



*Frank O'Bannon*  
 Governor

*Lori F. Kaplan*  
 Commissioner

100 North Senate Avenue  
 P.O. Box 6015  
 Indianapolis, Indiana 46206-6015  
 (317) 232-8603  
 (800) 451-6027  
 www.in.gov/idem

## PART 70 MINOR SOURCE MODIFICATION OFFICE OF AIR QUALITY

**Steel Dynamics, Inc.  
 4500 County Road 59,  
 Butler, Indiana, 46721**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval 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.

|   |                                  |
|---|----------------------------------|
| Minor Source Modification No.: 033-15186-00043  |                                  |
| Issued by: Original Signed by Paul Dubenetzky<br>Paul Dubenetzky, Branch Chief<br>Office of Air Quality | Issuance Date: February 11, 2002 |



## TABLE OF CONTENTS

### **A SOURCE SUMMARY**

- A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
- A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-(c)]
- A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

### **B GENERAL CONSTRUCTION CONDITIONS**

- B.1 Definitions [326 IAC 2-7-1]
- B.2 Effective Date of the Permit [IC13-15-5-3]
- B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

### **C GENERAL OPERATION CONDITIONS**

- C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
- C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)][326 IAC 2-7-6(1) and (6)]
- C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]
- C.4 Opacity [326 IAC 5-1]
- C.5 Fugitive Dust Emissions [326 IAC 6-4]
- C.6 Operation of Equipment [326 IAC 2-7-6(6)]
- C.7 Compliance Requirements [326 IAC 2-1.1-11]
- C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
- C.9 Emergency Provisions
- C.10 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
- C.11 General Record Keeping Requirements [326 IAC 2-7-5(3)]
- C.12 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

### **D.1 FACILITY OPERATION CONDITIONS – Radiant Tube Heaters**

- Certification**
- Emergency Occurrence Report**

## SECTION A

## SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through 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 approval 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)]

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The Permittee owns and operates a stationary steel mill.

|                              |   |
|------------------------------|---|
| Responsible Official:        | Barry Smith   |
| Source Address:              | 4500 County Road 59, Butler, Indiana 46721  |
| Mailing Address:             | 4500 County Road 59, Butler, Indiana 46721  |
| General Source Phone Number: | (219) 868-8000  |
| SIC Code:                    | 3312  |
| County Location:             | DeKalb  |
| Source Location Status:      | Attainment for all criteria pollutants  |
| Source Status:               | Part 70 Permit Program<br>Major Source, under PSD rules;<br>Major Source, Section 112 of the Clean Air Act<br>1 of 28 Source Categories |

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

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This stationary source is approved to construct and operate the following emission units and pollution control devices:

Addition of twenty four (24), natural gas fired radiant tube heaters, each with a maximum heat input rate capacity of 0.3 MMBtu/hour. The exhaust from these heaters will be fugitive and will be released inside the building. The hot band galvanizing line with a maximum heat input capacity of 45 MMBtu/hour was permitted in a PSD construction permit CP 033-5625-00043, issued on August 08, 1996.

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

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This modification to the stationary source does not include any insignificant activities, as defined in 326 IAC 2-7-1(21).

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

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

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

**B.2      Effective Date of the Permit [IC13-15-5-3]**

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

**B.3      Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]**

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

**SECTION C GENERAL OPERATION CONDITIONS**

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

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- (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 a 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, with each submittal requiring certification.
- (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]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, 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 Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (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 contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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.

**C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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

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

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

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

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

**C.4 Opacity [326 IAC 5-1]**

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

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

**C.6 Operation of Equipment [326 IAC 2-7-6(6)]**

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Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment is in operation.

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

**C.7 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. 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.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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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 necessary equipment and initiating any required monitoring related to that equipment.

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

**C.9 Emergency Provisions [326 IAC 2-7-16]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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: 317-233-5674 (ask for Compliance Section)  
Facsimile Number: 317-233-5967

- (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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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) IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) 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) Operations of the affected auxiliary boiler may continue during an emergency only if the following conditions are met:
  - (1) 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.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is 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.
  - (3) Any operation of the affected auxiliary boiler shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

C.10 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within 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 and 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 documents submitted pursuant to this condition do not 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.11 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]**

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- (a) Records of all required data, reports and support information 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 kept 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 applicable record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

#### **C.12 General Reporting Requirements [326 IAC 2-7-5(3)(C)]**

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- (a) The 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, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (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) 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. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

**SECTION D.1**

**FACILITY OPERATION CONDITIONS**

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

Addition of twenty four (24), natural gas fired radiant tube heaters, each with a maximum heat input rate capacity of 0.3 MMBtu/hour. The exhaust from these heaters will be fugitive and will be released inside the building. The hot band galvanizing line with a maximum heat input capacity of 45 MMBtu/hour was permitted in a PSD construction permit CP 033-5625-00043, issued on August 08, 1996.

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

There are no applicable requirements to this new equipment.

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Steel Dynamics, Inc.  
Source Address: 4500 County Road 59, Butler, Indiana 46721  
Mailing Address: 4500 County Road 59, Butler, Indiana 46721  
Source Modification No.:033-15186-00043

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

Please check what document is being certified:

- 9 Test Result (specify) \_\_\_\_\_
- 9 Report (specify) \_\_\_\_\_
- 9 Notification (specify) \_\_\_\_\_
- 9 Affidavit (specify) \_\_\_\_\_
- 9 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:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Steel Dynamics, Inc.  
Source Address: 4500 County Road 59, Butler, Indiana 46721  
Mailing Address: 4500 County Road 59, Butler, Indiana 46721  
Source Modification No.: 033-15186-00043

**This form consists of 2 pages**

**Page 1 of 2**

|  |
|--|
| <p>9 This is an emergency as defined in 326 IAC 2-7-1(12)<br/>C The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and<br/>C The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.</p> |
|--|

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<br>Describe:   |
| Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:   |
| Estimated amount of pollutant(s) emitted during emergency:  |
| Describe the steps taken to mitigate the problem:   |
| Describe the corrective actions/response steps taken:   |
| Describe the measures taken to minimize emissions:  |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

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

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

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

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

A certification is not required for this report.

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

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

#### **Source Background and Description**

|  |   |
|--|---|
| <b>Source Name:</b>                    | <b>Steel Dynamics, Inc.</b>                       |
| <b>Source Location:</b>                | <b>4500 County Road 59, Butler, Indiana 46721</b> |
| <b>County:</b>                         | <b>DeKalb</b>                                     |
| <b>SIC Code:</b>                       | <b>3312</b>                                       |
| <b>Operation Permit No.:</b>           | <b>T033-8068-00043</b>                            |
| <b>Operation Permit Issuance Date:</b> | <b>Not yet issued</b>                             |
| <b>Minor Source Modification No.:</b>  | <b>033-15186-00043</b>                            |
| <b>Permit Reviewer:</b>                | <b>Gurinder Saini</b>                             |

The Office of Air Quality (OAQ) has reviewed a modification application from Steel Dynamics, Inc. relating to the modification to the existing hot band galvanizing line furnace as follows:

Addition of twenty four (24), natural gas fired radiant tube heaters, each with a maximum heat input rate capacity of 0.3 MMBtu/hour. The exhaust from these heaters will be fugitive and will be released inside the building. The hot band galvanizing line with a maximum heat input capacity of 45 MMBtu/hour was permitted in a PSD construction permit CP 033-5625-00043, issued on August 08, 1996.

#### **History**

On January 02, 2002 Steel Dynamics, Inc. submitted an application to the OAQ requesting to add additional radiant tube heaters to their existing hot band galvanizing line. Steel Dynamics, Inc. applied for a Part 70 permit on January 03, 1997. The existing hot band galvanizing line was permitted to construct and operate, pursuant to the construction permit CP 033-5625-00043 issued on August 08, 1996. This construction permit was issued pursuant to provisions of 326 IAC 2-2 and 40 CFR 52.21 Prevention of Significant Deterioration (PSD).

#### **Justification for the Modification**

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(d)(4)(B)(ii) because the potential to emit for the NO<sub>x</sub> is greater than 10 tons per year and less than 25 tons per year.

#### **Existing Approvals**

The source applied for a Part 70 Operating Permit T033-8068-00043 on January 03, 1997. The source has been operating the galvanizing line under previous approvals including, but not limited to, the following:

- (a) CP 033-5625-00043, issued on August 8, 1996.

**Recommendation**

The staff recommends to the Commissioner that the Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application.

An application for the purposes of this review was received on January 02, 2002.

**Emission Calculations**

See Appendix A page 1 of 1 of this document for detailed emissions calculations.

**Potential To Emit of the Modification**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source 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”.

| Pollutant       | Potential To Emit (tons/year) |
|-----------------|-------------------------------|
| PM              | 0.1                           |
| PM-10           | 0.2                           |
| SO <sub>2</sub> | -                             |
| VOC             | 0.2                           |
| CO              | 2.6                           |
| NO <sub>x</sub> | 10.9                          |

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of NO<sub>x</sub> is greater than 10 tons per year and less than 25 tons per year. Therefore, the modification is subject to the provisions of 326 IAC 2-7-10.5 (d).

**Potential to Emit**

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

| Process/facility                           | Potential to Emit (tons/year) |       |                 |     |     |                 |      |
|--|-------------------------------|-------|-----------------|-----|-----|-----------------|------|
|  | PM                            | PM-10 | SO <sub>2</sub> | VOC | CO  | NO <sub>x</sub> | HAPs |
| 24 Radiant Tube Heaters                    | 0.1                           | 0.2   | -               | 0.2 | 2.6 | 10.9            | -    |
| Total Emissions                            | 0.1                           | 0.2   | -               | 0.2 | 2.6 | 10.9            | -    |
| PSD /Emission offset significant threshold | 25                            | 15    | 40              | 25  | 100 | 40              | -    |

This modification to a Major source is minor because the net emissions increases are less than

PSD significant threshold.

The Source has requested this modification to improve the quality of steel produced and provide a better product mix from the galvanizing line. This modification will not result in any increase in steel production from the galvanizing line or upstream processes.

### County Attainment Status

The source is located in DeKalb County.

| Pollutant       | Status     |
|-----------------|------------|
| PM-10           | Attainment |
| SO <sub>2</sub> | Attainment |
| NO <sub>2</sub> | Attainment |
| Ozone           | Attainment |
| CO              | Attainment |
| Lead            | Attainment |

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (2) DeKalb County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited or actual emissions):

| Pollutant       | Emissions (tons/year) |
|-----------------|-----------------------|
| PM-10           | 127                   |
| SO <sub>2</sub> | 117                   |
| VOC             | 75                    |
| CO              | 540                   |
| NO <sub>x</sub> | 719                   |

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.
- (b) The data in this table is based upon the reported emissions for the year 2000.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

### **State Rule Applicability - Entire Source**

#### 326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of all criteria pollutants. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

#### 326 IAC 5-1 (Visible Emissions Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) 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.

### **State Rule Applicability – 24 natural gas fired radiant tube heaters at 0.3 MMBtu/hour each**

#### 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of radiant tube heaters will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

This modification is not subject to the requirements of 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating) because the burners are not utilized for indirect heating.

#### 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)

This modification of addition of burners is not subject to the requirements of 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) because the potential to emit of the sulfur dioxide from these facilities are less than 25 tons per year. The burners shall only combust natural gas.

#### 326 IAC 8-1-6 (New facilities; General Reduction Requirements):

This modification is not subject to the requirements of 326 IAC 8-1-6 (New facilities; general reduction requirements) because the potential to emit of VOC from this modification is less than 25 tons per year per unit.

#### 326 IAC 9 (Carbon Monoxide Emission Limits):

Pursuant to 326 IAC 9 (Carbon Monoxide Emission Limits), the modification is subject to this rule because it is a stationary source which emits CO emissions and commenced operation after March 21, 1972. Under this rule, there is not a specific emission limit because the source is not an operation listed under 326 IAC 9-1-2.

#### 326 IAC 10 (Nitrogen Oxides)

This source is not subject to the requirements of 326 IAC 10 (Nitrogen Oxides) because the source is not located in the specified counties (Clark and Floyd) listed under 326 IAC 10-1-1.

## **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also 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 is no control device and the actual emissions (equal to potential to emit as the unit is yet to be modified) from the modification do not exceed 25 tons per year. Therefore, there are no compliance monitoring requirements for this modification.

## **Conclusion**

This source modification shall be subject to the conditions of the attached Part 70 Minor Source Modification No. 033-15186-00043.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**24 Radiant Tube heaters @ 0.3 MMBtu/hour**

**Company Name: Steel Dynamics, Inc.**

**Address City IN Zip: 4500 County Road 59, Butler, IN 46721**

**CP: 033-15186**

**Pit ID: 033-00043**

**Reviewer: GS**

**Date: 01/04/01**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

7.2

63.1

|                               | Pollutant |       |     |                      |     |      |
|-------------------------------|-----------|-------|-----|----------------------|-----|------|
|                               | PM*       | PM10* | SO2 | NOx                  | VOC | CO   |
| Emission Factor in lb/MMCF    | 1.9       | 7.6   | 0.6 | 346.8<br>**see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.1       | 0.2   | 0.0 | 10.9                 | 0.2 | 2.6  |

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

\*\*Emission Factors for NOx: Vendor Supplied specific to the Radiant Tube type heaters.

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).