmitigated PM_{10} Emissions (tons/yr)	Controlled Unmitigated $PM_{2.5}$ Emissions (tons/yr)
2a	80	2.39	0.54	0.05	0.48	0.11	0.01
2b	80	5.94	1.34	0.13	1.19	0.27	0.03
	Total	**8.33**	**1.88**	**0.19**	**1.67**	**0.38**	**0.04**

[a] AP-42 Section 13.2.2, Table 13.2.2-2
[b] Traffic does not include front-end loader movement within the existing slag area because slag that would have otherwise been moved via front-end loader to piles within the existing slag area will now be moved to the new slag area, with no change in traffic.
[c] Vehicle weight for customer trucks based on average weight from truck scale data from January to March 2012.
[d] Indiana default silt content for National Emission Inventory, per AP-42 Section 13.2.2 Related Information. (http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-2.html) This value is used for affected unpaved roads outside of the slag processing area.
[e] Segment lengths obtained from Butler facility map.
[f] Control efficiency required by MSM No. T033-30828-00047, Condition D.12.1.
gRoad segment BBB-DDD is being broken into sub-segments BBB-XXX, XXX-SSS, and SSS-DDD as part of this project.

Methodology:
Miles/Year = Segment Length (miles) x Trips per Year x 2 One-way Trips

Appendix A: Emissions Calculations
Erosion Emission Factors

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Emission Factors for Storage Pile Erosion

Wind Erosion - Emission Factor Equation[1]

$$k \sum_{i=1}^{N} p_i \qquad P = 58\,(u^* - u_t^*)^2 + 25\,(u^* - u_t^*)$$

where:	Value PM_{30}	PM_{10}	$PM_{2.5}$	Units	Data Source
k = particle size multiplier for particle size range and units of interest	1	0.5	0.075		AP-42, Section 13.2.5.3[2]
N = number of disturbances per year	365			days	Assume once per day
% of total pile area for subarea A	12			%	AP-42, Figure 13.2.5-3
% of total pile area for subarea B	48			%	AP-42, Figure 13.2.5-3
% of total pile area for subarea C	40			%	AP-42, Figure 13.2.5-3
u^+ = fastest mile of wind speed at anemometer height	20			m/s	National Climatic Data Center Publication[3]
z = Anemometer Height at Station	33			ft	ASOS[4]
	10.06			m	
u_{10}^+ = fastest mile of wind speed at a reference height of 10 m	20			m/s	AP-42, Section 13.2.5.3, Equation 5[5]
u* = maximum friction velocity for large flattop pile	1.04			m/s	AP-42, Section 13.2.5.3, Equation 4[5,6]
u* = maximum friction velocity conical pile subarea A	1.77			m/s	AP-42, Section 13.2.5.3, Equations 6 & 7[7]
u* = maximum friction velocity conical pile subarea B	1.18			m/s	AP-42, Section 13.2.5.3, Equations 6 & 7[7]
u* = maximum friction velocity conical pile subarea C	0.39			m/s	AP-42, Section 13.2.5.3, Equations 6 & 7[7]
u_t* = threshold friction velocity	1.02			m/s	AP-42, Table 13.2.5-2[8]
P = erosion potential for large flattop pile	0.57			g/m^2-disturbance	AP-42, Section 13.2.5.3, Equation 3
P = erosion potential for conical pile subarea A	51.25			g/m^2-disturbance	AP-42, Section 13.2.5.3, Equation 3
P = erosion potential for conical pile subarea B	5.45			g/m^2-disturbance	AP-42, Section 13.2.5.3, Equation 3
P = erosion potential for conical pile subarea C	0.00			g/m^2-disturbance	AP-42, Section 13.2.5.3, Equation 3
E = daily/hourly particulate emission factor for large flattop pile	0.57	0.28	0.04	g/m^2	**One disturbance per day at maximum daily wind speed from 2011. Assume emissions occur in a single hour during peak wind gust.**
E = daily/hourly particulate emission factor for large conical pile	8.77	4.38	0.66	g/m^2	
E = annual particulate emission factor for large flattop pile	0.57	0.28	0.04	g/m^2	**Calculation**
E = annual particulate emission factor for conical pile	75.80	37.90	5.69	g/m^2	

[1] AP-42, Section 13.2.5.3, Equation 2 (11/06).
[2] k value selected is for PM is PM_{30}.
[3] Maximum 2-minute daily wind speed data from the National Climatic Data Center for each day from 2011 (http://www7.ncdc.noaa.gov/IPS/lcd/lcd.html). Data based on wind speeds monitored by the Fort Wayne Intl Airport Airport Monitoring Station. The 2-minute maximum windspeed is used instead of the 3-second windspeed data per AP 42 Section 13.2.5.2, which states that "the fastest mile, typically about 2 minutes, matches well with the half-life of the erosion process, which ranges from 1-4 minutes."
[4] http://www.weather.gov/ops2/Surface/documents/windtower.xls
[5] Assumes a typical roughness height of 0.5 cm (0.005 m), since no site specific data is available.
[6] Friction Velocity = $0.053*u_{10}^+$
[7] Friction Velocity = $.1*[(u_s)/u_r]*u_{10}^+$, where $(u_s)/u_r$ = 0.9, 0.6, and 0.2 for pile subareas A, B, and C respectively.
[8] Threshold friction velocity data based on overburden at a surface coal mine.

Appendix A: Emissions Calculations
Data Inputs

Company Name: Steel Dynamics, Inc. - Flat Roll Division
Address City IN Zip: 4500 County Rd 59, Butler, IN 46721
Minor Source Modification No.: 033-32483-00043
MinorPermit Modification No.: 033-32660-00043
Reviewer: Kristen Willoughby
Date: 11/5/2012

Slag Area Data Inputs

Slag Pile Specifications

Facility ID	Slag Area Contents	Max Pile Base Area (ft^2)	Pile Shape	Max Hourly Loading Rate (tons/hr)	Max Hourly Unloading Rate (tons/hr)	Max Pile Height (ft)	Annual Process Throughput - Loading (tpy)	Annual Process Throughput - Unloading (tpy)	Basis
Slag Area 1, 2, 3	100% EAF Slag or 70% EAF Slag, 15% Ladle Brick, 15% Mill Scale	566,000	Flattop	400	350	60	265,000	265,000	Slag storage will be split between existing slag process area and the new slag storage areas, such that not all slag processed will be stored in the slag storage areas. Annual Process Throughputs conservatively assume that 100% of potential annual slag production will be loaded and unloaded at the slag storage area. Hourly loading rate ar based on stacker use and hourly unloading rate is based on front end loader use.

Slag Pile Area Calculations

Facility ID	Slag Area Contents	Max Pile Height (m)	Max Pile Base Area (m^2)	Max Pile Perimeter (m)	Max Pile Area (m^2)	Basis
Slag Area 1, 2, 3	100% EAF Slag or 70% EAF Slag, 15% Ladle Brick, 15% Mill Scale	18.29	52,583	2,220	93,182	Max Pile Area (m^2) = Max Base Pile Area (m^2) + Max Pile Perimeter (m) *Max Pile Height (m)

Slag Moisture Contents

Facility ID	Slag Area Contents	Wet Moisture Content (%)	Dry Moisture Content (%)	Basis
Slag Area 1, 2, 3	100% EAF Slag or 70% EAF Slag, 15% Ladle Brick, 15% Mill Scale	3.0	0.92	Wet moisture content 3.0% conservatively based on slag moisture only, the lowest moisture content material, with use of water sprays as required in the fugitive dust plan. 0.92% is the average moisture content of slag per AP-42 13.2.4 and is used to calculate emissions assuming water sprays are not used.

Slag Loading and Unloading

Equipment / Load	Weight (tons)	Basis
Customer Truck Weight	13	2012 vehicle traffic data
Customer Truck Load	18	2012 vehicle traffic data
Front-end Loader Weight	38	Plant estimate
Front-end Loader Load	10	Plant estimate
Dump Truck Weight	40	2012 vehicle traffic data
Dump Truck Load	35	2012 vehicle traffic data

Traffic	No. Trips Annual	Basis
Customer Truck	14,821	= Annual Process Throughput - Unloading (ton/yr) / Customer Truck Load (tons/trip)
Front End Loader - Customer Truck	730	Assume Front-End Loader will remain in pile area for loading throughout the day, with minimal traffic moving between the pile and the customer truck.
Dump Truck - Pile Loading Area 1	3,754	= Annual Process Throughput - Loading (ton/yr) / Dump Truck Load (tons/trip) / 2
Dump Truck - Pile Loading Area 2	3,754	= Annual Process Throughput - Loading (ton/yr) / Dump Truck Load (tons/trip) / 2

Notes:
Assume 50/50 split between Area 1 and Area 2 for front end loading pile loading traffic. The distance to Area 3 is less than for the other piles, so this is conservative.

Wind Speed Data

Month	Average (mph)	Basis
Jan.	9.0	From 2011 Local Climatological Data for the Fort Wayne Intl Airport.
Feb.	10.8	Tabulated are the monthly average wind speeds from the same documents as the fastest mile data.
Mar,	10.0	(http://www7.ncdc.noaa.gov/IPS/lcd/lcd.html)
Apr,	12.8	
May	8.1	
Jun.	8.1	
Jul.	5.7	
Aug.	5.2	
Sept.	7.4	
Oct.	6.7	
Nov.	11.1	
Dec.	8.2	
Average	8.6	

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Governor

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TO: Barry Smith
Steel Dynamics, Inc. - Flat Roll Division
4500 County Road 59
Butler, IN 46721

DATE: February 4, 2013

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

SUBJECT: Final Decision
Minor Source Modification to Part 70
033-32483-00043

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:
Glenn Pushis, Responsible Official
David Dempsey, Trinity Consultants
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

Mail Code 61-53

IDEM Staff	PWAY 2/4/2013 SDI- Steel Dynamics, Inc 033-32483-00043 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		Glenn Pushis VP / GM - Flat Roll Division SDI- Steel Dynamics, Inc 4500 CR 59 Butler IN 46721 *(RO CAATS)*									
3		Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 *(Affected Party)*									
4		DeKalb County Commissioners 100 South Main Street Auburn IN 46706 *(Local Official)*									
5		Ms. Diane Leroy 303 N. Jackson St. Auburn IN 46706 *(Affected Party)*									
6		Mr. Barry Fordanish R#3 1480 CR 66 Auburn IN 46706 *(Affected Party)*									
7		Dekalb County Health Department 220 E 7th St #110 Auburn IN 46706 *(Health Department)*									
8		Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 *(Affected Party)*									
9		Mr. Mario Wilson Laser, Inc. PO Box 907 Gridley CA 95948-0907 *(Affected Party)*									
10		Brown & Sons Fuel Co. P.O. Box 665 Kendallville IN 46755 *(Affected Party)*									
11		Mr. Marty K. McCurdy 2550 County Road 27 Waterloo IN 46793 *(Affected Party)*									
12		Butler City Council and Mayors Office 201 S. Broadway Butler IN 47621 *(Local Official)*									
13		Ms. Camille Sears 502 W Lomita Ave Ojai CA 93023 (Affected Party)									
14		Mr. David Dempsey Trinity Consultants 7330 Woodland Drive, Suite 225 Indianapolis IN 46278 *(Consultant)*									
15											

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