



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 27, 2008

RE: Steel Dynamics, Inc - Engineered Bar Products Division / 063-25379-00037

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

May 27, 2008

Re: Significant Source Modification No:
063-25379-00037

Dear Mr. Brooks:

Steel Dynamics, Inc. – Engineered Bar Products Division ("SDI") applied for a Part 70 operating permit on March 15, 2005 for a stationary mini-mill that produces merchant and special bar quality steels. An application to modify the source was received on October 10, 2007. Pursuant to 326 IAC 2-7-10.5, SDI is permitted to:

- (1) Increase the nominal heat input capacity of the existing natural gas-fired Reheat Furnace from 185 MMBtu/hr to 310 MMBtu/hr.
- (2) Modify Stack 2 (that exhausts emissions from the Reheat Furnace) by:
 - (a) Converting the stack to an ejector stack; and
 - (b) Reducing the stack height by approximately 50 feet.

The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating the modification on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source cannot operate until an Operation Permit Validation Letter is issued.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bob Sidner, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (703) 633-1701 to speak directly to Mr. Sidner. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely/Original Signed By:

Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Attachments
ERG/BS

cc: File - Hendricks County
U.S. EPA, Region V
Hendricks County Health Department
Air Compliance Section Inspector
Compliance Data Section
Administrative and Development
Technical Support and Modeling
Billing, Licensing and Training Section



Mitchell E. Daniels, Jr.
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PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

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

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

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

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

Source Modification No.: 063-25379-00037	
Issued by/Original Signed By: Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality	Issuance Date: May 27, 2008

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary mini-mill that produces merchant and special bar quality steels.

Source Address:	8000 North County Road 225 East, Pittsboro, IN 46167
Mailing Address:	8000 North County Road 225 East, Pittsboro, IN 46167
General Source Phone Number:	(317) 892-7000
SIC Code:	3312
County Location:	Hendricks
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, under 326 IAC 2-3 Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

This stationary source is approved to modify and operate the following:

One (1) Reheat Furnace, constructed in 1996 and modified in 2004 and 2008, with a nominal heat input capacity of 310 MMBtu/hr, equipped with low NOx burners, exhausting to stack 2.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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

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

SECTION B GENERAL CONSTRUCTION CONDITIONS

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

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

B.2 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

(a) The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the emission units in Section A.2.

(b) Pursuant to 326 IAC 2-1.1-9, any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.3 Permit No Defense [IC 13-11 through 13-20][IC 13-22 through 13-25]

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

B.4 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.5 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

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

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

SECTION C GENERAL OPERATION CONDITIONS

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

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

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) (by job title or description) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

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

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

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

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

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

C.4 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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

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

C.5 Opacity [326 IAC 5-1]

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

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

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). 326 IAC 6-4-2(4) is not federally enforceable.

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

C.7 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period. A request for an extension does not require certification of the responsible official.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any equipment described in Section D and initiating any required monitoring related to that equipment.

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

Telephone Number: 317-233-0178 (ask for Compliance Section)

Facsimile Number: 317-233-6865

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

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

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

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

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

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

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

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

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

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

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

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

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

Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the method specified in 326 IAC 2-2-1(rr)(2)(A) and/or 326 IAC 2-3-1(mm)(2)(A), as applicable for calculating “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
- (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. Unless otherwise specified in this permit, all reports require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria:

- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (g) Then the Permittee shall submit the report for project at an existing emissions unit within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Section D.3 of PSD SSM 063-16628-00037, issued August 29, 2003, is superseded by this Section.

Emissions Unit Description:

One (1) Reheat Furnace, constructed in 1996 and modified in 2004 and 2008, with a nominal heat input capacity of 310 MMBtu/hr, equipped with low NO_x burners, exhausting to stack 2.

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

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

D.3.1 Reheat Furnace PSD BACT [326 IAC 2-2]

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

- (a) The NO_x emissions from the Reheat Furnace shall not exceed 0.08 lb/MMBtu.
- (b) The SO₂ emissions from the Reheat Furnace shall not exceed 0.0006 lb/MMBtu.
- (c) The CO emissions from the Reheat Furnace shall not exceed 0.084 lb/MMBtu.
- (d) The VOC emissions from the Reheat Furnace shall not exceed 0.0055 lb/MMBtu.
- (e) The PM_(filterable) emissions from the Reheat Furnace shall not exceed 0.0019 lb/MMBtu.
- (f) The PM_{10 (filterable and condensible)} emissions from the Reheat Furnace shall not exceed 0.0076 lb/MMBtu.
- (g) The visible emission from the Reheat Furnace shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

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

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

Compliance Determination Requirements

D.3.3 Low NO_x Burners [326 IAC 2-2]

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

- (a) The Reheat Furnace shall be equipped and operated with natural gas fueled low NO_x burners.
- (b) Proper combustion operation shall be followed.

D.3.4 Natural Gas Fuel [326 IAC 2-2]

Pursuant to PSD SSM 063-16628-00037, issued August 29, 2003, and 326 IAC 2-2 (PSD), the Permittee shall use pipeline natural gas as fuel in the Reheat Furnace.

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

D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within one hundred and eighty (180) days after startup of the modification permitted by SSM 063-25379-00037, the Permittee shall perform NOx testing of the Reheat Furnace in order to demonstrate compliance with Condition D.3.1(a). These tests shall be conducted utilizing methods approved by the Commissioner and repeated thereafter at least once every five (5) years from the date of valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.3.6 Record Keeping Requirements

- (a) To document compliance with Condition D.3.5, the Permittee shall maintain records of the results from tests required by that condition.
- (b) Pursuant to 326 IAC 2-2, the Permittee shall maintain records as specified by Conditions C.12(c) and (d) (General Record Keeping Requirements).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Address: 8000 North County Road 225 East, Pittsboro, IN 46167
Mailing Address: 8000 North County Road 225 East, Pittsboro, IN 46167
Permit No.: 063-25379-00037

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Address: 8000 North County Road 225 East, Pittsboro, IN 46167
Mailing Address: 8000 North County Road 225 East, Pittsboro, IN 46167
Permit No.: 063-25379-00037

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Steel Dynamics, Inc. - Engineered Bar Products Division
8000 North County Road 225 East
Pittsboro, IN 46167

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Steel Dynamics, Inc., located at 8000 North County Road 225 East, Pittsboro, IN 46167, completed construction on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on October 10, 2007 and as permitted pursuant to Significant Source Modification No. 063-25379-00037.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature _____

Date _____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20 _____. My Commission expires: _____.

Signature _____

Name _____ (typed or printed)

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Part 70 Significant Source Modification

Source Background and Description

Source Name:	Steel Dynamics, Inc. – Engineered Bar Products
Source Location:	8000 North County Road 225 East, Pittsboro, IN 46167
County:	Hendricks
SIC Code:	3312
Operation Permit No.:	T063-20969-00037
Operation Permit Issuance Date:	Not Yet Issued
Significant Source Modification No.:	063-25379-00037
Permit Reviewer:	ERG/BS

On April 19, 2008, the Office of Air Quality (OAQ) had a notice published in the Brownsburg Public Library of Brownsburg, Indiana, stating that Steel Dynamics, Inc. ("SDI") had applied for a Significant Source Modification to a Part 70 Permit (not yet issued) regarding a request to increase the nominal heat input capacity of the existing natural gas-fired Reheat Furnace and modify the stack that exhausts emissions from the Reheat Furnace. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not the permit should be issued as proposed.

On May 13, 2008, SDI submitted comments on the proposed Significant Source Modification. The following is a description of the comments and IDEM responses to the comments. Added text is shown as bold and deleted text is shown as strikeout. When conditions are added or deleted, the other conditions are renumbered accordingly, and the Table of Contents modified to reflect these changes.

Comment 1:

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

Response to Comment 1:

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

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

Comment 2:

SDI objects to the statements found throughout the draft permit which add duplicative requirements. By way of example and not limitation, statements in Section D conditions which provide that "All records shall be maintained in accordance with Section C – General Record Keeping Requirements of this permit" arguably add a requirement that entirely duplicates the obligation already contained in Condition C.14 to maintain records in accordance with that condition. SDI objects to any permit condition which requires that something shall be done "in accordance with" a previously-stated requirement in the Permit. SDI requests that these conditions be revised to note that the other permit provision contains requirements regarding, for example, recordkeeping.

Response to Comment 2:

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

While the inclusion of Condition C.14 may seem redundant, IDEM, OAQ believes that it does not subject facilities to double jeopardy or require multiple submissions for the same permit obligation.

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

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

Comment 3:

SDI objects to the statements found throughout the draft permit which requires compliance with certain provisions within a specified amount of time "of permit issuance," rather than "after startup of the modification." Because SDI may take up to 18 months after permit issuance to commence construction of the modification described in this permit, SDI may noteable to identify and/or implement these conditions until the modification is complete.

Response to Comment 3:

SDI did not indicate which specific conditions correspond to this comment. The OAQ found only two occurrences in the permit that match SDI's comment: Conditions C.2(a) and C.13(b).

Condition C.2(a) indicates that, "if required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility." SDI's comment does not apply to this condition since the requirement to develop and maintain a PMP for the Reheat Furnace is an existing requirement from the 2003 PSD permit.

Condition C.13(b) indicates that, "unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days after issuance of this permit." This condition establishes a deadline relative to permit issuance and the OAQ believes that it is appropriate.

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

Comment 4:

[Condition A.2]

SDI requests that the construction and modification dates be deleted. "Constructed in" or similar dates are unnecessary as the construction permits already provide a record of permitting for construction of equipment. Further, in some cases these dates are inaccurate or misleading, especially where construction spanned over more than one year. If IDEM insists on such information being included, then SDI requests that IDEM reference the permit number authorizing the unit instead of a particular year of construction.

Response to Comment 4:

IDEM, OAQ includes construction dates for emission units because that information can be a necessary factor in determining rule applicability. The construction dates will remain in the permit.

The IDEM, OAQ would be willing to correct any erroneous construction dates if SDI provides IDEM with the correct dates.

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

Comment 5:

[Section C: Source Operating Conditions]

SDI does not believe that any Section C conditions need to be issued in this SSM permitting action. Removal of Section C will address many of the comments in this letter. However, if IDEM does include Section C, SDI will be forced to file an appeal to avoid any unintentional waiver of issues raised in prior permit appeals, including the appeal for PSD Significant Source Modification Permit No. T063-16628-00037 (Cause No. 03-A-J-3183).

Response to Comment 5:

The IDEM, OAQ has the authority under 326 IAC 2-7 to issue provisions and requirements for Part 70 sources, as appropriate. SDI has not yet received its Part 70 permit so the conditions of the permit Section C are particularly important as they identify and describe many requirements for Part 70 sources. Appealed conditions or conditions relating to appealed conditions will be addressed in the respective appeal resolution.

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

Comment 6:

[Condition C.1: Certification]

SDI requests that the requirement to submit a certification for other applicable requirements, other than as designated by this permit, be deleted. This condition should not impose compliance statements for other unspecified requirements that may exist outside of this permit and were not identified by IDEM.

Response to Comment 6:

The certification required under Condition C.1 is required in Part 70 permits issued by Indiana. The interpretation of "or required by an applicable requirement" can apply to certain requirements, a NESHAP for example, which may not be included in the permit prior to a compliance deadline. NESHAP reporting requirements are also required to be certified by the facility's responsible official whether that condition is in the permit or not. Therefore, the Permit Shield does not extend to these situations.

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

Comment 7:

[Condition C.2: Preventive Maintenance Plan]

SDI requests that subsection (a) be revised consistent with the reasoning in Comment No. 2.

Response to Comment 7:

The IDEM, OAQ disagrees. The respective conditions adequately describe and clarify the requirements without unnecessary duplicity. In addition, SDI did not indicate what revisions it believes are appropriate.

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

Comment 8:

[Condition C.7: Performance Testing]

As clarification, SDI requests that IDEM include a statement stating that a report submittal extension request under subsection (c) does not require a certification by a “responsible official.”

Response to Comment 8:

The following changes were made to the permit as a result of this comment:

C.7 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

...

- (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. **A request for an extension does not require certification of the responsible official.**

Comment 9:

[Condition C.11: Emergency Provisions]

SDI requests that subcondition (h) be deleted, consistent with the language in Condition C.3(a).

Response to Comment 9:

The OAQ does not believe Condition C.11(h) is inconsistent with the provisions of C.3(a). Condition C.11(h) requires that the Permittee include emergencies on the Quarterly Deviation and Compliance Monitoring form. Condition C.3(a) requires that Deviations be reported in the same manner. Emergencies may require additional reporting requirements and are therefore addressed as a separate condition from the section pertaining to all deviations.

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

Comment 10:

[Condition C.12: Actions Related to Noncompliance Demonstrated by a Stack Test]

For subcondition (a), SDI requests that any references to “appropriate actions” be replaced with “reasonable steps” and any reference to “minimize” be replaced by “reduce.”

In addition, SDI requests that the following statement be added to provide SDI and IDEM with the option to agree to a different schedule of activities for a retest: *“The Permittee is not required to follow the specific procedures set out in (a) and (b) above if it and IDEM, OAQ agree to a different schedule of activities.”*

Response to Comment 10:

The OAQ does not believe that the proposed revisions are appropriate because they are unnecessary and change the meaning of the requirement. In addition, the OAQ already allows testing extension requests (Condition C.7(c)) and specifies when retesting shall be performed (Condition C.12(b)).

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

Comment 11:

[Condition C.13: General Record Keeping Requirements]

SDI requests that subsection (b) be revised consistent with the reasoning in Comment No. 3. In addition, SDI requests that subconditions (c) and (d) be revised as follows, consistent with 326 IAC 2-2-8(b) and 326 IAC 2-3-2(m):

(c) *If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit **at a major stationary source**, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the **method specified in 326 IAC 2-2-1(rr)(2)(A) and/or 326 IAC 2-3-1(mm)(2)(A), as applicable for calculating** “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:*

(1) *Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) ~~at an existing emissions unit~~, document and maintain **a recording of the following information** ~~the following records~~:*

...

(d) *If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the **method specified in 326 IAC 2-2-1(rr)(2)(A) and/or 326 IAC 2-3-1(mm)(2)(A), as applicable for calculating** “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:*

Response to Comment 11:

The OAQ does not believe that Condition C.13 should be revised consistent with SDI Comment 3. See Response to Comment 3.

However, the following changes were made to make the condition consistent with 326 IAC 2-2-8(b) and 326 IAC 2-3-2(m):

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
[326 IAC 2-2][326 IAC 2-3]

...

(c) *If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit **at a major stationary source**, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the **method specified in 326 IAC 2-2-1(rr)(2)(A) and/or 326 IAC 2-3-1(mm)(2)(A), as applicable for calculating** “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:*

- (1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, document and maintain **a record of the following information** ~~the following records:~~
- (A) A description of the project.
- ...
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the **method specified in 326 IAC 2-2-1(rr)(2)(A) and/or 326 IAC 2-3-1(mm)(2)(A), as applicable for calculating** “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- ...

Comment 12:

[Condition C.14: General Reporting Requirements]

SDI requests that subsection (a) be deleted, because it duplicates Condition C.3(a).

In addition, SDI requests that subsection (e) be revised consistent with the reasoning in Comment No. 3.

Finally, SDI requests that subsections (f) and (g) be revised as follows, consistent with 326 IAC 2-2-8(b) and 326 IAC 2-3-2(m):

- (f) *If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, ~~then the Permittee shall submit a report to IDEM, OAQ:~~*
- (g) **Then the Permittee shall submit t**~~The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:~~

Response to Comment 12:

See Response to Comment 2 regarding the OAQ's position on the inclusion of "duplicative" requirements.

See Response to Comment 3 regarding compliance with certain provisions within a specified amount of time of permit issuance.

The following changes were made to make the condition consistent with 326 IAC 2-2-8(b) and 326 IAC 2-3-2(m).

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

...

- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1

(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, and the project meets the following criteria, ~~then the Permittee shall submit a report to IDEM, OAQ:~~

...

- (g) ~~Then the Permittee shall submit~~ the report for project at an existing emissions unit ~~shall be submitted~~ within sixty (60) days after the end of the year and contain the following:

...

Comment 13:

[Section D.3: Emission Unit Description]

SDI requests that the facility description depicting construction and modification dates be deleted, consistent with the reasoning in Comment No. 4 above.

Response to Comment 13:

See Response to Comment 4.

Comment 14:

[Condition D.3.2: Preventive Maintenance Plan]

SDI requests that this Condition be revised to eliminate any cross-reference to Section C, consistent with the reasoning in Comment No. 2 above.

Response to Comment 14:

See Response to Comment 2.

Comment 15:

[Conditions D.3.6: Record Keeping Requirements]

SDI requests that subsection (b) be deleted because it is inappropriate to repeat a requirement already addressed completely in Section C.13 (the current citation to C.12 is a typographical error). In addition, SDI requests that subsection (c) be revised to eliminate any cross-reference to Section C, consistent with the reasoning in Comment No. 2 above.

Response to Comment 15:

See Response to Comment 2.

Comment 16:

[Emergency Occurrence Report form]

SDI request that the timeframe to notify IDEM of an emergency be revised to “within four (4) *daytime* business hours,” consistent with 326 IAC 2-7-16(b)(4).

Response to Comment 16:

The following changes were made to the permit in response to this comment:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003**

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

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Address: 8000 North County Road 225 East, Pittsboro, IN 46167
Mailing Address: 8000 North County Road 225 East, Pittsboro, IN 46167
Permit No.: 063-25379-00037

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16. |
|--|

Comment 17:

[Technical Support Document]

(Permit Level Determination - PSD and EO) In the second full paragraph, SDI requests that the second sentence be deleted because this is information is unnecessary and is inconsistent with IDEM's preliminary determination in the following paragraph that the actuals-to-projected-future-actuals test shows the emissions not to be major under 326 IAC 2-2.

(Testing Requirements) SDI requests that this condition be revised consistent with the language in Condition D.3.5.

Response to Comment 17:

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

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

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location

Source Name: Steel Dynamics, Inc. – Engineered Bar Products Division
Source Location: 8000 North County Road 225 East, Pittsboro, IN 46167
County: Hendricks
SIC Code: 3312
Operation Permit No.: T063-20969-00037
Operation Permit Issuance Date: Not Yet Issued
Significant Source Modification No.: 063-25379-00037
Permit Reviewer: ERG/BS

The Office of Air Quality (OAQ) has reviewed a significant source and significant permit application from Steel Dynamics, Inc. – Engineered Bar Products Division (“SDI”) relating to the operation of a mini-mill that produces merchant and special bar quality steels.

Existing Approvals

The source submitted an application for a Part 70 Operating Permit on March 15, 2005. At this time, this application is still under review. The source is operating under the following approvals:

- (a) PSD SSM 063-16628-00037, issued August 29, 2003 **;
- (b) MSM 063-22033-00037, issued December 13, 2005;
- (c) AA 063-22499-00037, issued February 9, 2006;
- (d) PSD SSM 063-22329-00037, issued March 21, 2007;
- (e) AA 063-24955-00037, issued June 29, 2007;
- (f) MSM 063-24946-00037, issued August 10, 1007; and
- (g) AA 063-25117-00037, issued August 10, 2007.

** This permit granted SDI approval to modify and re-start the operation of this source which was previously owned and operated by Qualitech Steel.

County Attainment Status

The source is located in Hendricks County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective October 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

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

- (a) **Ozone Standards:**
 - (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
 - (2) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. Hendricks County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM2.5**
 In Federal Register Notice 70 FR 943, dated January 5, 2005, the U.S. EPA designated Hendricks County as nonattainment for PM2.5. On March 7, 2005, the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Non-attainment New Source Review requirements. See the *State Rule Applicability – Entire Source* section.
- (c) **Other Criteria Pollutants**
 Hendricks County has been classified as attainment for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for PSD, 326 IAC 2-2.
- (d) **Fugitive Emissions**
 Since this source is classified as a steel mill, it belongs to one of the twenty-eight (28) listed PSD source categories as specified in 326 IAC 2-2-1(gg)(1) and fugitive emissions are counted toward the determination of PSD applicability.

Source Status

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

Pollutant	Potential To Emit* (tons/year)
PM	Greater than 100
PM ₁₀	Greater than 100
SO ₂	Greater than 100
VOC	Greater than 100
CO	Greater than 100
NO _x	Greater than 100
Pb	Less than 0.6

* According to the public noticed draft TSD for T063-20969-00037, not yet issued.

This existing source is a major stationary source under PSD (326 IAC 2-2), because PM/PM10, SO2, VOC, CO and NOx are emitted at a rate of 100 tons per year or more, and it is in one of the twenty-eight (28) listed PSD source categories, as specified in 326 IAC 2-2-1(gg)(1).

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

HAPs	Potential To Emit* (tons/year)
A single HAP	Less than 10
Total HAPs	Less than 25

* According to the public noticed draft TSD for T063-20969-00037, not yet issued.

This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2004 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM _{2.5}	26.8
PM ₁₀	46.1
SO ₂	87.4
VOC	13.6
CO	598.5
NO _x	97.8
Pb	Not reported

Description of Proposed Modification

The Office of Air Quality (OAQ) reviewed a Part 70 modification application from SDI (submitted on October 10, 2007, amended January 21, 2008) regarding a request to:

- (1) Increase the nominal heat input capacity of the existing natural gas-fired Reheat Furnace from 185 MMBtu/hr to 310 MMBtu/hr.

This proposed change will provide longer retention times for the reheating of larger steel blooms. The emissions increase associated with this proposal is the result of natural gas combustion. The furnace does not smelt or melt steel.

- (2) Modify Stack 2 (that exhausts emissions from the Reheat Furnace) by:
 - (a) Converting the stack to an ejector stack; and
 - (b) Reducing the stack height by approximately 50 feet.

Ejector stacks are equipped with a nozzle that increases the velocity of the exhaust gases.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Nominal Flow Rate (acfm)	Temperature (°F)
2	Reheat Furnace	117.9	11.27	200,478	700

Enforcement Issues

There are no pending enforcement actions.

Emission Calculations

See Appendix A (page 1-2) of this document for detailed emission calculations.

Permit Level Determination – Part 70 Modification

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

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

Pollutant	Potential To Emit (tons/year)
PM	1.0
PM ₁₀	4.0
PM _{2.5}	4.0
SO ₂	0.3
VOC	2.9
CO	44
NO _x	30

Pursuant to 326 IAC 2-7-10.5(f)(4), this modification is being performed through a Part 70 Significant Source Modification because it has the potential to emit NO_x greater than 25 tons per year; see the *Permit Level Determination – PSD* section of this document for more information.

Permit Level Determination – PSD and EO

The table below summarizes the emissions increase, reflecting all limits, of the emission units associated with this modification. Any control equipment is considered federally enforceable only after issuance of this Part 70 Source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Description	Emissions Increase (tons/year)						
	PM	PM ₁₀ / PM _{2.5}	SO ₂	VOC	CO	NO _x	Pb
Heat input capacity increase to the Reheat Furnace ^(a)	1.0	4.0	0.3	2.9	44.3	30.0	0.003
Stack modifications ^(b)	0	0	0	0	0	0	0
TOTAL	1.0	4.0	0.3	2.9	44.3	30.0	0.003
PSD Significant Level	25	15	40	40	100	40	0.6

(a) See Appendix A for the calculation of emissions increases.

(b) The proposed stack modifications will not increase emissions and are not expected to have a significant impact on air quality. See the State Rule Applicability section for more information.

The Permittee completed an Actual to Projected Actual test (pursuant to 326 IAC 2-2-2) for this modification at a major stationary source that indicates that the modification will not be major for Prevention of Significant Deterioration (PSD) (326 IAC 2-2). IDEM, OAQ has not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with 326 IAC 2-2-8 (Source Obligation).

This modification to an existing major stationary source is not major because the emissions increase is less than the Emission Offset and Nonattainment NSR significant levels. Therefore,

pursuant to 326 IAC 2-3 and 326 IAC 2-1.1-5, the Emission Offset and Nonattainment NSR requirements do not apply.

Federal Rule Applicability Determination

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 20; and 40 CFR Parts 61 and 63) included for this modification.
- (c) This source is subject to the provisions of 40 CFR Part 64, Compliance Assurance Monitoring (CAM). In order for this rule to apply, a pollutant-specific-emissions-unit at a source that requires a Part 70 or Part 71 permit must meet three criteria for a given pollutant:
 - (1) The unit has potential emissions (before controls) of the applicable regulated air pollutant, equal or greater than 100 percent of the amount required for a source to be classified as a major source,
 - (2) The unit is subject to an applicable emission limitation or standard for the applicable regulated air pollutant, and
 - (3) The unit uses a control device to achieve compliance with the applicable emission limitation or standard.

The Reheat Furnace has potential pre-control emissions greater than 100 tons of CO per year, is subject to 326 IAC 2-2 for CO, but does not use a CO emission control device. Therefore, the Reheat Furnace is not subject to the requirements of 40 CFR Part 64.

State Rule Applicability Determination – Reheat Furnace

326 IAC 2-1.1-5 (Air Quality Requirements)

On January 5, 2005, the EPA promulgated nonattainment designations for the PM_{2.5} NAAQS. These designations become effective on April 5, 2005; see 70 FR 944. This source is located in Hendricks County which is designated as nonattainment for PM_{2.5} and attainment for all other criteria pollutants.

On April 5, 2005, Steve Page, Director of the OAQPS, authored a memo titled “Implementation of New Source Review Requirements in PM_{2.5} Nonattainment Areas” directing states to assume that a major stationary source’s PM₁₀ emissions represent PM_{2.5} emissions until EPA promulgates the PM 2.5 major NSR regulations. As a result, IDEM, OAQ uses the PM₁₀ nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM_{2.5} NAAQS.

The PM₁₀ emissions increase associated with this modification is significantly less than 15 tpy. Therefore, assuming that PM₁₀ emissions represent PM_{2.5} emissions, 326 IAC 2-1.1-5 does not apply to this modification.

326 IAC 2-2 (Prevention of Significant Deterioration)

Source status

This source does belong to one of the listed 28 PSD source categories with a PSD major threshold of 100 tons per year.

Evaluation of PSD applicability

As indicated in the *Description of Modification* section of this document, this modification involves

a physical change to an existing unit at a major PSD source. In order to determine the emissions increases of the modification (or "project" pursuant to 326 IAC 2-2), the OAQ used the "actual-to-projected actual test" described in 326 IAC 2-2-2(d)(3). The following paragraphs describe how the test was conducted and how the emissions increases of the project were calculated. See *Appendix A* for detailed emission calculations.

The actual-to-projected actual test specifies how the emission increases from modified units should be calculated in order to evaluate the applicability of 326 IAC 2-2:

For modified units, the emissions increases are the difference between projected actual emissions and baseline actual emissions excluding the portion of emissions that a unit could have accommodated during the baseline period (as provided by 326 IAC 2-2-1(rr)(2)(A)(iii)).

Baseline actual emissions (BAE) for any existing non-EUSGU are the average annual emissions rate based on the unit's operation during any consecutive 24-month period in the 10 years preceding the date on which the complete permit application was received by IDEM. In this case, BAE are based on the operation of the Reheat Furnace from October 1, 2005 to September 30, 2007. Emission factors are from source test results or published AP-42 emission factors.

Projected actual emissions (PAE) for an emission unit are based on the maximum capacity of the unit following the modification and emission factors from source test results or published AP-42 emission factors.

Pursuant to 326 IAC 2-2-1, fugitive emissions, to the extent quantifiable, must be included in the assessment of baseline actual and projected actual emissions. There are no quantifiable fugitive emissions associated with this modification.

Finally, the net emissions increase of the modification is equal to the sum of the emission increases from new, modified and increasingly utilized units coupled with the contemporaneous and creditable emissions increases and decreases. Since the emissions increases are less than the PSD significant thresholds, an evaluation of net emissions increases is not necessary.

As indicated by the *Permit Level Determination - PSD* section of this document and the emission calculations in *Appendix A*, the emissions increases of the project is less than the relevant PSD significant thresholds for all pollutants.

Therefore, this modification is not subject to the requirements of 326 IAC 2-2.

Source obligation under 326 IAC 2-2

Pursuant to 326 IAC 2-2-8(b) and (c), the following requirements apply to this modification:

The following provisions apply to projects at an existing emissions unit at a major stationary source, other than projects at a source with a PAL, in circumstances where there is a reasonable possibility that a project that is not a part of a major modification may result in a significant emissions increase and the owner or operator elects to use the method specified in section 1(rr)(2)(A) of this rule for calculating projected actual emissions:

- (1) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
 - (A) A description of the project.
 - (B) Identification of any emissions unit whose emissions of a regulated NSR pollutant could be affected by the project.
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

- (i) the baseline actual emissions;
 - (ii) the projected actual emissions;
 - (iii) the amount of emissions excluded under section 1(rr)(2)(A)(iii) of this rule; and
 - (iv) an explanation for why the amount was excluded, and any netting calculations, if applicable.
- (2) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the department if the annual emissions, in tons per year, from the project identified in subdivision (1) exceed the baseline actual emissions, as documented and maintained under subdivision (1)(C), by a significant amount, as defined in section 1(xx) of this rule, for that regulated NSR pollutant and if the emissions differ from the preconstruction projection as documented and maintained under subdivision (1)(C). The report shall be submitted to the department within sixty (60) days after the end of the year. The report shall contain the following:
- (A) The name, address, and telephone number of the major stationary source.
 - (B) The annual emissions as calculated under subdivision (3).
 - (C) The emissions calculated under the actual-to-projected actual test stated in section 2(d)(3) of this rule.
 - (D) Any other information that the owner or operator wishes to include in the report, such as an explanation as to why the emissions differ from the preconstruction projection.

The owner or operator of the source shall make the information required to be documented and maintained under subsection (b) available for review upon a request for inspection by the department. The general public may request this information from the department under 326 IAC 17.1.

Existing PSD requirements

Pursuant to SSM 063-16628-00037 and 326 IAC 2-2 (PSD), the Permittee shall comply with the following:

- (a) The NO_x emissions from the Reheat Furnace shall not exceed 0.08 lb/MMBtu.
- (b) The SO₂ emissions from the Reheat Furnace shall not exceed 0.0006 lb/MMBtu.
- (c) The CO emissions from the Reheat Furnace shall not exceed 0.084 lb/MMBtu.
- (d) The VOC emissions from the Reheat Furnace shall not exceed 0.0055 lb/MMBtu.
- (e) The PM (filterable) emissions from the Reheat Furnace shall not exceed 0.0019 lb/MMBtu.
- (f) The PM₁₀ (filterable and condensable) emissions from the Reheat Furnace shall not exceed 0.0076 lb/MMBtu.
- (g) The visible emission from the Reheat Furnace shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

These PSD BACT limitations have not been changed by the proposed modification. While an increase in the heat input capacity of the Reheat Furnace will increase emissions, the Reheat Furnace will be able to comply with the existing PSD BACT limitations.

326 IAC 2-4.1 (Hazardous Air Pollutants)

Pursuant to 326 IAC 2-4.1-1, any facility that:

- (1) Is constructed or reconstructed after July 27, 1997; and
- (2) Is major source of HAPs (as defined in 40 CFR 63.41); and
- (3) Is not exempt pursuant to 326 IAC 2-4.1-1(b)

is subject to the requirements of 326 IAC 2-4.1.

The Reheat Furnace is not a major source of HAPs and is therefore not subject to the requirements of 326 IAC 2-4.1.

326 IAC 2-7-10.5 (Part 70 Modifications)

During the development of PSD SSM 063-16628-00037, issued August 29, 2003, air quality modeling analyses were completed to determine the ambient air quality impact of the emission units associated with that approval. The potential emissions from the Reheat Furnace were included in those analyses.

As indicated in the *Description of Modification* section of this document, SDI has proposed to modify the stack that exhausts emissions from the Reheat Furnace. Therefore, pursuant to 326 IAC 2-7-10.5(a) and (c), OAQ completed air quality modeling analyses to demonstrate that the stack modifications will not contribute to a violation of the National Ambient Air Quality Standards (NAAQS). If a modeled change in a pollutant's concentration is greater than the respective significant threshold, additional modeling would be completed. A summary of the modeling results are provided below:

Averaging Time	Modeled CO Concentration (ug/m ³)		Change in Concentration (ug/m ³)	Significant Threshold (ug/m ³)
	Current Stack	Proposed Stack		
1-hour	47.36	65.6	18.24	2000
3-hour	-	-	-	-
8-hour	21.49	23.91	2.42	500
24-hour	-	-	-	-
Annual	-	-	-	-

Averaging Time	Modeled NOx Concentration (ug/m ³)		Change in Concentration (ug/m ³)	Significant Threshold (ug/m ³)
	Current Stack	Proposed Stack		
1-hour	-	-	-	-
3-hour	-	-	-	-
8-hour	-	-	-	-
24-hour	-	-	-	-
Annual	1.31	1.2	-0.11	1.0

Averaging Time	Modeled SO ₂ Concentration (ug/m ³)		Change in Concentration (ug/m ³)	Significant Threshold (ug/m ³)
	Current Stack	Proposed Stack		
1-hour	-	-	-	-
3-hour	0.259	0.32	0.061	25
8-hour	-	-	-	-
24-hour	0.068	0.08	0.012	5.0
Annual	0.009	0.009	0	1.0

Averaging Time	Modeled PM ₁₀ Concentration (ug/m ³)		Change in Concentration (ug/m ³)	Significant Threshold (ug/m ³)
	Current Stack	Proposed Stack		
1-hour	-	-	-	-
3-hour	-	-	-	-
8-hour	-	-	-	-
24-hour	0.864	0.962	0.098	5.0
Annual	0.126	0.115	-0.011	1.0

Based on the results of the modeling completed by OAQ, the proposed stack modifications are not expected to cause a significant impact on air quality.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 2-2-3, particulate matter emissions from the Reheat Furnace shall not exceed 0.0019 lb/MMBtu (equivalent to 2.5 tons of PM per year). Therefore, pursuant to 326 IAC 6-3-1(c)(1), the requirements of 326 IAC 6-3-2 do not apply to the Reheat Furnace because the 326 IAC 2-2 limit is more stringent than a limit established by 326 IAC 6-3-2.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

Pursuant to 326 IAC 7-1.1-1, any facility with a potential to emit SO₂ greater than or equal to 25 tons of per year or 10 pounds per hour shall comply with the requirements of 326 IAC 7-1.1. The Reheat Furnace has a potential to emit SO₂ less than 25 tons per year and 10 pounds per hour. Therefore, the requirements of 326 IAC 7-1.1 do not apply to the Reheat Furnace.

326 IAC 8-1-6 (Volatile Organic Compounds – BACT)

Pursuant to 326 IAC 8-1-6, any facility constructed after January 1, 1980 that has potential VOC emissions greater than or equal to 25 tons of VOC per year shall reduce VOC emissions using BACT. The Reheat Furnace has potential VOC emissions of less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply to the Reheat Furnace.

Testing Requirements

Within one hundred and eighty (180) days after start-up of the modification permitted by SSM 063-25379-00037, the Permittee shall perform NO_x testing of the Reheat Furnace in order to demonstrate compliance with the existing limitations established under 326 IAC 2-2. These tests shall be conducted utilizing methods approved by the Commissioner and repeated at least once every five (5) years from the date of valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination

Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements applicable to this modification.

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 063-25379-00037. The staff recommends to the Commissioner that this Part 70 Significant Source Modification be approved.

**Appendix A: Emission Calculations
Reheat Furnace**

Company Name: Steel Dynamics, Inc. - Bar Products Division
Address : 8000 North County Road 225 East, Pittsboro IN 46167
SSM: 063-25379-00037
Reviewer: ERG/BS
Date: 2/1/08

Baseline Actual Emissions (from October 1, 2005 - September 30, 2007)

Pollutant	Nominal Heat Rate (MMBtu/hr)	Nominal Heat Rate (MMCF/hr)	Emission Factor * (lb/MMCF)	Emissions	
				(lb/hr)	(tpy)
PM	185	0.181	1.9	0.345	1.48
PM10	185	0.181	7.6	1.378	5.93
SO2	185	0.181	0.6	0.109	0.47
NOx	185	0.181	57	10.338	44.45
VOC	185	0.181	5.5	0.998	4.29
CO	185	0.181	84	15.235	65.51
Lead	185	0.181	0.0005	9.1E-05	3.9E-04

Baseline actual emissions are the average annual emissions rate based on the unit's operation during any consecutive 24-month period in the 10 years preceding the date on which the complete permit application was received by IDEM.

Since the emissions of the Reheat Furnace are entirely dependent on its operating hours, and it operates approximately 8600 hours per year, the unit's baseline actual emissions are equal to its annual actual emissions.

Projected Actual Emissions

Pollutant	Nominal Heat Rate (MMBtu/hr)	Nominal Heat Rate (MMCF/hr)	Emission Factor * (lb/MMCF)	Emissions	
				(lb/hr)	(tpy)
PM	310	0.304	1.9	0.577	2.48
PM10	310	0.304	7.6	2.310	9.93
SO2	310	0.304	0.6	0.182	0.78
NOx	310	0.304	57	17.324	74.49
VOC	310	0.304	5.5	1.672	7.19
CO	310	0.304	84	25.529	109.78
Lead	310	0.304	0.0005	1.5E-04	6.5E-04

Following completion of the proposed modification, the Reheat Furnace will have a nominal heat input rate of 310 MMBtu/hr.

Emissions Increases

Pollutant	Projected Actual Emissions (tpy)	Baseline Actual Emissions (tpy)	Emissions Increase (tpy)
PM	2.48	1.48	1.00
PM10	9.93	5.93	4.00
SO2	0.78	0.47	0.32
NOx	74.49	44.45	30.04
VOC	7.19	4.29	2.90
CO	109.78	65.51	44.26
Lead	6.5E-04	3.9E-04	2.6E-04

NOTES:

* Except for NOx, all emission factors are from AP-42 (Ch. 1.4). The NOx emission factor is from emissions testing completed in October 2004.

Methodology:

1 MMCF = 1020 MMBtu

Emissions (tpy) = Nominal Heat Rate (MMCF/hr) x EF (lb/MMCF) x 8600 hr/yr x 1/2000 ton/lb

**Appendix A: Emissions Calculations
Reheat Furnace**

**Company Name: Steel Dynamics, Inc. - Bar Products Division
Address : 8000 North County Road 225 East, Pittsboro IN 46167
SSM: 063-25379-00037
Reviewer: ERG/BS
Date: 2/1/08**

Heat Input Increase of the Reheat Furnace

MMBtu/hr

Throughput Increase: MMCF/yr

CF/hr

HAPs

HAPs - Organics

	Benzene	Dichloro- benzene	Formaldehyde	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	3.4E-03
Potential to Emit (tons/yr)	1.127E-03	6.441E-04	4.026E-02	1.825E-03

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential to Emit (tons/yr)	2.684E-04	5.904E-04	7.515E-04	2.040E-04	1.127E-03

Total HAPs 0.047 tons/yr

METHODOLOGY

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Potential to Emit (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) x 1/2000 ton/lb