



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To: Interested Parties

Date: June 16, 2014

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

Source Name: Steel Dynamics, Inc.

Permit Level: Minor Source Operating Permit Administrative Amendment

Permit Number: 019-34480-00089

Source Location: 5134 Loop Road, Jeffersonville, Indiana

Type of Action Taken: Changes that are administrative in nature

Notice of Decision: Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>
To view the document, select Search option 3, then enter permit 34480.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from 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.



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**Minor Source Operating Permit Renewal
OFFICE OF AIR QUALITY**

**Steel Dynamics, Inc.
5134 Loop Road
Jeffersonville, Indiana 47130**

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1 and 326 IAC 2-6.1, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 MSOP under 326 IAC 2-6.1.

Operation Permit No.: M019-30060-00089	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 15, 2011 Expiration Date: December 15, 2021
Minor Permit Revision No.:019-33061-00089, issued on April 22, 2013	
Administrative Amendment No.:019-34480-00089	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 16, 2014 Expiration Date: December 15, 2021

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 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 2-6.1-4(a)]

The Permittee owns and operates a stationary steel coil coating facility.

Source Address:	5134 Loop Road, Jeffersonville, Indiana 47130
General Source Phone Number:	(812) 218-1490
SIC Code:	3479 (Coating, Engraving, and Allied Services, Not Elsewhere Classified)
County Location:	Clark
Source Location Status:	Nonattainment for PM _{2.5} standard Attainment for all other criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) hot dip galvanizing line, constructed in 1998, approved in 2014 for modification to increase the line speed, with a nominal production capacity of 74 tons per hour, consisting of the following:
 - (1) One (1) alkaline cleaning process consisting of:
 - (i) One (1) high pressure hot water spray tank, equipped with one (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour, approved in 2014 for construction,
 - (ii) One (1) hot water generator, equipped with one (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour, approved in 2014 for construction,
 - (iii) One (1) natural gas-fired hot air dryer, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,
 - (iv) Two (2) cascade rinse tanks, each with nominally heat input rated at 1.35 MMBtu per hour, approved in 2014 for construction,
 - (v) One (1) cascade rinse tank, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,
 - (vi) two (2) alkaline spray tanks, each equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction,

- (vii) One (1) brush, equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction, no control, and
 - (viii) One (1) exhaust blower equipped with a demister to remove particulate matter emissions in the air stream of the alkaline cleaning process, constructed in 1998 and exhausting to stack S2.
 - (2) One (1) four-section annealing furnace equipped with natural gas-fired low-NO_x burners, consisting of a preheat section nominally rated at 56.0 MMBtu per hour, exhausting to stack S1, and a radiant tube section nominally rated at 21.0 MMBtu per hour, constructed in 1998.
- (b) One (1) coil coating line for applying primer and finish coats to both sides of steel coil in one pass, constructed in 2008, with a nominal coating capacity of 600 linear feet of coil per minute, using rolling application methods, consisting of:
 - (i) one (1) natural gas-fired curing oven for drying primer coat, identified as Primer Curing Oven.

This Primer Curing Oven is also equipped with low NO_x burners having a nominal heat capacity of 11.6 MMBtu per hour and is used to provide heat for startup and to keep this oven hot during process interruptions.
 - (ii) one (1) curing oven for drying finish coat, identified as Finish Curing Oven.

These two ovens are heated by an integral thermal oxidizer fueled by VOC with natural gas available as a supplemental fuel, with a nominal heat input capacity of 60 MMBtu per hour.

The thermal oxidizer utilizes low NO_x burners and is considered an integral part of the process. The integral thermal oxidizer also acts to reduce VOC emissions from the coating line.

The coil coating line exhausts to stack S3.

This unit is considered an affected source under 40 CFR Part 60, Subpart TT (Metal Coil Surface Coating).
- (c) One (1) distillation solvent recycle system, associated with the Paint Line (Coil Coating Line), with a nominally rate of 54,750 gallons of solvent per year for recycle, no control, and exhausting inside the building, approved in 2014 for construction.
- (d) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of:
 - (1) One (1) natural gas-fired hot air dryer nominally rated at 2.0 MMBtu per hour associated with the chemical treatment dip tank.
 - (2) One (1) quench tank hot air dryer, nominally rated at 2.0 MMBtu per hour.
- (e) Welding equipment related to manufacturing activities not resulting in the emission of HAPs, consisting of one (1) lap seam welder that fuses coil ends together to allow continuous line operation.

- (f) Activities with emissions equal to or less than the following thresholds: 5 lb/hour or 25 lbs/day PM₁₀; 5 lbs/hour or 25 lbs/day SO₂; 5 lbs/hour or 25 lbs/day NO_x; 3 lbs/hour or 15 lbs/day VOC; 0.6 tons per year Pb; 5 lbs/day or 1.0 ton/year of a single HAP, and 12.5 lbs/day or 2.5 ton/year of any combination of HAPs, consisting of:
 - (1) One (1) electrically heated zinc pot.
 - (2) One (1) surface chemical treatment dip tank that applies a protective chromium coating to the surface of the steel, with no particulate formed in the process.
- (g) One (1) outdoor scrap metal sorting operation, with a nominal metal processing throughput of 40.0 tons per hour, and consisting of the following:
 - (1) Two (2) oxypropane torches, approved for construction in 2013, cutting galvanized pipes and coils with a nominal thickness of 0.0625 inches and a nominal cutting rate of 12.0 inches per minute, each, uncontrolled, and exhausting outdoors.
 - (2) Four (4) oxypropane torches, approved for construction in 2013, cutting metal plates with a nominal thickness of 4.0 inches and a nominal metal cutting rate of 20.0 inches per minute, each, uncontrolled, and exhausting outdoors.
 - (3) One (1) oxypropane torch, approved for construction in 2013, cutting mandrels with a nominal thickness of 26.0 inches and a nominal metal cutting rate of 1.0 inches per minute, uncontrolled, and exhausting outdoors.
 - (4) Metal storage piles.
 - (5) Unpaved roads.
- (h) Paved roads and parking lots with public access.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M019-30060-00089, is issued for a fixed term of ten (10) 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, 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

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

B.5 Severability

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

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

B.7 Duty to Provide Information

- (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 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached or its equivalent no later than March 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
- (c) The notification 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.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
 - (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.The Permittee shall implement the PMPs.
- (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 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.
- (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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M019-30060-00089 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.11 Termination of Right to Operate [326 IAC 2-6.1-7(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 one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

- (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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete, as known at the time of completion of the application, and shall subject the applicant to liability under state laws forbidding false or misleading statements, by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 one hundred twenty (120) days 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 2-6.1 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 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

B.15 Inspection and Entry

[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

- (a) Enter upon the Permittee's premises where a permitted 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ.
- (b) 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.18 Credible Evidence [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 2-6.1-5(a)(1)]

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

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any 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 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

C.5 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.6 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).

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 60.120.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

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 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

Compliance Requirements [326 IAC 2-1.1-11]

C.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 2-6.1-5(a)(2)]

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

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 by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.11 Instrument Specifications [326 IAC 2-1.1-11]

- (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

C.12 Response to Excursions or Exceedances

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

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not 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.13 Actions Related to Noncompliance Demonstrated by a Stack Test

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

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the attached Malfunction Report Form (2 pages) or its equivalent. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment subject to the requirements of 326 IAC 1-6 shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (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.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) hot dip galvanizing line, constructed in 1998, approved in 2014 for modification to increase the line speed, with a nominal production capacity of 74 tons per hour, consisting of the following:
 - (1) One (1) alkaline cleaning process consisting of:
 - (i) One (1) high pressure hot water spray tank, equipped with one (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour, approved in 2014 for construction,
 - (ii) One (1) hot water generator, equipped with one (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour, approved in 2014 for construction,
 - (iii) One (1) natural gas-fired hot air dryer, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,
 - (iv) Two (2) cascade rinse tanks, each with nominally heat input rated at 1.35 MMBtu per hour, approved in 2014 for construction,
 - (v) One (1) cascade rinse tank, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,
 - (vi) two (2) alkaline spray tanks, each equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction,
 - (vii) One (1) brush, equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction, no control, and
 - (viii) One (1) exhaust blower equipped with a demister to remove particulate matter emissions in the air stream of the alkaline cleaning process, constructed in 1998 and exhausting to stack S2.
 - (2) One (1) four-section annealing furnace equipped with natural gas-fired low-NO_x burners, consisting of a preheat section nominally rated at 56.0 MMBtu per hour, exhausting to stack S1, and a radiant tube section nominally rated at 21.0 MMBtu per hour, constructed in 1998.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the alkaline cleaning process and annealing furnace shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf), each.

D.1.2 Nitrogen Oxide Emissions Limitations [326 IAC 10-1]

Pursuant to Permit # 019-9559-00089, issued on June 23, 1998 and 326 IAC 10-1(a)(3), the annealing furnace shall utilize low-NOx burners.

Compliance Determination Requirements

D.1.3 Particulate Control

In order to comply with Condition D.1.1, the demister for particulate control shall be in operation at all times the hot dip galvanizing line is in operation.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (b) One (1) coil coating line for applying primer and finish coats to both sides of steel coil in one pass, constructed in 2008, with a nominal coating capacity of 600 linear feet of coil per minute, using rolling application methods, consisting of:

- (i) one (1) natural gas-fired curing oven for drying primer coat, identified as Primer Curing Oven.

This Primer Curing Oven is also equipped with low NO_x burners having a nominal heat capacity of 11.6 MMBtu per hour and is used to provide heat for startup and to keep this oven hot during process interruptions.

- (ii) one (1) curing oven for drying finish coat, identified as Finish Curing Oven.

These two ovens are heated by a integral thermal oxidizer fueled by VOC with natural gas available as a supplemental fuel, with a nominal heat input capacity of 60 MMBtu per hour.

The thermal oxidizer utilizes low NO_x burners and is considered an integral part of the process. The integral thermal oxidizer also acts to reduce VOC emissions from the coating line.

The coil coating line exhausts to stack S3.

This unit is considered an affected source under 40 CFR Part 60, Subpart TT.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Nitrogen Oxide Control Requirement (BACT) [326 IAC 10-1-1]

Pursuant to MSOP 019-22695-00089, issued on September 25, 2006 and 326 IAC 10-1-1(a)(3), for the primer curing oven and integral thermal oxidizer, the Permittee shall:

- (a) Utilize low-NO_x burners; and
(b) Limit NO_x emissions to less than 3.51 pounds per hour.

D.2.2 Volatile Organic Compound (VOC) Content Limitations [326 IAC 8-2-4]

Pursuant to 326 IAC 8-2-4, no owner or operator may cause, allow or permit the discharge into the atmosphere of any VOC in excess of 2.6 pounds per gallon excluding water, delivered to the coating applicator for prime and topcoat or single coat operations.

D.2.3 Particulate Matter Limitations Except Lake County [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the primer curing oven and finish curing oven shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf), each.

D.2.4 Preventive Maintenance Plan [326 IAC 1-6-3]

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

D.2.5 PSD Minor Limit and MSOP Status [326 IAC 2-2] [326 IAC 2-6.1]

In order to maintain MSOP status, 326 IAC 2-6.1 and to render the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2, not applicable, the Permittee shall operate the thermal oxidizer at a minimum overall control efficiency of 97.8 % at all times that the coil coating line is in operation.

Compliance Determination Requirements

D.2.6 Volatile Organic Compounds (VOC)

The compliance status with the VOC content limitation contained in Condition D.2.2 shall be achieved through one of the following:

- (a) Pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) the source shall prepare or obtain from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. 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) Thermal Oxidizer
 - (i) Pursuant to 326 IAC 8-1-2(a)(2), the Permittee shall use a thermal oxidizer on the coil coating line, and shall operate the thermal oxidizer within manufacturer's specifications.
 - (ii) Pursuant to 326 IAC 8-1-2(c), the overall efficiency of the thermal oxidizer shall be no less than the equivalent overall efficiency 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 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 solids as applied; and
- O = equivalent overall efficiency of the capture system and control device as a percentage.

The overall efficiency of the thermal oxidizer shall be greater than or equal to 53% at V = 8.64 lbs/gallon and E = 4.06 lbs/gallon.

D.2.7 Thermal Oxidizer

In order to comply with Condition D.2.5, the Permittee shall operate the thermal oxidizer at all times that the coil coating line is in operation.

D.2.8 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.2.2, D.2.5 and D.2.6, and as required under NSPS Subpart TT (Section E.1) and to render 326 IAC 2-2 (PSD) not applicable, the Permittee shall perform VOC testing of the thermal oxidizer utilizing methods as approved by the Commissioner. This test shall be repeated at least once every 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). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.2.9 Thermal Oxidation

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the integral thermal oxidizer for measuring operating temperature. For the purpose of this condition, "continuous" means no less than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour block average. From the date of issuance of this permit until the stack test results are available, the Permittee shall operate the thermal oxidizers at or above the 3-hour block average temperature of 1320°F.
- (b) The Permittee shall determine the 3-hour block average temperature from the most recent valid stack test that demonstrates compliance with the limit in Condition D.2.2.
- (c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature as observed during the compliant stack test.
- (d) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with limit in Condition D.2.2.
- (e) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the stack test results are available, the duct pressure or fan amperage shall be compared to the range as established in the most recent compliant stack test. A reading outside that range is not considered a deviation but Permittee shall take reasonable response steps in connection with the reading outside the range. Section C- Response to Excursions and Exceedances contains conditions regarding response steps.

Record Keeping Requirements [326 IAC 2-6.1-5(a)(2)]

D.2.10 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.2, the Permittee shall maintain records of:
 - (1) The amount and VOC content of each coating material and solvent used less water on a monthly basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (2) The volume weighted VOC content of the coatings used for each month; and
 - (3) The weight of VOCs emitted for each compliance period.
- (b) To document the compliance status with Condition D.2.9, the Permittee shall maintain continuous temperature records for the thermal oxidizers and the 3-hour block average temperature used to demonstrate compliance during the most recent compliant stack test. The Permittee shall include in its daily record when a temperature reading is not taken and the reason for the lack of temperature reading (e.g., the process did not operate that day).

- (c) To document the compliance status with Condition D.2.9(c), the Permittee shall maintain daily records of the duct pressure or fan amperage for the thermal oxidizers. The Permittee shall include in its daily record when a pressure or fan amperage reading is not taken and the reason for the lack of pressure or fan amperage reading (e.g., the process did not operate that day).
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (d) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of:
 - (1) One (1) natural gas-fired hot air dryer nominally rated at 2.0 MMBtu per hour associated with the chemical treatment dip tank.
 - (2) One (1) quench tank hot air dryer, nominally rated at 2.0 MMBtu per hour.
- (e) Welding equipment related to manufacturing activities not resulting in the emission of HAPs, consisting of one (1) lap seam welder that fuses coil ends together to allow continuous line operation.
- (g) One (1) outdoor scrap metal sorting operation, with a nominal metal processing throughput of 40.0 tons per hour, and consisting of the following:
 - (1) Two (2) oxypropane torches, approved for construction in 2013, cutting galvanized pipes and coils with a nominal thickness of 0.0625 inches and a nominal cutting rate of 12.0 inches per minute, each, uncontrolled, and exhausting outdoors.
 - (2) Four (4) oxypropane torches, approved for construction in 2013, cutting metal plates with a nominal thickness of 4.0 inches and a nominal metal cutting rate of 20.0 inches per minute, each, uncontrolled, and exhausting outdoors.
 - (3) One (1) oxypropane torch, approved for construction in 2013, cutting mandrels with a nominal thickness of 26.0 inches and a nominal metal cutting rate of 1.0 inches per minute, uncontrolled, and exhausting outdoors.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.3.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the chemical treatment dip tank dryer, quench tank dryer, welding equipment, and oxypropane torches shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf), each.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (b) One (1) coil coating line for applying primer and finish coats to both sides of steel coil in one pass, constructed in 2008, with a nominal coating capacity of 600 linear feet of coil per minute, using rolling application methods, consisting of:

- (i) one (1) natural gas-fired curing oven for drying primer coat, identified as Primer Curing Oven.

This Primer Curing Oven is also equipped with low NO_x burners having a nominal heat capacity of 11.6 MMBtu per hour and is used to provide heat for startup and to keep this oven hot during process interruptions.

- (ii) one (1) curing oven for drying finish coat, identified as Finish Curing Oven.

These two ovens are heated by an integral thermal oxidizer fueled by VOC with natural gas available as a supplemental fuel, with a nominal heat input capacity of 60 MMBtu per hour.

The thermal oxidizer utilizes low NO_x burners and is considered an integral part of the process. The integral thermal oxidizer also acts to reduce VOC emissions from the coating line.

The coil coating line exhausts to stack S3.

This unit is considered an affected source under 40 CFR Part 60, Subpart TT (Metal Coil Surface Coating).

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

New Source Performance Standards (NPSP Requirements [326 IAC 12-1])

E.1.1 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 coil coating line described in this section except when otherwise specified in 40 CFR Part 60, Subpart TT.

E.1.2 Standards of Performance for Metal Coil Surface Coating [40 CFR Part 60, Subpart TT]

Pursuant to 40 CFR Part 60, Subpart TT, the Permittee shall comply with the provisions of the New Source Performance Standards for Metal Coil Surface Coating, as specified in the following:

- (1) 40 CFR 60.460
- (2) 40 CFR 60.461
- (3) 40 CFR 60.462(a)(2)
- (4) 40 CFR 60.462(a)(3)
- (5) 40 CFR 60.463(a),(b)
- (6) 40 CFR 60.463(c)(2)
- (7) 40 CFR 60.464(a)
- (8) 40 CFR 60.464(c)
- (9) 40 CFR 60.465
- (10) 40 CFR 60.466

See Attachment A of this permit for the standards listed above.

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Steel Dynamics, Inc
Address:	5134 Loop Road
City:	Jeffersonville, Indiana 47130
Phone #:	260-868-8191
MSOP #:	M019-30060-00089

I hereby certify that Steel Dynamics, Inc. is:

still in operation.

no longer in operation.

I hereby certify that Steel Dynamics, Inc. is:

in compliance with the requirements of MSOP M019-30060-00089.

not in compliance with the requirements of MSOP M019-30060-00089.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ ____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ ____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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

Technical Support Document (TSD) for an Administrative Amendment to a
Minor Source Operating Permit Renewal (MSOP)

Source Description and Location

Source Name: Steel Dynamics, Inc.
Source Location: 5134 Loop Road, Jeffersonville, Indiana 47130
County: Clark
SIC Code: 3479 (Coating, Engraving, and Allied Services, Not Elsewhere Classified)
Operation Permit No.: 019-30060-00089
Operation Permit Issuance Date: December 15, 2011
Administrative Amendment No.: 019-34480-00089
Permit Reviewer: Renee Traivaranon

On April 14 and April 28, 2014, the Office of Air Quality (OAQ) received two applications from Steel Dynamics, Inc. related to the modifications to an existing stationary steel coil coating facility. These 2 applications are being processed as one application.

Existing Approvals

The source was issued MSOP Renewal No. 019-30060-00089 on December 15, 2011. The source has since received Minor Permit Revision No. 019-33061-00089, issued on May 22, 2013.

County Attainment Status

The source is located in Clark County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Basic nonattainment designation effective federally April 5, 2005, for PM _{2.5} .
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

¹ Attainment effective October 23, 2001, for the 1-hour ozone standard for the Louisville area, including Clark County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for purposes of 40 CFR Part 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.

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

emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
Clark County has been classified as nonattainment for PM_{2.5} in 70 FR 943 dated January 5, 2005. On May 8, 2008, U.S. EPA promulgated specific New Source Review rules for PM_{2.5} emissions. These rules became effective on July 15, 2008. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5.
- (c) **Other Criteria Pollutants**
Clark County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

- (a) The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.
- (b) This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

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

This PTE table is from the TSD or Appendix A of 019-33061-00089, issued on May 22, 2013.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Alkaline Cleaning Process***	13.40	13.40	13.40	-	-	-	-	-	-	-
Surface Coating****	-	-	-	-	-	-	43.55	-	9.57	4.56 1-2-4 Trimethyl- benzene
Natural Gas Combustion	1.31	5.25	3.94	0.41	37.2	58.04	3.80	82,944	1.30	-
Welding	0.11	0.11	0.11	-	-	-	-	-	0.01	-
Surface Chemical Treatment Dip Tank*****	-	-	-	-	-	-	-	-	-	-
Torch Cutting	7.73	7.73	7.73	-	-	-	-	-	0.04	0.02, Manganese
Material Handling & Processing	0.29	0.14	0.02	-	-	-	-	-	-	-
Unpaved Roads	1.58	0.40	0.40	-	-	-	-	-	-	-
Total PTE of Entire Source	24.43	27.04	25.61	0.41	37.19	58.04	47.35	82,944	10.92	4.56
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	NA	250	250	250	250	100,000	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA	NA
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". ** The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD. *** Due to this revision the source has requested to remove the existing PM limit on the alkaline cleaning process, which limited emissions to less than 10 tons per year and rendered the requirements of 326 IAC 6.5 not applicable. **** PTE after the integral thermal oxidizer. ***** No particulate is formed in this process and the solution does not contain VOC.										

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed two applications, submitted by Steel Dynamics, Inc. on April 14, 2014 and April 28, 2014.

The first application was submitted on April 14, 2014 to upgrade the hot dip galvanizing line cleaning section by installing new nine (9) natural gas-fired burners and dryer, which will increase the hot dip galvanizing line cleaning heat input rate up from 10.3 to 19.05 MMBtu/hr.

In addition, Steel Dynamics, Inc. will also upgrade the galvanizing line drives and motors to allow for an increased line speed for certain production types. This will provide greater flexibility while improving quality. As a result of this project, the actual annual galvanizing production will increase by approximately 70,000 tons per year. The current galvanizing nominal production capacity of 74 tons per hour and the nominal exhaust blower flow rate (10,500 scfm) or paint line will not be affected by this project.

Steel Dynamics, Inc. will also remove two (2) natural gas-fired burners and one natural gas-fired dryer.

The second application was submitted on April 28, 2014 to install a distillation solvent recovery system of the MEK used in cleaning of the coating line. MEK was already used as cleaning solvent prior to the installation of this recovery system. The MEK is used for cleaning after coating runs and switching to new colors/paints, and approximately 5 gallons is used for each cleaning. The maximum of paint changes during a 12-hour shift is 15 times.

The following is a list of the new emission units and pollution control devices:

- (a) One (1) high pressure hot water spray tank, equipped with one (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour, approved in 2014 for construction,
- (b) One (1) hot water generator, equipped with one (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour, approved in 2014 for construction,
- (c) One (1) natural gas-fired hot air dryer, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,
- (d) Two (2) cascade rinse tanks, each with nominally heat input rated at 1.35 MMBtu per hour, approved in 2014 for construction,
- (e) One (1) cascade rinse tank, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,
- (f) two (2) alkaline spray tanks, each equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction,
- (g) One (1) brush, equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction, no control, and
- (h) One (1) distillation solvent recycle system, associated with the Paint Line (Coil Coating Line), with a nominally rate of 54,750 gallons of solvent per year for recycle, no control, and exhausting inside the building, approved in 2014 for construction.

The following is a list of the emission units removed from the source:

- (a) One (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour from hot soap dip tank,
- (b) One (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour from hot water dip tank, and

- (c) One (1) natural gas-fired hot air dryer nominally rated at 2.0 MMBtu per hour that dries the steel strip as it exits the alkaline cleaning process.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – MSOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	CO	VOC	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
Coil Steel Surface Coating*	-	-	-	-	-	-	*	-	1.03	0.49 1-2-4 Trimethyl- benzene
Distillation Solvent Recycle System	-	-	-	-	-	-	8.74	-	-	-
Natural Gas Combustion	0.16	0.62	0.47	0.05	8.2	6.9	0.45	9,876	0.15	-
Total PTE of Proposed Revision	0.16	0.62	0.47	0.05	8.2	6.9	9.19	9,876	1.18	0.49 1-2-4 Trimethyl- benzene
negl. = negligible										

Note: *The coil steel surface coating has not been modified during this revision, however the source will add fuel to the galvanizing line, including upgrade to the galvanizing line drives and motors to increase the line speed, and anticipates that the actual annual production from the galvanizing line will increase by approximately 70,000 tons per year, but the PTE of VOC for coil steel surface coating will not increase, because this upgrade will allow for an increased line speed for certain product types, where it is presently unachievable.

This MSOP is revised through Administrative Amendment for the following reasons:

- (1) Pursuant to 326 IAC 2-6.1-6(d)(8), this revision involves the modification that adds emissions units of the same type that is already permitted and that will comply with the same applicable requirements and permit terms and conditions as the existing emission units, and the modification would not result in a potential to emit greater than the thresholds in 326 IAC 2-2 or 326 IAC 2-3 or would not result in a potential to emit equal to or greater than the thresholds in 326 IAC 2-7.
- (2) Pursuant to 326 IAC 2-6.1-6(d)(11), this revision involves the modification that adds emissions units, subject to 326 IAC 2-1.1-3, at the request of the applicant.

PTE of the Entire Source After Issuance of the MSOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	CO	VOC	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Alkaline Cleaning Process***	13.40	13.40	13.40	-	-	-	-	-	-	-
Surface Coating****	-	-	-	-	-	-	43.55	-	9.57	4.56 1-2-4 Trimethyl- benzene
Distillation Solvent Recycle System	-	-	-	-	-	-	8.74	-	-	-
Natural Gas Combustion	4.34 1.38	5.25 5.54	3.94 4.15	0.41 0.44	37.2 40.94	58.04 61.19	3.80 4.01	82,944 87,952	1.30 1.37	- 1.31
Welding	0.11	0.11	0.11	-	-	-	-	-	0.01	-
Surface Chemical Treatment Dip Tank*****	-	-	-	-	-	-	-	-	-	-
Torch Cutting*****	7.73 7.44	7.73 7.44	7.73 7.44	-	-	-	-	-	0.04	0.02, Manganese
Material Handling & Processing	0.29	0.14	0.02	-	-	-	-	-	-	-
Unpaved Roads	1.58	0.40	0.40	-	-	-	-	-	-	-
Total PTE of Entire Source	24.43 24.22	27.04 27.04	25.61 25.54	0.41 0.44	37.19 40.94	58.04 61.19	47.35 56.30	82,944 87,952	10.92 10.98	4.56
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	NA	250	250	250	250	100,000	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA	NA

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	CO	VOC	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". ** The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD. *** Due to this revision the source has requested to remove the existing PM limit on the alkaline cleaning process, which limited emissions to less than 10 tons per year and rendered the requirements of 326 IAC 6.5 not applicable. **** PTE after the integral thermal oxidizer. *****No particulate is formed in this process and the solution does not contain VOC. ***** This is to correct typographical errors only.										

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this MSOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	CO	VOC	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Alkaline Cleaning Process	13.40	13.40	13.40	-	-	-	-	-	-	-
Surface Coating***	-	-	-	-	-	-	43.55	-	9.57	4.56 1-2-4 Trimethyl- benzene
Distillation Solvent Recycle System	-	-	-	-	-	-	8.74	-	-	-
Natural Gas Combustion	1.38	5.54	4.15	0.44	40.94	61.19	4.01	87,952	1.37	1.31
Welding	0.11	0.11	0.11	-	-	-	-	-	0.01	-
Surface Chemical Treatment Dip Tank****	-	-	-	-	-	-	-	-	-	-
Torch Cutting	7.44	7.44	7.44	-	-	-	-	-	0.04	0.02, Manganese
Material Handling & Processing	0.29	0.14	0.02	-	-	-	-	-	-	-
Unpaved Roads	1.58	0.40	0.40	-	-	-	-	-	-	-
Total PTE of Entire Source	24.22	27.04	25.54	0.44	40.94	61.19	56.30	87,952	10.98	4.56
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	CO	VOC	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
PSD Major Source Thresholds**	250	250	NA	250	250	250	250	100,000	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA	NA
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". ** The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD. *** PTE after the integral thermal oxidizer. **** No particulate is formed in this process and the solution does not contain VOC.										

MSOP Status:

- (a) This revision to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).
- (b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit greenhouse gases (GHGs) will still be less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

Compliance Assurance Monitoring (CAM)

- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because:
 - (1) The potential to emit of all PSD regulated pollutants, excluding GHGs, from the entire source will continue to be less than the PSD major source threshold levels.
 - (2) The GHG emissions from the entire source will continue to be less than one hundred thousand (100,000) tons of CO₂ equivalent (CO₂e) emissions per yearTherefore, pursuant to 326 IAC 2-2, the GHG emissions are not subject to regulation and the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.
- (c) 326 IAC 2-1.1-5 (Nonattainment New Source Review)
This modification to an existing minor stationary source under 326 IAC 2-1.1-5 (Nonattainment New Source Review) will not change the minor status, because the potential to emit of PM_{2.5} from the entire source will continue to be less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and modified units is 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.
- (e) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (f) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4:
 - (2) 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.
- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.
- (h) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

- (i) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Alkaline cleaning operation

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The alkaline cleaning process is not subject to 326 IAC 6-3-2 limits because it is subject to more stringent particulate matter limits under 326 IAC 6.5 (Particulate Matter Limitations Except Lake County).
- (b) 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the alkaline cleaning process shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

The demister shall be in operation at all times the alkaline cleaning process is in operation, in order to comply with this limit.

Note: this is an existing requirement.

Distillation solvent recycle system

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The requirements of 326 IAC 6-3-2 are not applicable to the distillation solvent recycle system because it does not have the potential to emit particulate matter.
- (b) 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
The requirements of 326 IAC 6.5 are not applicable to the distillation solvent recycle system because it does not have the potential to emit particulate matter.
- (c) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The unlimited VOC potential emissions from the the distillation solvent recycle system is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.
- (d) 326 IAC 8-1-6 (VOC)
There are no other 326 IAC 8 Rules that are applicable to the distillation solvent recycle system.

Compliance Determination, Monitoring and Testing Requirements

- (a) The existing compliance monitoring and compliance determination requirements will not change as a result of this revision.
- (b) Testing is not required for this revision.

Proposed Changes

The following changes listed below are due to the proposed revision.

1. The description of the hot dip galvanizing line has been revised to include new nine (9) natural gas-fired burners and dryer in the alkaline cleaning process in the in Section A.2 and Section D.1.
2. The distillation solvent recycle system was added in Section A.2.

3. The three (3) existing natural gas-fired burners and dryer were removed from Section A.2, Section D.1, and Section D.3 including the requirement of the hot air dryer in the Condition D.3.1.
4. IDEM, OAQ made additional revisions to the permit as described below:
 - (a) In order to correct for typographical error, the source location was changed from Loop to Clark County.
 - (b) The description indicated that the coil coating line was "approved for construction in 2006 and" was removed since it was constructed in 2008, in Section A.1, Section D.2 and Section E.1.
 - (c) In order to correct for typographical error, Condition D.2.10(c) has been revised from Condition D.2.10 to Condition D.2.9(e).

The permit has been revised as follows with the deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

A.1 General Information [326 IAC 2-6.1-4(a)]

...
County Location: ~~Loop~~ **Clark**

A.2 Emission Units and Pollution Control Equipment Summary

-
- (a) One (1) hot dip galvanizing line, constructed in 1998, **approved in 2014 modification to increase the line speed**, with a nominal production capacity of 74 tons per hour, consisting of the following:
 - (1) One (1) alkaline cleaning process consisting of:
 - (i) ~~one (1) hot soap dip tank equipped with one (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour,~~
 - (ii) ~~one (1) hot water dip tank equipped with one (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour, and~~
 - (i) **One (1) high pressure hot water spray tank, equipped with one (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour, approved in 2014 for construction,**
 - (ii) **One (1) hot water generator, equipped with one (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour, approved in 2014 for construction,**
 - (iii) **One (1) natural gas-fired hot air dryer, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,**
 - (iv) **Two (2) cascade rinse tanks, each with nominally heat input rated at 1.35 MMBtu per hour, approved in 2014 for construction,**
 - (v) **One (1) cascade rinse tank, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,**

- (vi) **two (2) alkaline spray tanks, each equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction,**
 - (vii) **One (1) brush, equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction, no control, and**
 - (viii) One (1) exhaust blower equipped with a demister to remove particulate matter emissions in the air stream of the alkaline cleaning process, **constructed in 1998** and exhausting to stack S2.
- (2) One (1) four-section annealing furnace equipped with natural gas-fired low-NO_x burners, consisting of a preheat section nominally rated at 56.0 MMBtu per hour, exhausting to stack S1, and a radiant tube section nominally rated at 21.0 MMBtu per hour, **constructed in 1998.**
- (b) One (1) coil coating line for applying primer and finish coats to both sides of steel coil in one pass, ~~approved for construction in 2006 and~~ constructed in 2008, with a nominal coating capacity of 600 linear feet of coil per minute, using rolling application methods, consisting of:
- (i) one (1) natural gas-fired curing oven for drying primer coat, identified as Primer Curing Oven.

This Primer Curing Oven is also equipped with low NO_x burners having a nominal heat capacity of 11.6 MMBtu per hour and is used to provide heat for startup and to keep this oven hot during process interruptions.
 - (ii) one (1) curing oven for drying finish coat, identified as Finish Curing Oven.

These two ovens are heated by an integral thermal oxidizer fueled by VOC with natural gas available as a supplemental fuel, with a nominal heat input capacity of 60 MMBtu per hour.

The thermal oxidizer utilizes low NO_x burners and is considered an integral part of the process. The integral thermal oxidizer also acts to reduce VOC emissions from the coating line.

The coil coating line exhausts to stack S3.
- This unit is considered an affected source under 40 CFR Part 60, Subpart TT (Metal Coil Surface Coating).
- (c) **One (1) distillation solvent recycle system, associated with the Paint Line (Coil Coating Line), with a nominally rate of 54,750 gallons of solvent per year for recycle, no control, and exhausting inside the building, approved in 2014 for construction.**
- (eh) Paved roads and parking lots with public access.
- (d) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of:
- (1) ~~One (1) natural gas-fired hot air dryer nominally rated at 2.0 MMBtu per hour that dries the steel strip as it exits the alkaline cleaning process.~~

- ~~(2)~~ — One (1) natural gas-fired hot air dryer nominally rated at 2.0 MMBtu per hour associated with the chemical treatment dip tank.
- ~~(32)~~ One (1) quench tank hot air dryer, nominally rated at 2.0 MMBtu per hour.
- (e) Welding equipment related to manufacturing activities not resulting in the emission of HAPs, consisting of one (1) lap seam welder that fuses coil ends together to allow continuous line operation.
- (f) Activities with emissions equal to or less than the following thresholds: 5 lb/hour or 25 lbs/day PM10; 5 lbs/hour or 25 lbs/day SO₂; 5 lbs/hour or 25 lbs/day NO_x; 3 lbs/hour or 15 lbs/day VOC; 0.6 tons per year Pb; 5 lbs/day or 1.0 ton/year of a single HAP, and 12.5 lbs/day or 2.5 ton/year of any combination of HAPs, consisting of:
 - (1) One (1) electrically heated zinc pot.
 - (2) One (1) surface chemical treatment dip tank that applies a protective chromium coating to the surface of the steel, with no particulate formed in the process.
- (g) One (1) outdoor scrap metal sorting operation, with a nominal metal processing throughput of 40.0 tons per hour, and consisting of the following:
 - (1) Two (2) oxypropane torches, approved for construction in 2013, cutting galvanized pipes and coils with a nominal thickness of 0.0625 inches and a nominal cutting rate of 12.0 inches per minute, each, uncontrolled, and exhausting outdoors.
 - (2) Four (4) oxypropane torches, approved for construction in 2013, cutting metal plates with a nominal thickness of 4.0 inches and a nominal metal cutting rate of 20.0 inches per minute, each, uncontrolled, and exhausting outdoors.
 - (3) One (1) oxypropane torch, approved for construction in 2013, cutting mandrels with a nominal thickness of 26.0 inches and a nominal metal cutting rate of 1.0 inches per minute, uncontrolled, and exhausting outdoors.
 - (4) Metal storage piles.
 - (5) Unpaved roads.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) hot dip galvanizing line, constructed in 1998, **approved in 2014 to increase the line speed**, with a nominal production capacity of 74 tons per hour, consisting of the following:
 - (1) One (1) alkaline cleaning process consisting of:
 - ~~(i) one (1) hot soap dip tank equipped with one (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour,~~

- ~~(ii) one (1) hot water dip tank equipped with one (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour, and~~
 - (i) One (1) high pressure hot water spray tank, equipped with one (1) natural gas-fired burner nominally rated at 5.3 MMBtu per hour, approved in 2014 for construction,**
 - (ii) One (1) hot water generator, equipped with one (1) natural gas-fired burner nominally rated at 3.0 MMBtu per hour, approved in 2014 for construction,**
 - (iii) One (1) natural gas-fired hot air dryer, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,**
 - (iv) Two (2) cascade rinse tanks, each with nominally heat input rated at 1.35 MMBtu per hour, approved in 2014 for construction,**
 - (v) One (1) cascade rinse tank, with nominally heat input rated at 2.0 MMBtu per hour, approved in 2014 for construction,**
 - (vi) two (2) alkaline spray tanks, each equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction,**
 - (vii) One (1) brush, equipped with one (1) natural gas-fired burner nominally rated at 1.35 MMBtu per hour, approved in 2014 for construction, no control, and**
 - (viii) One (1) exhaust blower equipped with a demister to remove particulate matter emissions in the air stream of the alkaline cleaning process, constructed in 1998 and exhausting to stack S2.**
- (2) One (1) four-section annealing furnace equipped with natural gas-fired low-NO_x burners, consisting of a preheat section nominally rated at 56.0 MMBtu per hour, exhausting to stack S1, and a radiant tube section nominally rated at 21.0 MMBtu per hour, **constructed in 1998.**

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the alkaline cleaning process and annealing furnace shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf), each.

D.1.2 Nitrogen Oxide Emissions Limitations [326 IAC 10-1]

Pursuant to Permit # 019-9559-00089, issued on June 23, 1998 and 326 IAC 10-1(a)(3), the annealing furnace shall utilize low-NOx burners.

Compliance Determination Requirements

D.1.3 Particulate Control

In order to comply with Condition D.1.1, the demister for particulate control shall be in operation at all times the hot dip galvanizing line is in operation.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) One (1) coil coating line for applying primer and finish coats to both sides of steel coil in one pass, ~~approved for construction in 2006 and~~ constructed in 2008, with a nominal coating capacity of 600 linear feet of coil per minute, using rolling application methods, consisting of:

(i) one (1) natural gas-fired curing oven for drying primer coat, identified as Primer Curing Oven.

This Primer Curing Oven is also equipped with low NOx burners having a nominal heat capacity of 11.6 MMBtu per hour and is used to provide heat for startup and to keep this oven hot during process interruptions.

(ii) one (1) curing oven for drying finish coat, identified as Finish Curing Oven.

These two ovens are heated by a integral thermal oxidizer fueled by VOC with natural gas available as a supplemental fuel, with a nominal heat input capacity of 60 MMBtu per hour.

The thermal oxidizer utilizes low NO_x burners and is considered an integral part of the process. The integral thermal oxidizer also acts to reduce VOC emissions from the coating line.

The coil coating line exhausts to stack S3.

This unit is considered an affected source under 40 CFR Part 60, Subpart TT.

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

.....

Record Keeping Requirements [326 IAC 2-6.1-5(a)(2)]

.....

D.2.10 Record Keeping Requirements

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- (c) To document the compliance status with Condition ~~D.2.10~~**D.2.9(c)**, the Permittee shall maintain daily records of the duct pressure or fan amperage for the thermal oxidizers. The Permittee shall include in its daily record when a pressure or fan amperage reading is not taken and the reason for the lack of pressure or fan amperage reading (e.g., the process did not operate that day).

.....

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (d) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, consisting of:
- (1) ~~One (1) natural gas-fired hot air dryer nominally rated at 2.0 MMBtu per hour that dries the steel strip as it exits the alkaline cleaning process.~~
 - (2) ~~One (1) natural gas-fired hot air dryer nominally rated at 2.0 MMBtu per hour associated with the chemical treatment dip tank.~~
 - (3) One (1) quench tank hot air dryer, nominally rated at 2.0 MMBtu per hour.

....

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.3.1 Particulate Matter Limitations Except Lake County [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the ~~alkaline cleaning process hot air dryer~~, chemical treatment dip tank dryer, quench tank dryer, welding equipment, and oxypropane torches shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf), each.

.....

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (b) One (1) coil coating line for applying primer and finish coats to both sides of steel coil in one pass, ~~approved for construction in 2006 and~~ constructed in 2008, with a nominal coating capacity of 600 linear feet of coil per minute, using rolling application methods, consisting of:

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

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the applications and additional information submitted by the applicant. The applications for the purposes of this review were received on April 14 and April 28, 2014. An additional information was received on May 16, 2014.

The construction and operation of this proposed revision shall be subject to the conditions of the attached MSOP Administrative Amendment No. 019-34480-00089. The staff recommends to the Commissioner that this MSOP Administrative Amendment be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ms. Renee Traivaranon 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) 234-5615 or toll free at 1-800-451-6027 extension 4-5615.
- (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 Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A: Emission Calculations
Potential To Emit Summary**

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-34480-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

Potential to Emit Before Controls (tons/year)										
Process	PM	PM10	PM2.5	SO ₂	NOx	CO	VOC	GHG	Single HAP	Combination HAPs
Alkaline Cleaning Process	13.40	13.40	13.40	0.00	0.00	0.00	0.00		0.00	0.00
Surface Coating*	0.00	0.00	0.00	0.00	0.00	0.00	43.55		4.56	9.57
Distillation Solvent Recycle System	0.00	0.00	0.00	0.00	0.00	0.00	8.74		0.00	0.00
Natural Gas Combustion	1.38	5.54	4.15	0.44	40.94	61.19	4.01	87,952	1.31	1.37
Welder	0.11	0.11	0.11	0.00	0.00	0.00	0.00		0.01	0.01
Surface Chemical Treatment Dip Tank**	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Torch Cutting	7.44	7.44	7.44	0.00	0.00	0.00	0.00		0.02	0.04
Material Handling & Processing	0.29	0.14	0.02	0.00	0.00	0.00	0.00		0.00	0.00
Unpaved Roads	1.58	0.40	0.40	0.00	0.00	0.00	0.00		0.00	0.00
Total	24.22	27.04	25.54	0.44	40.94	61.19	56.30	87,952	4.56	10.98

* PTE for surface coating is after the integral oxidizer.

** No particulate is formed in this process and the solution does not contain VOC.

Note: The greatest single HAP emitted by the surface coating is 1-2-4 trimethylbenzene, the greatest single HAP emitted by combustion is hexane, and the greatest single HAP emitted by flame cutting is manganese/chromium.

**Appendix A: Emission Calculations
VOC and Particulate Emissions From Coil Steel Surface Coating Operations**

Company Name: Steel Dynamics, Inc.

Address: 5134 Loop Road, Jeffersonville, Indiana 47130

Permit Number: 019-34480-00089

Permit Reviewer: Renee Traivaranon

Date: 29-May-14

Material	Density (lbs/gal)	Weight % Volatile (H ₂ O & Organics)	Weight % Water	Weight % Organics	Maximum Usage* (gals/year)	Percentage of Total Throughput	Pounds VOC per gallon of coating	Integral Oxidizer Destruction Efficiency (%)	PTE of VOC (lbs/hr)***	PTE of VOC (lbs/day)***	PTE of VOC (tons/year)***	PTE of PM/PM10/PM2.5 Before Controls** (tons/year)
Primer 45Y54	11.44	50.2%	0.00%	50.2%	637,523	100%	5.74	99%	4.18	100	18.3	0
Finish Poly-White	11.5	29.6%	0.00%	29.6%	739,922	50%	3.40	99%	2.87	69.0	12.6	0
Finish Poly-Color	9.35	32.3%	0.00%	32.3%	369,961	25%	3.02	99%	1.28	30.6	5.6	0
Finish SMP-White	10.4	35.9%	0.00%	35.9%	221,977	15%	3.74	99%	0.95	22.7	4.15	0
Finish SMP-Color	9.5	38.8%	0.00%	38.8%	73,992	5%	3.68	99%	0.31	7.46	1.36	0
Finish Kynar-White	11.5	35.9%	0.00%	35.9%	44,395	3%	4.13	99%	0.21	5.02	0.92	0
Finish Kynar-Color	9.4	46.8%	0.00%	46.8%	29,597	2%	4.38	99%	0.15	3.55	0.65	0
Totals									9.94	239	43.55	0

* Maximum Usage figures for coatings are engineering estimates submitted by the source of the amount of coatings that are used at maximum production capacity.

** Coatings are applied with rollers. Transfer efficiency is 100%. Therefore, no particulate is formed in the process of coating the steel coil.

Coil steel is 58 inches wide. Line speed is 400 feet per minute. Both sides are coated with primer and then finish in one pass through the coating line.

*** PTE is after the integral Oxidizer

METHODOLOGY

FYI: PTE before the integral oxidizer = (43.6 tons/yr)/(1-0.99) = 4,360 tons/yr

Pounds of VOC per Gallon Coating = (Density (lbs/gal) x Weight % Organics)

PTE of VOC (lbs/hr) = Density (lbs/gal) x Weight % Organics x Maximum Usage (gals/year) x 1 year/8760 days x (1- Destruction Efficiency (%))

PTE of VOC (lbs/day) = Density (lbs/gal) x Weight % Organics x Maximum Usage (gals/year) x 1 year/8760 days x (1- Destruction Efficiency (%)) x 24 hrs/day

PTE of VOC (tons/year) = Density (lbs/gal) x Weight % Organics x Maximum Usage (gals/year) x 1 ton/2,000 lbs x (1- Destruction Efficiency (%))

PM = PM10 = PM2.5

Note:

Above calculations were carried over from the permit No. 019-33061-00089, issued on May 22, 2013.

**Appendix A: Emission Calculations
HAP Emissions From Coil Steel Surface Coating Operations**

Company Name: Steel Dynamics, Inc.

Address: 5134 Loop Road, Jeffersonville, Indiana 47130

Permit Number: 019-33061-00089

Permit Reviewer: Renee Traivaranon

Date: 29-May-14

Material	Density (lbs/gal)	Maximum Usage* (gals/year)	Weight % 1-2-4-Trimethyl benzene	Weight % Ethyl benzene	Weight % Xylene	Weight % Naphthalene	Weight % Butoxy ethoxyethyl Acetate	Weight % Butyl carbitol Acetate	Weight % Isophorone	Weight % Diethylene Glycol Butyl Ether	Weight % Form-aldehyde	Weight % Propyl Cellosolve
Primer 45Y54	11.44	637,523	3.4%	1.0%	4.2%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finish Poly-White	11.5	739,922	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finish Poly-Color	9.35	369,961	0.0%	2.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finish SMP-White	10.4	221,977	4.7%	0.1%	1.0%	0.0%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Finish SMP-Color	9.5	73,992	2.6%	0.3%	1.1%	2.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%
Finish Kynar-White	11.5	44,395	0.0%	1.5%	6.4%	0.0%	4.5%	0.0%	19.0%	0.0%	0.0%	0.0%
Finish Kynar-Color	9.4	29,597	0.0%	0.0%	1.6%	2.2%	0.0%	0.0%	0.0%	2.5%	0.4%	1.8%

Potential to Emit of HAPs (tons/year)												
Material	Density (lbs/gal)	Maximum Usage* (gals/year)	PTE of 1-2-4-Trimethyl benzene	PTE of Ethyl benzene	PTE of Xylene	PTE of Naphthalene	PTE of Butoxy ethoxyethyl Acetate	PTE of Butyl carbitol Acetate	PTE of Isophorone	PTE of Diethylene Glycol Butyl Ether	PTE of Form-aldehyde	PTE of Propyl Cellosolve
Primer 45Y54	11.44	637,523	124	36.5	153	43.8	0.0	0.0	0.0	0.0	0.0	0.0
Finish Poly-White	11.5	739,922	268	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Finish Poly-Color	9.35	369,961	0.0	38.1	0.0	5.19	0.0	0.0	0.0	0.0	0.0	0.0
Finish SMP-White	10.4	221,977	54.8	1.62	11.9	0.0	100	0.0	0.0	0.0	0.0	0.0
Finish SMP-Color	9.5	73,992	9.12	1.05	3.86	7.01	0.0	6.66	0.0	0.0	0.0	0.0
Finish Kynar-White	11.5	44,395	0.0	3.86	16.5	0.0	11.5	0.0	48.5	0.0	0.0	0.0
Finish Kynar-Color	9.4	29,597	0.0	0.0	2.21	3.04	0.0	0.0	0.0	3.46	0.55	2.49
Total PTE of HAP (tons/year)			4.56	0.81	1.88	0.59	1.12	0.07	0.49	0.03	0.01	0.02

* Maximum Usage figures for coatings are based on engineering estimates of the amount of coatings that are used at maximum production capacity. The PTE of HAPs is calculated after the effect of the integral thermal oxidizer. The destruction efficiency (%) for HAPs is 98%.

METHODOLOGY

PTE of HAPS Before Controls (tons/year) = Density (lbs/gal) x Maximum Usage (gals/year) x Weight % HAP x 1 ton/2000 lbs x (1- Destruction Efficiency %)

Note:

Above calculations were carried over from the permit No. 019-33061-00089, issued on May 22, 2013.

Appendix A: Emission Calculations
Particulate Emissions From Alkaline Cleaning Process on Hot Dip Galvanizing Line

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-33061-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

Location	Control Device ID	Outlet Grain Loading (gr/dscf)	Maximum Air Flow Rate (scfm)	Control Efficiency* (%)	PTE of PM/PM10 After Control (lbs/hour)	PTE of PM/PM10 After Control (tons/year)	PTE of PM/PM10 Before Control (lbs/hour)	PTE of PM/PM10 Before Control (tons/year)
Alkaline Cleaning Process	Demister	0.0017	10,500	95.0%	0.15	0.67	3.06	13.4

Assume all PM emissions equal PM10 emissions.

The outlet grain loading of the demister was established in a stack test conducted at the source on November 16, 2000. IDEM, CDS approved these results and deemed the facility to be in compliance with the applicable regulations.

* The control efficiency was not determined during the stack test conducted at the source on November 16, 2000. Therefore, the control efficiency is based on an engineering estimate.

Methodology

PTE of PM/PM10 After Control (lbs/hour) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 (mins/hour) x 1/7000 (lbs/gr)

PTE of PM/PM10 After Control (tons/year) = Grain Loading (gr/dscf) x Max. Air Flow Rate (scfm) x 60 (mins/hour) x 1/7000 (lbs/gr) x 8760 (hours/year) x 1 ton/2000 lbs

PTE of PM/PM10 Before Control (lbs/hour) = PTE of PM/PM10 After Control (lbs/hour) / (1-Control Efficiency%)

PTE of PM/PM10 Before Control (tons/year) = PTE of PM/PM10 After Control (tons/year) / (1-Control Efficiency%)

**Appendix A: Emission Calculations
Natural Gas Fired Combustion**

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-34480-00089
Permit Reviewer: Renee Traivaranon
Date: April 9, 2014

Emission Unit Description	Heat Input Capacity (MMBtu/hour)	Maximum Potential Throughput (MMCF/year)
Annealing Furnace: Preheat Section	56.0	481
Annealing Furnace: Radiant Tube Section	21.0	180
hot water spray tank burner	5.30	45.5
hot water generator burner	3.00	25.8
hot air dryer burner	2.00	17.2
Two cascade rinse tanks burners	2.70	23.2
cascade rinse tank burner	2.00	17.2
Two alkali spray tank burners	2.70	23.2
bush burner	1.35	11.6
Chem Treat Dryer	2.0	17.2
Primer Curing Oven	11.6	100
Thermal Oxidizer	60.0	515
		1457

These are new units (see PTE of these units only in new combustion)

	Pollutant Emission Factors (lbs/MMCF)							HAPs
	PM*	PM10*	PM2.5	SO ₂	NO _x **	CO	VOC	
Low-NO _x Annealing Furnace Burners	1.9	7.6	5.7	0.6	50	84.0	5.5	1.89
Low-NO _x Curing Oven and Thermal Oxidizer Burners	1.9	7.6	5.7	0.6	50	84.0	5.5	1.89
All Other Combustion	1.9	7.6	5.7	0.6	100	84.0	5.5	1.89

Emission Unit ID	Potential To Emit (tons/year)							
	PM	PM10	PM2.5	SO ₂	NO _x	CO	VOC	HAPs
Annealing Furnace: Preheat Section	0.46	1.83	1.37	0.14	12.0	20.2	1.32	0.45
Annealing Furnace: Radiant Tube Section	0.17	0.69	0.51	0.05	4.51	7.57	0.50	0.17
hot water spray tank burner	0.04	0.17	0.13	0.01	2.28	1.91	0.13	0.04
hot water generator burner	0.02	0.10	0.07	0.01	1.29	1.08	0.07	0.02
hot air dryer burner	0.02	0.07	0.05	0.01	0.86	0.72	0.05	0.02
Two cascade rinse tanks burners	0.02	0.09	0.07	0.01	1.16	0.97	0.06	0.02
cascade rinse tank burner	0.02	0.07	0.05	0.01	0.86	0.72	0.05	0.02
Two alkali spray tank burners	0.02	0.09	0.07	0.01	1.16	0.97	0.06	0.02
bush burner	0.01	0.04	0.03	0.00	0.58	0.49	0.03	0.01
Chem Treat Dryer	0.02	0.07	0.05	0.01	0.86	0.72	0.05	0.02
Primer Curing Oven	0.09	0.38	0.28	0.03	2.49	4.18	0.27	0.09
Thermal Oxidizer	0.49	1.96	1.47	0.15	12.9	21.6	1.42	0.49
TOTAL	1.38	5.54	4.15	0.44	40.9	61.2	4.01	1.37

* PM emission factor is for filterable PM only. PM10 emission factor is for condensable and filterable PM and PM10 combined.
 **Emission factors for NO_x: Uncontrolled = 100 lb/MMCF, Low NO_x burners = 50 lb/MMCF
 Emission factors are from AP-42, Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4. SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)
 All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas

Methodology
 Maximum Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) x 8,760 (hours/year) x 1 MMCF/1,020 MMBtu
 PTE (tons/year) = Max. Potential Throughput (MMCF/year) x Emission Factor (lbs/MMCF) x 1 ton/2,000 lbs

**Appendix A: Emissions Calculations
 Natural Gas Combustion Only
 MM BTU/HR <100
 Greenhouse Gas Emissions**

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-33061-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	87,420	1.7	1.603
Summed Potential Emissions in tons/yr	87,423		
CO2e Total in tons/yr	87,952		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations
Natural Gas Fired Combustion**

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-34480-00089
Permit Reviewer: Renee Traivaranon
Date: April 9, 2014

Emission Unit Description	Heat Input Capacity (MMBtu/hour)	Maximum Potential Throughput (MMCF/year)
hot water spray tank burner	5.30	45.5
hot water generator burner	3.00	25.8
hot air dryer burner	2.00	17.2
cascade rinse tanks burners	2.70	23.2
cascade rinse tank burner	2.00	17.2
alkali spray tank burners	2.70	23.2
bush burner	1.35	11.6
		164

See the total combustion for the source on the previous page

	Pollutant Emission Factors (lbs/MMCF)							HAPs
	PM*	PM10*	PM2.5	SO ₂	NOx**	CO	VOC	
Low-NOx Annealing Furnace Burners	1.9	7.6	5.7	0.6	50	84.0	5.5	1.89
Low-NOx Curing Oven and Thermal Oxidizer Burners	1.9	7.6	5.7	0.6	50	84.0	5.5	1.89
All Other Combustion	1.9	7.6	5.7	0.6	100	84.0	5.5	1.89

Emission Unit ID	Potential To Emit (tons/year)							HAPs
	PM	PM10	PM2.5	SO ₂	NOx	CO	VOC	
hot water spray tank burner	0.04	0.17	0.13	0.01	2.28	1.91	0.13	0.04
hot water generator burner	0.02	0.10	0.07	0.01	1.29	1.08	0.07	0.02
hot air dryer burner	0.02	0.07	0.05	0.01	0.86	0.72	0.05	0.02
cascade rinse tanks burners	0.02	0.09	0.07	0.01	1.16	0.97	0.06	0.02
cascade rinse tank burner	0.02	0.07	0.05	0.01	0.86	0.72	0.05	0.02
alkali spray tank burners	0.02	0.09	0.07	0.01	1.16	0.97	0.06	0.02
bush burner	0.01	0.04	0.03	0.00	0.58	0.49	0.03	0.01
TOTALS	0.16	0.62	0.47	0.05	8.2	6.9	0.45	0.15

* PM emission factor is for filterable PM only. PM10 emission factor is for condensable and filterable PM and PM10 combined.

**Emission factors for NOx: Uncontrolled = 100 lb/MMCF, Low NOx burners = 50 lb/MMCF

Emission factors are from AP-42, Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4. SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. (AP-42 Supplement D 7/98)

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Methodology

Maximum Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hour) x 8,760 (hours/year) x 1 MMCF/1,020 MMBtu

PTE (tons/year) = Max. Potential Throughput (MMCF/year) x Emission Factor (lbs/MMCF) x 1 ton/2,000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Greenhouse Gas Emissions

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-33061-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	9,816	0.2	0.2
Summed Potential Emissions in tons/yr	9,817		
CO2e Total in tons/yr	9,876		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations

MEK solvent cleaning

Company Name: Steel Dynamics, Inc.
Address City IN Zip: 5134 Loop Road, Jeffersonville, Indiana 47130
Part 70 Renewal No.: 019-33061-00089
Reviewer: Renee Traivaranon
Date: 29-May-14

Recovery Efficiency	Emissions
95.00%	5.00%

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Gal of Mat. (gal/day)	Gal of Mat. (gal/yr)	Total VOC for recycle (tons per year)	Recovery VOC (tons per year)	PTE VOC (tons per year)
Methyl Ethyl Ketone (MEK)	6.72	100.0%	0.0%	100.0%	0.0%	150.0	54750.00	183.96	174.76	8.74

METHODOLOGY

Assumption: The worst case that all MEK usage from the cleaning will be sent to recycle.
 The MEK is used for cleaning after coating runs and switching to new colors/paints, and approximately 5 gallons is used for each cleaning.
 The maximum paint changes during a 12- hour shift is 15 times.
 The maximum MEK usage (gallons/day) = the MEK usage 5 (gallons/clearing) * 15 clearing/shift * 2 shift/day
 The maximum MEK usage (gallons/yr) = the MEK usage 5 (gallons/day) * 365 days/yr
 The maximum VOC (Tons per Year) for recycle = Density (lbs/gal) x Weight % Organics x Gal of mat. (gal/yr) x 1 ton/2,000 lbs

Note: 95% control efficiency provided by source. Also, this unit does not have a control device.

Therefore, 5% will be the worst case that this recycled unit can be emitted.

VOC Recovery (Tons per Year) = Amount VOC * (1-95% Recovery efficiency)

PTE VOC Tons per Year (no control) = VOC (Recovery) * (5% emissions)

**Appendix A: Emission Calculations
Particulate and HAP Emissions from Welding Operations**

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-33061-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

Type of Welder	# of Welding Stations	Maximum Electrode Usage Rate (lbs/hr/welder)	PM/PM10 Emission Factor (lbs PM10/1,000 lbs electrode)	Manganese Emission Factor (lbs Mn/1,000 lbs electrode)	PTE of PM/PM10 Uncontrolled (lbs/hr)	PTE of PM/PM10 Uncontrolled (tons/yr)	PTE of Manganese Uncontrolled (tons/yr)	Control Efficiency (%)	PTE of PM/PM10 Controlled (tons/yr)	PTE of Manganese Controlled (tons/yr)
Robotic High Frequency	1	5	5.2	0.318	0.03	0.11	0.01	0%	0.11	0.01

Assume all PM emissions are equal to PM10.

Emission factors are from AP 42, Chapter 12.19, Electric Arc Welding, Tables 12.19-1 and 12.19-2 (1/95).

Methodology

PTE PM/PM10/Mn Uncontrolled (tons/yr) = # of Welding Stations x Electrode Usage x Emission Factor (lbs/1,000 lbs electrode) x 8760 (hrs/yr) x 1 ton/2,000 lbs

PTE PM/PM10/Mn Controlled (tons/yr) = # of Welding Stations x Electrode Usage x Emission Factor (lbs/1,000 lbs electrode) x 8760 (hrs/yr) x 1 ton/2,000 lbs x (1 - Control Efficiency %)

Appendix A: Emissions Calculations
Torch Cutting

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-33061-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

PROCESS	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Torch Cutting												
Oxypropane (galv pipe & coils)	2	0.0625	12.00	0.0815	0.0002		0.0002	0.007	0.0000	0.00	0.0000	0.0000
Oxypropane (plate)	4	4.00	20.00	0.0815	0.0002		0.0002	1.56	0.0038	0.00	0.0038	0.0077
Oxypropane (mandrels)	1	26.00	1.00	0.0815	0.0002		0.0002	0.13	0.0003	0.00	0.0003	0.0006
EMISSION TOTALS												
Potential Emissions lbs/hr								1.70	0.004	0.00	0.004	0.01
Potential Emissions lbs/day								40.78	0.10	0.00	0.10	0.20
Potential Emissions tons/year								7.44	0.02	0.00	0.02	0.04

Methodology:

As with any scrap torch cutting operation, metal thickness and metal cutting rate will vary; the source has attempted to reflect the worst case scenario (max metal thickness and associated cutting rate) in determining the potential to emit.

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

**Appendix A: Emissions Calculations
Material Processing and Handling**

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-33061-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

$$E_f = k \cdot (0.0032)^{1.3} \cdot (U/5)^{1.3} / (M/2)^{1.4}$$

where: E_f = Emission factor (lb/ton)

- k (PM) = 0.74 = particle size multiplier (0.74 assumed for aerodynamic diameter $\leq 100 \mu\text{m}$)
- k (PM10) = 0.35 = particle size multiplier (0.35 assumed for aerodynamic diameter $\leq 10 \mu\text{m}$)
- k (PM2.5) = 0.053 = particle size multiplier (0.053 assumed for aerodynamic diameter $\leq 2.5 \mu\text{m}$)
- U = 10.2 = worst case annual mean wind speed (Source: NOAA, 2006*)
- M = 11.0 = material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
- E_f (PM) = 5.50E-04 lb PM/ton of material handled
- E_f (PM10) = 2.60E-04 lb PM10/ton of material handled
- E_f (PM2.5) = 3.94E-05 lb PM2.5/ton of material handled

Maximum Material Handling Throughput = 40 tons/hr
 Maximum Material Handling Throughput = 350,400 tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.10	0.05	0.01
Material Transfer	0.10	0.05	0.01
Loading of material into trucks	0.10	0.05	0.01
Total (tons/yr)	0.29	0.14	0.02

Methodology

Maximum Material Handling Throughput (tons/yr) = Maximum Material Handling Throughput (tons/hr) * 8,760 (hr/yr)
 Unlimited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs
 *Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 20

Abbreviations

- PM = Particulate Matter
- PM10 = Particulate Matter (<10 μm)
- PM2.5 = Particulate matter (< 2.5 μm)
- PTE = Potential to Emit

**Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads**

Company Name: Steel Dynamics, Inc.
Address: 5134 Loop Road, Jeffersonville, Indiana 47130
Permit Number: 019-33061-00089
Permit Reviewer: Renee Traivaranon
Date: 29-May-14

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006)

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	22.0	1.0	22.0	40.0	880.0	240	0.045	1.0	365.0
Vehicle (leaving plant) (one-way trip)	18.0	1.0	18.0	17.5	315.0	240	0.045	0.8	298.6
Total			40.0		1195.0			1.8	663.6

Average Vehicle Weight Per Trip = tons/trip
 Average Miles Per Trip = miles/trip

Unmitigated Emission Factor, $E_f = k * [(s/12)^a] * [(W/3)^b]$ (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	1.5	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	29.9	29.9	29.9	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E * [(365 - P)/365]$ (Equation 2 from AP-42 13.2)

Mitigated Emission Factor, $E_{ext} = E * [(365 - P)/365]$

where P = days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f =$	7.26	1.85	1.85	lb/mile
Mitigated Emission Factor, $E_{ext} =$	4.77	1.22	1.22	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	1.32	0.34	0.34	0.87	0.22	0.22
Vehicle (leaving plant) (one-way trip)	1.08	0.28	0.28	0.71	0.18	0.18
	2.41	0.61	0.61	1.58	0.40	0.40

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PTE = Potential to Emit



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Barry Smith
Steel Dynamics, Inc. (SDI)
4500 CR 59
Butler, IN 46721

DATE: June 16, 2014

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

SUBJECT: Final Decision
Administrative Amendment
019-34480-00089

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:
Jordan Breiner – Plant Manager
Tony Schroeder – 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 6/13/2013

Mail Code 61-53

IDEM Staff	GHOTOPP 6/16/2014 Steel Dynamics, Inc. (SDI) 019-34480-00089 Final		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Barry Smith Steel Dynamics, Inc. (SDI) 4500 CR 59 Butler IN 46721 (Source CAATS) via confirmed delivery										
2		Jordan Breiner Plant Manager Steel Dynamics, Inc. (SDI) 5134 Loop Road Jeffersonville IN 47130 (RO CAATS)										
3		Ms. Rhonda England 17213 Persimmon Run Rd Borden IN 47106-8604 (Affected Party)										
4		Ms. Betty Hislip 602 Dartmouth Drive, Apt 8 Clarksville IN 47129 (Affected Party)										
5		Jeffersonville City Council and Mayors Office 500 Quarter Master Jeffersonville IN 47130 (Local Official)										
6		Clark County Health Department 1320 Duncan Avenue Jeffersonville IN 47130-3723 (Health Department)										
7		Tony Schroeder Trinity Consultants 7330 Woodland Drive, Suite 225 Indianapolis IN 46728 (Consultant)										
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6			