

033-48020-00043 MAI 14845

June 26, 2024

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

JUL 0 1 2024

Dept of Environmental Mgmt Office of Air Quality

RE:

Title V Administrative Amendment Application Steel Dynamics, Inc. – Flat Roll Group – Butler Division Source ID 033-00043

To Whom It May Concern:

Enclosed is an application for an Administrative Amendment of the Part 70 Operating Permit (Title V) for the Steel Dynamics, Inc. - – Flat Roll Group – Butler Division (SDI) stationary steel mini-mill located at 4500 County Road 59, Butler, Indiana (Butler Facility).

If you have any questions concerning this application, please contact Ms. Emily Stewart of Trinity Consultants at (317) 451-8100.

Sincerely,

STEEL DYNAMICS, INC.

Bill Bougher

**Environmental Engineer** 

(260) 868-8191

# ADMINISTRATIVE AMENDMENT APPLICATION



Steel Dynamics, Inc. – Flat Roll Group, Butler Division / Butler, Indiana

**Prepared By:** 

#### TRINITY CONSULTANTS

8900 Keystone Crossing Suite 1070 Indianapolis, IN 46240 (317) 451-8100

June 2024

Project No. 241501.0003





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#### 1. INTRODUCTION

Steel Dynamics, Inc. – Flat Roll Group, Butler Division (SDI) is a mini-mill facility in Butler, Indiana (Butler Facility). SDI currently operates the Butler Facility under a Part 70 (Title V) operating permit No. T033-41286-00043, issued by the Indiana Department of Environmental Management (IDEM) on January 3, 2022, and last modified on October 13, 2023 (TV AA No. 033-47031-00043). SDI is requesting an Administrative Amendment for the addition of a new natural gas-fired boiler at the existing pickling line at the Butler Facility. State forms are included in Appendix A and emission calculations are provided in Appendix B.

#### 2.1 Source Location

The Butler Facility is located at 4500 County Road 59 in Butler, Indiana. The Butler Facility is located in DeKalb County, which has been designated as attainment or unclassifiable for all criteria pollutants.<sup>1</sup>

The Butler Facility is an existing major source under the Prevention of Significant Deterioration (PSD) and an area source under Section 112 of the Clean Air Act.

#### 2.2 Emission Unit Description

SDI is proposing to add a new natural gas-fired boiler at the existing pickling line operation at the Butler Facility. The potential uncontrolled emissions from the proposed boiler are below with the exemption thresholds per 326 IAC 2-1.1-3(e)(1). Therefore, SDI is requesting that IDEM incorporate the descriptive information for the boiler into the permit under Section A.3 as follows:

One (1) natural gas-fired boiler, identified as Boiler No. 1a, with a nominal rating of 500 horsepower, exhausting to Stack 15.

<sup>1 326</sup> IAC 1-4-18

## 3. AIR EMISSIONS QUANTIFICATION

The proposed natural gas-fired boiler is expected to generate emissions of particulate matter (PM), PM with an aerodynamic diameter less than 10 microns ( $PM_{10}$ ), PM with an aerodynamic diameter less than 2.5 microns ( $PM_{2.5}$ ), sulfur dioxide ( $SO_2$ ), nitrogen oxides ( $SO_2$ ), volatile organic compounds ( $SO_2$ ), carbon monoxide ( $SO_2$ ), and hazardous air pollutants ( $SO_2$ ).

### 3.1 Potential To Emit Summary

The uncontrolled PTE from the proposed boiler at the Butler Facility is summarized in Table 3-1. Detailed emission calculations for the proposed unit are included in Appendix B.

**Table 3-1. Butler Facility Uncontrolled PTE from Proposed Boiler** 

Emission Unit	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	voc	со	Total HAP	Highest Single HAP <sup>2</sup>
Boiler No. 1a	0.17	0.67	0.67	0.05	1.86	0.48	2.83	7.72E-03	6.57E-03
Exemption Thresholds <sup>1</sup>	5	5	5	10	10	10	25	2.5	1
Source Modification Required?	No	No	No	No	No	No	No	No	No

<sup>1326</sup> IAC 2-1.1-3(e)(1)

<sup>&</sup>lt;sup>2</sup>Highest Single HAP is Formaldehyde

#### 4. REGULATORY APPLICABILITY

This section of the permit application summarizes the key air quality regulations that are potentially applicable to the new boiler at the Butler Facility.

#### 4.1 Federal Regulatory Applicability

#### 4.1.1 Attainment Status of DeKalb County

DeKalb County has been designated as attainment for all pollutants per 326 IAC 1-4-18. Since the county is designated attainment or unclassifiable for all other criteria pollutants, emissions increase from the project will be reviewed pursuant to the requirements for PSD under 326 IAC 2-2.

#### 4.1.2 Prevention of Significant Deterioration (PSD)

The Butler Facility is an existing major stationary source under the Prevention of Significant Deterioration (PSD) program; therefore, the emissions increase from the proposed project is evaluated against the major PSD significant emission rates (SER) for all PSD-regulated pollutants. The addition of this boiler will not increase the production rate of the Pickling Line, which is based on steel production rates at the EAFs and customer demand for pickled steel.

As shown in Table 4-1, the emission increases due to the proposed project do not exceed the SER for any regulated NSR pollutant. Therefore, the project is not subject to PSD review.

Emission Unit	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	Voc	со
Boiler No. 1a	0.17	0.67	0.67	5.26E-02	1.86	0.48	2.83
Total	0.17	0.67	0.67	5.26E-02	1.86	0.48	2.83
SER	25	15	10	40	40	40	100
PSD/NNSR Triggered?	No	No	No	No	No	No	No

**Table 4-1. Project Emissions Increases** 

#### 4.1.3 New Source Performance Standards

New Source Performance Standards (NSPS), located in 40 CFR Part 60 and implemented in Indiana regulation 326 IAC 12, require new, modified, or reconstructed sources to control emissions to specified levels. Moreover, any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A, except where expressly noted.

#### 4.1.3.1 Subpart Dc -Small Industrial-Commercial-Institutional Steam Generating Units

Pursuant to 40 CFR 60.40c(a), NSPS Subpart Dc applies to each steam generating unit that has a maximum rated heat input no more than 100 MMBtu/hr (HHV) but greater than or equal to 10 MMBtu/hr (HHV) and for which construction commenced after June 9, 1989. The proposed Boiler No. 1a will have a nameplate heat input capacity between 10 and 100 MMBtu/hr; therefore, it is subject to the requirements of NSPS Dc. Form 53512 (FED-01) detailing the applicable portions of this rule is included in Appendix A.

Trinity Consultants 4-1

#### 4.1.4 National Emissions Standards for Hazardous Air Pollutants

NESHAPs apply to sources in specifically regulated industrial source classifications (Clean Air Act Section 112(d)) or on a case-by-case basis (Clean Air Act Section 112(g)) for facilities not regulated as a specific industrial source type. Pollutant specific NESHAPs may also be applicable under 40 CFR Part 61. Many NESHAPs have been developed for particular industrial source categories under 40 CFR Part 63. Therefore, the potential applicability of a particular NESHAP to a facility can be readily ascertained based on the industrial source category covered. There are no changes to NESHAP applicability for the facility.

### 4.2 Indiana Regulatory Applicability

#### 4.2.1 Administrative Amendment (326 IAC 2-7-11)

Pursuant to 326 IAC 2-7-11, SDI is applying for an administrative amendment to the Title V permit for the Butler Facility. These changes may be addressed as an administrative amendment according to 326 IAC 2-7-11(a)(8)(A) and 326 IAC 2-7-11(a)(7) because they add an exempt unit as described in 326 IAC 2-1.1-3 and do not trigger new applicable requirements. Appropriate permit application forms are included in Appendix A.

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

The provisions of 326 IAC 6-2-4 regulate PM emissions from indirect heating facilities constructed after September 21, 1983. The proposed boiler is classified as an indirect heating facility based on the definition of combustion for indirect heating in 326 IAC 1-2-19. Allowable PM emissions from the Butler Facility were calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

#### Where:

Pt = pounds of particulate matter emitted per million Btu (MMBtu) heat input

Q = total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The Butler Facility has a facility-wide heat input for indirect heating sources of 434.21 MMBtu/hr. Based on the equation above, allowable PM emissions from the proposed boiler are calculated at 0.2247 lb/MMBtu. The emissions from the natural gas-fired boiler were calculated using emission factors from AP 42, Chapter 1.4. These factors indicate that the emission rate is 0.0019 lb/MMBtu; therefore, no control device is required to satisfy the requirements of 326 IAC 6-2.

# **APPENDIX A. STATE FORMS**



#### AIR PERMIT APPLICATION COVER SHEET

State Form 50639 (R4 / 1-10) INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT IDEM - Office of Air Quality - Permits Branch

100 N. Senate Avenue, MC 61-53 Room 1003 Indianapolis, IN 46204-2251 Telephone: (317) 233-0178 or

Toll Free: 1-800-451-6027 x30178 (within Indiana) Facsimile Number: (317) 232-6749 www.IN.gov/idem

FOR OFFICE USE ONLY

#### **NOTES:**

1. Tax ID

• The purpose of this cover sheet is to obtain the core information needed to process the air permit application. This cover sheet is required for <u>all</u> air permit applications submitted to IDEM, OAQ. Place this cover sheet on

top of a	applications submitted to IDEM, OAQ. Place this cover sheet on all subsequent forms and attachments that encompass your air application packet.	PERMIT NUMBER:
● Submit	the completed air permit application packet, including all forms and ments, to IDEM Air Permits Administration using the address in	DATE APPLICATION WAS RECEIVED:
the upp	per right hand corner of this page.	Received
<ul><li>IDEM v</li></ul>	will send a bill to collect the filing fee and any other applicable fees.	State of Indiana
	d instructions for this form are available on the Air Permit ation Forms website.	JUL 0 1 2024 PC
Number:		Dept of Environmental Mgmt Office of Air Quality

	PART A: Purpose of Application								
Da	art A identifies the	nurnose c	**************************************				ses of this fo	orm the to	arm
	ource" refers to the		•					71111, U1 <del>C</del> U	51111
			teel Dynamics, Inc.						
2.	Source / Company		ivision	- riacron	Croup D	utioi	3. Plant ID:	033	<u> </u>
4.	Billing Address:	4	500 County Road 5	59					
	City: Butler			Sta	te: IN		ZIP Code: 4	16721 –	
5.	Permit Level:	☐ Exemption	on 🔲 Registratio	n 🗌 SS	DA 🔲	MSOP [	☐ FESOP 🔯	TVOP	☐ PBR
6.	Application Summa				numbers n	nay be ass	igned as need	ed based o	n the
	choices selected be	low.							
	☐ Initial Permit	□ F	Renewal of Operati	ng Permit		☐ As	sphalt General	Permit	
	☐ Review Request	□ F	Revocation of Oper	ating Perm	it	□ Al	ternate Emissio	on Factor F	Request
	☐ Interim Approval		Relocation of Porta	ble Source		□ Ac	cid Deposition (	Phase II)	
	☐ Site Closure		Emission Reduction	n Credit Re	gistry				
	☐ Transition (betwe	en permit le	evels) From:				То:		
		mendment:	☐ Company Na	ame Change			☐ Change o	f Responsib	le Official
			☐ Correction to	Non-Techn	ical Informa	ation	☐ Notice On	ly Change	
			🛛 Other (speci	fy): F	ddition of	insignifica	nt activity		
	☐ Modification:	☐ New Emis	ssion Unit or Control I	Device [	☐ Modified	Emission U	Init or Control De	vice	
		☐ New Appli	icable Permit Require	ment [	] Change	to Applicabii	lity of a Permit R	equirement	
		☐ Prevention	n of Significant Deter	oration [	] Emission	Offset	☐ MACT Pre	econstructio	n Review
		☐ Minor Sou	ırce Modification	☐ Signific	ant Source	Modificatio	n		
		☐ Minor Per	mit Modification	☐ Signific	ant Permit	Modification	1		
		Other (spe	cify):						
7.	Is this an application	ı for an initia	I construction and/	or operating	g permit fo	r a <b>"Gree</b> n	nfield" Source	? 🗌 Yes	⊠ No
8.	Is this an application	n for constru	ction of a new emis	sions unit a	at an <b>Exis</b> t	ting Sourc	<b>:e</b> ?	☐ Yes	⊠ No

PART B: Pre-Application Meeting				
Part B specifies whether a meeting was held or is being requested to discuss the permit application.				
9. Was a meeting held between the company and IDEM prior to submitting this application to discuss the details of the project?				
⊠ No ☐ Yes: Date:				
10. Would you like to schedule a meeting with IDEM management and your permit writer to discuss the details of this project?				
⊠ No ☐ Yes: Proposed Date for Meeting:				
DART C: Confidential Pusings Information				
PART C: Confidential Business Information  Part C identifies permit applications that require special care to ensure that confidential business information is kept separate from the public file.				
Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in the Indiana Administrative Code (IAC). To ensure that your information remains confidential, refer to the IDEM, OAQ information regarding submittal of confidential business information. For more information on confidentiality for certain types of business information, please review IDEM's Nonrule Policy Document Air-031-NPD regarding Emission Data.				
11.Is any of the information contained within this application being claimed as Confidential Business Information?				
⊠ No □ Yes				
PART D: Certification Of Truth, Accuracy, and Completeness				
Part D is the official certification that the information contained within the air permit application packet is truthful, accurate, and complete. Any air permit application packet that we receive without a signed certification will be deemed incomplete and may result in denial of the permit.				
For a Part 70 Operating Permit (TVOP) or a Source Specific Operating Agreement (SSOA), a "responsible official" as defined in 326 IAC 2-7-1(34) must certify the air permit application. For all other applicants, this person is an "authorized Individual" as defined in 326 IAC 2-1.1-1(1).				
I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate, and complete.				
Jeff Rickman General Manager				
Name (typed) Title				
July - Proximan 6/26/24				
Signature				



#### **OAQ GENERAL SOURCE DATA APPLICATION** GSD-01: Basic Source Level Information

State Form 50640 (R5 / 1-10) State of Indiana INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

JUL @ 1 2024

Dept of Environmental Mamt Office of Air Quality

IDEM - Office of Air Quality - Permits Branch

100 N. Senate Avenue, MC 61-53 Room 1003 Indianapolis, IN 46204-2251 Telephone: (317) 233-0178 or

Toll Free: 1-800-451-6027 x30178 (within Indiana) Facsimile Number: (317) 232-6749 www.IN.gov/idem

NOTES:

- The purpose of GSD-01 is to provide essential information about the entire source of air pollutant emissions. GSD-01 is a required
- Detailed instructions for this form are available on the Air Permit Application Forms website.
- All information submitted to IDEM will be made available to the public unless it is submitted under a claim of confidentiality. Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in 326 IAC 17.1-4-1. Failure to follow these requirements exactly will result in your information becoming a public record, available for public inspection.

	PART A: Source / Company Location Information				
1.	<b>Source / Company Name</b> : Steel Dynami Butler Division	cs, Inc Flat R	Roll Group -	2. Plant ID:	033 – 00043
3.	Location Address: 4500 County Road 59	)			
	City: Butler		State: IN	ZIP Code: 4	16721 –
4.	County Name: Dekalb		5. Township N	lame: Wilming	yton
6.	Geographic Coordinates:				
	Latitude: 41°22'13.24"N		Longitude:	84°54'40.64"W	
7.	Universal Transferal Mercadum Coordi	nates (if knowr	n):		
	Zone: Hori:	zontal:		Vertical:	
8.	Adjacent States: Is the source located wi	thin 50 miles of	f an adjacent state	<b>∍</b> ?	
<u> </u>	☐ No ☑ Yes – Indicate Adjacent State(s):	☐ Illinois (IL)	⊠ Michigan (N	/II) ⊠ Ohio (OH)	☐ Kentucky (KY)
9.	Attainment Area Designation: Is the sour	ce located within	a non-attainment a	rea for any of the	criteria air pollutants?
		utant(s): 🔲 C	O Pb N	Ox O3 P	M ☐ PM <sub>10</sub> ☐ PM <sub>2.5</sub> ☐ SO <sub>2</sub>
10	Portable / Stationary: Is this a portable of	r stationary sou	ırce?	☐ Portable	Stationary     Stationary
·					
		PART B: Sou	rce Summary		
11.	Company Internet Address (optional):				
12.	Company Name History: Has this source	operated unde	er any other name	e(s)?	
L		regarding past	company names	in Part I, Compa	any Name History.
13.	Portable Source Location History: Will t	he location of t	he portable sourc	e be changing ir	n the near future?
	Not Applicable ☐ No ☐ Ye		Part J, Portable S Part K, Request t		History, and ion of Portable Source.
14.	14. Existing Approvals: Have any exemptions, registrations, or permits been issued to this source?				
	☐ No      ☑ Yes – List these permits and their corresponding emissions units in Part M, Existing Approvals.				
15.	15. Unpermitted Emissions Units: Does this source have any unpermitted emissions units?				
	☑ No ☐ Yes – List all unpermitted emissions units in Part N, Unpermitted Emissions Units.				
16.	16. New Source Review: Is this source proposing to construct or modify any emissions units?				
	⊠ No ☐ Yes – List all proposed new construction in Part O, New or Modified Emissions Units.				
17.	Risk Management Plan: Has this source	submitted a Ris	sk Management F	Plan?	
l	Not Required  □ No □ Yes → Dat	o aubmittad:	F	PA Facility Identifi	ier: – –

PART C: Source Contact Information						
IDEM will send the original, signed permit decision to the person identified in this section.  This person MUST be an employee of the permitted source.						
18. Name of Source Contact Person: Bill Bougher	18. Name of Source Contact Person: Bill Bougher					
19. Title (optional): Environmental Engineer						
20. Mailing Address: 4500 County Road 59						
City: Butler	State: IN	<b>ZIP Code</b> : 46721 –				
21. Electronic Mail Address (optional): bill.bougher@steeld	ynamics.com					
<b>22. Telephone Number</b> : (260) 868 – 8191	<b>22. Telephone Number</b> : ( 260 ) 868 - 8191					
PART D: Authorized Individual/						
IDEM will send a copy of the permit decision to the Individual or Responsible Official is different from t						
24. Name of Authorized Individual or Responsible Officia	al: Jeff Rickman					
25. Title: General Manager						
26. Mailing Address: 4500 County Road 59						
City: Butler	State: IN	<b>ZIP Code</b> : 46721 –				
<b>27. Telephone Number</b> : (260) 868 – 8000	28. Facsimile Number (optional): ( ) –					
29. Request to Change the Authorized Individual or Responsive the person designated as the Authorized Individual IDEM, OAQ? The permit may list the title of the Authorized In	ual or Responsible Official	I in the official documents issued by				
☐ No ☐ Yes – Change Responsible Official to:	Jeff Rickman					
PART F: Own	er Information					
30. Company Name of Owner: Steel Dynamics, Inc.						
31. Name of Owner Contact Person: Jeff Rickman		Anna da Anna anna anna anna anna anna an				
32. Mailing Address: 4500 County Road 59						
City: Butler	State: IN	<b>ZIP Code</b> : 46721 –				
33. Telephone Number: (260) 868 - 8000	34. Facsimile Number					
34. Operator: Does the "Owner" company also operate the s	ource to which this applic	ation applies?				
□ No - Proceed to Part F below. □ Yes - Enter "SAME AS OWNER" on line 35 and proceed to Part G below.						
PART F: Operator Information						
35. Company Name of Operator: SAME AS OWNER						
36. Name of Operator Contact Person:						
37. Mailing Address:						
City:	State:	ZIP Code: –				
38. Telephone Number: (     )	39. Facsimile Number	8. Telephone Number: ( ) – 39. Facsimile Number (optional): ( ) –				

	PART G: Agent Information					
40. Company Name of Agent: Trinity Consultants						
41. Type of Agent: 🛛 Environmental Consultant 🗀	Attorney	pecify):				
42. Name of Agent Contact Person: Emily Stewart						
43. Mailing Address: 8900 Keystone Crossing, Suite 107	0					
City: Indianapolis	State: IN	<b>ZIP Code</b> : 46240 –				
44. Electronic Mail Address (optional): estewart@	4. Electronic Mail Address (optional): estewart@trinityconsultants.com					
<b>45. Telephone Number</b> : (317) 451 – 8102	46. Facsimile Numbe	r (optional): ( ) –				
47. Request for Follow-up: Does the "Agent" wish to receive during the public notice period (if applicable) and a copy						
PART H: Local L	ibrary Information					
48. Date application packet was filed with the local libra		nnlication submittal (if required)				
49. Name of Library: Butler Public Library	y. Within to dayo of ap	phiodion odomical (ii roquirou)				
50. Name of Librarian (optional):	-					
51. Mailing Address: 340 South Broadway Street						
City: Butler	State: IN	<b>ZIP Code</b> : 46721 –				
52. Internet Address (optional): http://www.butlerpu						
53. Electronic Mail Address (optional):						
<b>54. Telephone Number</b> : (260) 868 – 2351	55. Facsimile Numbe	r (optional): ( ) –				
Complete this section only if the source has previously opera above in Section A.	<b>ne History</b> <i>(if applicable)</i> ated under a legal name f					
56. Legal Name of Company		57. Dates of Use				
		to				
		to				
		to				
		to				
		to				
		to				
		to				
		to to				
		to				
58. Company Name Change Request: Is the source official on all official documents issued by IDEM, OAQ?	illy requesting to change	to to to				

Address:

**County Name:** 

City:

The current location of the source should be listed in Section A.

59. Plant ID	60. Location of the Portable Source	61. Dates at this Location
_		to
		to
_		to
		to
_		to
_		to
		to
_		to
_		to
_		to
<u> </u>		to
		to
		to
_		· ·
P <i>A</i>	ART K: Request to Change Location of Portable Source (if ap	oplicable)
Complete this section to re	equest a change of location for a portable source.	
62. Current Location:		
Address:		
City:	State: ZIP Co	
County Name:		
63. New Location:		

PART J: Portable Source Location History (if applicable)

Complete this section only if the source is portable and the location has changed since the previous permit was issued.

State:

ZIP Code:

Complete this section to summarize the	PART L: Source Process Descri	ption	
64. Process Description	65. Products	66. SIC Code	67. NAICS Code
Steel Manufacturing	Steel Coils	3312	331111
			-

	PART M: Existing Approvals (if applicable)					
Complete this se	ction to summarize the approvals issued to the source since issuance	of the main operating permit.				
68. Permit ID	69. Emissions Unit IDs	70. Expiration Date				
41286	Title V Renewal					
44671	Title V Significant Permit Modification					
47031	Administrative Amendment					

	PART N: Unpermitted Em	issions Units (if applicable	)	
Complete this se	ection only if the source has emission units the	nat are not listed in any peri	nit issued by IDEM	, OAQ.
		73. Actua	l Dates	
71. Emissions Unit ID	72. Type of Emissions Unit	Began Construction	Completed Construction	Began Operation

PART O: New or Modified Emissions Units (if applicable)  Complete this section only if the source is proposing to add new emission units or modify existing emission units.											
Complete this se	ction	only	if the source is proposing to add new e	emission units or modify	existing emission	units,					
	>	۵		78. Estima							
74. Emissions Unit ID		76. MOD		Begin Construction	Complete Construction	Begin Operation					
						#344.00					



# OAQ FEDERAL RULE INCORPORATION APPLICATION FED-01: Summary of Federal Requirements – NSPS & NESHAP

State Form 53512 (R / 1-10)

#### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

IDEM – Office of Air Quality – Permits Branch 100 N. Senate Avenue, MC 61-53, Room 1003 Indianapolis, IN 46204-2251 Telephone: (317) 233-0178 or Toll Free: 1-800-451-6027 x30178 (within Indiana) Facsimile Number: (317) 232-6749

www.in.gov/idem

#### **NOTES:**

- The purpose of this form is to provide a standardized way for sources to identify the NSPS or NESHAP requirements that are applicable to the regulated source. Complete one (1) form for each federal rule that applies to the source. This is a required form.
- Detailed instructions for this form are available on the Air Permit Application Forms website.
- All information submitted to IDEM will be made available to the public unless it is submitted under a claim of confidentiality. Claims
  of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in 326 IAC
  17.1-4-1. Failure to follow these requirements exactly will result in your information becoming a public record.

		art A: Identification of Applicable Standard
Pa	rt A identifies the applicable standard	and affected source.
1.	Type of Standard:	☑ Part 60 NSPS ☐ Part 61 NESHAP ☐ Part 63 NESHAP (MACT)
2.	Subpart Letter:	Dc
3.	Source Category Name:	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
4.	Affected Source (Include all applicable emission unit IDs):	Boiler No. 1
		Part B: Applicable Requirements
Pa	rt B specifies the specific requiremer	its of the federal rule that are applicable to the process or emission unit.
5.	level. For example, if all of 40 CFR	by the section of the federal standard that is applicable at the lowest subsection 63.342(c) is applicable, "40 CFR 63.342(c)" is the appropriate citation. If only

	Part B: App	licable Requirements								
Part B specifies the specific requiremer	nts of the federal	rule that are applicable to the process or emission unit.								
5. Applicable Requirements: Identify the section of the federal standard that is applicable at the lowest subsection level. For example, if all of 40 CFR 63.342(c) is applicable, "40 CFR 63.342(c)" is the appropriate citation. If only paragraph 2 of 40 CFR 63.342(c) is applicable, then the appropriate citation is 40 CFR 63.342(c)(2).										
<ul> <li>40 CFR 60.40c (a) and (b)</li> </ul>	•	•								
• 40 CFR 60.41c	•	•								
• 40 CFR 60.48c (a)(1), (a)(2),	•	•								
(a)(3), (g), and (i)	•	•								
•	•	•								
•	•	•								
•	•	•								
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•	•	•								
•	•	•								
•										

Part C: Pe	Performance Testing Requirements
Part C identifies the performance testing require	rements that are applicable to the process or emission unit.
6. Performance Testing:	N/A
7. Date of Initial Performance Test:	N/A
8. Test Methods:	N/A
Was the initial performance test approved by IDEM?	☐ Yes: Date approved: ☐ No
10. Did the initial performance test show compliance with the rule?	☐ Yes ☐ No: Date of next performance test:
	Part D: Important Dates
Part D identifies specific dates associated with t	the federal standard that are applicable to the process or emission unit.
11. Date Initial Notification was Submitted:	TBD
12. Initial Compliance Date:	Startup: <u>TBD</u> ☐ Other:
	Description: N/A Date:
13. Other Dates	Description: N/A Date:
	Description: N/A Date:
	Part E: Other Information
	taining to the applicable federal rule. Attach additional information using
form GSD-09 as necessary.	

# **APPENDIX B. EMISSION CALCULATIONS**

Trinity Consultants B-1

#### Appendix B: Emissions Calculations

Company Name: Steel Dynamics, Inc. - Flat Roll Group - Butler Division

Source Address: 4500 County Road 59, Butler, IN 46721

#### **Uncontrolled Potential to Emit**

Emission Unit	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	voc	со	Total HAP	Highest Single HAP <sup>2</sup>
Boiler No. 1a	0.17	0.67	0.67	0.05	1.86	0.48	2.83	7.72E-03	6.57E-03
Exemption Thresholds <sup>1</sup>	5	5	5	10	10	10	25	2.5	1
Source Modification Required?	No	No	No	No	No	No	No	No	No

<sup>&</sup>lt;sup>1</sup>326 IAC 2-1.1-3(e)(1)

#### **PSD Emission Increases**

Emission Unit	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	voc	co
Boiler No. 1a	0.17	0.67	0.67	5.26E-02	1.86	0.48	2.83
Total	0.17	0.67	0.67	5.26E-02	1.86	0.48	2.83
SER	25	15	10	40	40	40	100
PSD/NNSR Triggered?	No	No	No	No	No	No	No

<sup>&</sup>lt;sup>2</sup>Highest Single HAP is Formaldehyde

#### Appendix B: Emissions Calculations Boiler No. 1a - Natural Gas Combustion (Less than 100 MMBtu/hr)

Company Name: Steel Dynamics, Inc. - Flat Roll Group - Butler Division

Source Address: 4500 County Road 59, Butler, IN 46721

Boiler Capacity (1000 Btu/hr)	20412
Boiler Capacity (MMBtu/hr)	20.412

					Pollutant						
					PM*	PM10*	PM2.5*	SO2	NOx	voc	co
Emission Factor in lb/MMCF					1.9 7.6 7.6 0.6 21.20 5.5				5.5	32,26	
Emissions Unit	Number of Units	Heat Input Capacity (MMBtu/hr)	Heat Input Capacity Total (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)						
Boiler No. 1a	1	20.412	20.412	175.3030588	0.17	0.67	0.67	0.05	1.86	0.48	2.83

#### Notes:

\*PM emission factor is filterable PM only. PM10 and PM2.5 emission factors are filterable and condensable PM combined.

Emissions factors for NOx and CO per manufacturers specifications.

			HAPs - Organics							
	Benzene	Dichlorobenzene	Formaldeh yde	Naphthale ne	Toluene	Mercury				
	2.10E-03	1.20E-03	7.50E-02	6.10E-04	3.40E-03	2.60E-04				
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)							
Boiler No. 1a	20,412	175,3030588	1.84E-04	1.05E-04	6,57E-03	5.35E-05	2.98E-04	2,28E-05		

			Lead*	Cadmium	Chromium	Manganes e	Nickel	Total HAPs
	5.00E-04	1.10E-03	1,40E-03	3.80E-04	2.10E-03	(Organics+Metals)		
Emissions Unit	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emissions (tons/yr)					
Boiler No. 1a	20.412	175,3030588	4,38E-05	9.64E-05	1.23E-04	3,33E-05	1.84E-04	7.72E-03

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

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

\*Lead is regulated under 326 IAC 2-2.

Note: A review of EPA's SPECIATE 4.3 database for HAPs associated with natural gas combustion reveals that n-hexane (the HAP form of hexane) is not emitted as part of natural gas combustion. Therefore, the AP-42 emission factor for hexane does not include any n-hexane and was not included when calculating HAPs from natural gas combustion.

#### Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Heating Value of Natural Gas is assumed to be 1020 MMBtu/MMCF

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) \* 8,760 hrs/yr \* 1 MMCF/1,020 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)
Potential Emission (tons/yr) = Throughput (MMCF/yr) \* Emission Factor (lb/MMCF) \* (1 ton/2,000 lb)

Dynamics County Road 59 IN 46721 Harmalan Wall-



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