

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

**IN THE MATTER OF:** )  
 )  
Steel Dynamics, Inc. ) **NOTICE OF VIOLATION AND**  
Butler, Indiana ) **FINDING OF VIOLATION**  
 )  
Proceedings Pursuant to ) **EPA-5-01-IN-13**  
Section 113(a)(1) of the )  
Clean Air Act, 42 U.S.C. )  
§ 7413(a)(1) )  
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**NOTICE AND FINDING OF VIOLATION**

The Administrator of the United States Environmental Protection Agency (U.S. EPA) is issuing this Notice of Violation and Finding of Violation under Section 113(a)(1) and (a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(1) and (a)(3). U.S. EPA finds that Steel Dynamics, Inc. (SDI) is violating the Indiana State Implementation Plan (SIP), 40 C.F.R. Part 52, Prevention of Significant Deterioration (PSD) requirements, PSD permits CP033-3692 and CP033-8091, and 40 C.F.R. § 60.272a, New Source Performance Standards (NSPS) as follows:

**Statutory and Regulatory Background**

1. On June 19, 1978, U.S. EPA promulgated the prevention of significant deterioration of air quality standards pursuant to Subtitle I, Part C of the Act. These regulations are codified at 40 C.F.R. § 52.21 (43 Fed. Reg. 26403). These regulations apply to any major stationary source or major modification that would be constructed in an area designated as attainment or unclassifiable under the Act.
2. Section 171 of the Act, 42 U.S.C. § 7471, requires states to include provisions in their SIPs that comply with the requirements of the PSD Program and the regulations promulgated thereunder.
3. In accordance with Section 110(c) of the CAA, 42 U.S.C. § 7410(c), and 40 C.F.R. § 52.21(a), on August 7, 1980, U.S. EPA incorporated the provisions of 40 C.F.R. § 52.21(b) through (w) into the Indiana SIP, and delegated to the Indiana Department of Environmental Management (IDEM) authority to review and process PSD permit applications and to implement the PSD program. 45 Fed. Reg. 52,741, as

amended at 53 Fed. Reg. 18,985, codified at 40 C.F.R. § 52.793.

4. 40 C.F.R. § 52.23 states, among other things, that failure to comply with any provision of 40 C.F.R. Part 52, or with any approved regulatory provision of a SIP, or with any permit condition pursuant to approved or promulgated regulations for the review of new or modified stationary or indirect sources, shall render the person or governmental entity so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under section 113 of the Act.
5. On June 16, 1997, U.S. EPA approved 326 IAC 5-1-2, Opacity Limitations, as part of the federally enforceable SIP for Indiana. 62 Fed. Reg. 18521.
6. 326 IAC 5-1-2 states that visible emissions from a source or facility shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings.
7. On March 15, 1984, U.S. EPA approved 326 IAC 1-6-2, Malfunction Reporting, as part of the federally enforceable SIP for Indiana. 49 Fed. Reg. 5618.
8. 326 IAC 1-6-2 states that notification of malfunction of any facility or emission control equipment which lasts more than one hour shall be made by telephone or telegraph, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence. Failure to report a malfunction of any emission control equipment subject to the requirements of this rule shall constitute a violation of this rule and any other applicable rules.
9. On July 16, 1982, U.S. EPA approved 326 IAC 6-3-2, Particulate Emission Limitations, as part of the federally enforceable SIP for Indiana. 47 Fed. Reg. 30972.
10. 326 IAC 6-3-2 states that no person shall operate any process so as to produce, cause, suffer or allow particulate matter to be emitted in excess of the process weight limit established by use of the equation listed at 326 IAC 6-3-2.
11. 40 C.F.R. § 60.272a, federal NSPS requirements, specifically § 60.272a(a)(1), states that no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an electric arc furnace (EAF) any

gases which exit from a control device and contain particulate matter (PM) in excess of 12 mg/dscm (0.0052 gr/dscf). 40 C.F.R. § 60.272a(a)(2) states that no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an EAF any gases which exit from a control device and exhibit 3 percent opacity or greater.

#### **FINDINGS OF FACT**

12. SDI owns and operates a steel mini-mill at 4500 County Road 59, Butler, Indiana.
13. SDI's Butler facility is located in Dekalb County, Indiana which has been designated an attainment or unclassifiable area under the Act.
14. SDI is a major stationary source, which has the potential to emit 250 tons per year or more of any pollutant subject to regulation under the Act.
15. On October 7, 1994, the Indiana Department of Environmental Management (IDEM) issued PSD permit CP033-3692 to SDI, which outlined emission limits for SDI's EAF. This permit included a PM10 limit of 0.0032 grains per dscf, an opacity limit of 3 percent, a nitrogen oxides (NOx) limit of 0.51 pounds per ton, and a volatile organic compound (VOC) limit of 0.13 pounds per ton. This permit also included requirements for malfunction reporting for its facility and control equipment, pursuant to 326 IAC 1-6-2.
16. On June 25, 1997, IDEM issued PSD permit CP033-8091 when SDI added a second EAF, among other things, to its Butler facility. This permit included a NOx limit of 0.51 pounds per ton and an opacity limit of 3 percent. This permit also included requirements for malfunction reporting for its facility and control equipment, pursuant to 326 IAC 1-6-2.
17. On March 24, 1998, IDEM issued PSD permit CP033-9187 when SDI added a submerged arc furnace (SAF), among other things, to its Butler facility. This permit included requirements for malfunction reporting for its facility and control equipment, pursuant to 326 IAC 1-6-2.
18. Emissions from SDI's EAFs are subject to the NOx limits outlined in PSD permits CP033-3692 and CP033-8091.

19. Emissions from SDI's EAFs are subject to the VOC limits outlined in its PSD permits CP033-3692 and CP033-8091.
20. Emissions from SDI's EAFs are subject to the PM10 limits outlined in PSD permit CP033-3692 and the Indiana SIP at 326 IAC 6-3-2.
21. On July 17, 1996, SDI conducted stack tests on its EAF stack to determine VOC, sulfur dioxide (SO<sub>2</sub>), NO<sub>x</sub>, and carbon monoxide (CO) emissions, and submitted the stack test results to IDEM.
22. On September 19 and 20, 1996, SDI retested emissions from its EAF stack to determine PM10, VOC, SO<sub>2</sub>, NO<sub>x</sub>, and CO emissions, and submitted the stack test results to IDEM.
23. On November 17-20, 1998, SDI conducted stack tests on its EAF to determine PM/PM10, NO<sub>x</sub>, and SO<sub>2</sub> emissions, and submitted the stack test results to IDEM.
24. On February 2-3, 1999, SDI conducted stack tests on its EAF to determine SO<sub>2</sub>, NO<sub>x</sub>, and CO emissions, and submitted the stack test results to IDEM.
25. SDI is subject to the malfunction reporting requirements in 326 IAC 1-6-2 of the Indiana SIP, as well as malfunction reporting requirements in PSD permit CP033-8091.
26. Emissions from SDI's EAFs are subject to the opacity regulations in the 40 C.F.R. § 60.272a, as well as opacity limits in PSD permits CP033-3692 and CP033-8091, and in the Indiana SIP at 326 IAC 5-1-2.
27. SDI has a state-of-the-art, laser-based continuous opacity monitor (COM) on its common stack.
28. In 1998 and 1999, SDI submitted Opacity Monitor Excess and Downtime reports to IDEM on a quarterly basis.

#### Violations

29. During the July 17, 1996 stack test, SDI's NO<sub>x</sub> emissions from its EAF were 1.34 pounds per ton. This is a violation of PSD permit CP033-3692.
30. During the July 17, 1996 stack test, SDI's VOC emissions from its EAF were 0.139 pounds per ton. This is a violation of PSD permit CP033-3692.

31. During the September 19 and 20, 1996 stack test, SDI's NO<sub>x</sub> emissions from its EAF were 0.612 pounds per ton. This is a violation of PSD permit CP033-3692.
32. During the September 19 and 20, 1996 stack test, SDI's PM<sub>10</sub> emissions were 0.04123 grains per dscf. This is a violation of PSD permit CP033-3692, and the Indiana SIP at 326 IAC 6-3-2. This is also a violation of 40 C.F.R. § 60.272a (a)(1).
33. During the November 17-20, 1998 stack test, SDI's NO<sub>x</sub> emissions from its EAF were 0.551 pounds per ton. This is a violation of PSD permit CP033-8091.
34. During the February 2-3, 1999 SDI's NO<sub>x</sub> emissions from its EAF were 0.5669 pounds per ton. This is a violation of PSD permit CP033-8091.
35. On July 8, 1997, SDI experienced a malfunction of its opacity monitor that lasted more than one hour. This malfunction was not reported to IDEM within four hours. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-8091.
36. On January 16, 2000, SDI experienced a malfunction of its wet scrubber that lasted more than one hour. This malfunction was not reported to IDEM within four hours. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-9187.
37. On January 21, 2000, SDI experienced a malfunction of its wet scrubber that lasted more than one hour. This malfunction was not reported to IDEM within four hours. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-9187.
38. On May 30, 2000, SDI experienced a malfunction of its submerged arc furnace (SAF) that lasted more than one hour. This malfunction was not reported to IDEM within four hours. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-9187.
39. According to SDI's Opacity Monitor Excess and Downtime report, on August 5, 1998, a malfunction occurred of the baghouse that lasted more than one hour. This malfunction was not reported to IDEM. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-8091.

40. According to SDI's Opacity Monitor Excess and Downtime report, on August 7, 1998, a malfunction occurred of the hopper that lasted more than one hour. This malfunction was not reported to IDEM. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-8091.
41. According to SDI's Opacity Monitor Excess and Downtime reports, on August 11, 1998, a malfunction occurred of the baghouse that lasted more than one hour. This malfunction was not reported to IDEM. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-8091.
42. According to SDI's Opacity Monitor Excess and Downtime reports, on October 28, 1999, a malfunction occurred of the baghouse that lasted more than one hour. This malfunction was not reported to IDEM. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-8091.
43. According to SDI's Opacity Monitor Excess and Downtime reports, on November 28, 1999, a malfunction occurred of the baghouse that lasted more than one hour. This malfunction was not reported to IDEM. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and CP033-8091.
44. According to SDI's Opacity Monitor Excess and Downtime reports, on November 30, 1999, a malfunction occurred of the baghouse that lasted more than one hour. This malfunction was not reported to IDEM. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-8091.
45. According to SDI's Opacity Monitor Excess and Downtime reports, on December 12, 1999, a malfunction occurred of the baghouse that lasted more than one hour. This malfunction was not reported to IDEM. This is a violation of the Indiana SIP at 326 IAC 1-6-2 and PSD permit CP033-8091.
46. During the first quarter of 1998, SDI's COM recorded at least 81 6-minute averages of 4% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).
47. During the second quarter of 1998, SDI's COM recorded at least 202 6-minute averages of 4% opacity or higher. At least four 6-minute averages were 10% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).

48. During the third quarter of 1998, SDI's COM recorded at least 231 6-minute averages of 4% opacity or higher. At least three 6-minute averages were 10% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).
49. During the fourth quarter of 1998, SDI's COM recorded at least 88 6-minute averages of 4% opacity or higher. At least six 6-minute averages were 10% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).
50. During the first quarter of 1999, SDI's COM recorded at least 75 6-minute averages of 4% opacity or higher. At least four 6-minute averages were 10% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).
51. During the second quarter of 1999, SDI's COM recorded at least 162 6-minute averages of 4% opacity or higher. At least three 6-minute averages were 10% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).
52. During the third quarter of 1999, SDI's COM recorded at least 262 6-minute averages of 4% opacity or higher. At least four 6-minute averages were 10% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).
53. During the third quarter of 1999, SDI's COM recorded a 6-minute average of 68% opacity. This is a violation of PSD permit CP033-8091, the Indiana SIP at 326 IAC 5-1-2, and 40 C.F.R. § 60.272a(a)(2).
54. During the fourth quarter of 1999, SDI's COM recorded at least 128 6-minute averages of 4% opacity or higher. At least five 6-minute averages were 10% opacity or higher. This is a violation of PSD permit CP033-8091 and 40 C.F.R. § 60.272a(a)(2).

9-26-01  
Date

  
Bharat Mathur, Director  
Air and Radiation Division

CERTIFICATE OF MAILING

I, Betty Williams, certify that I sent a Notice of Violation/Finding of Violation, No. EPA-5-01-IN-13 by Certified Mail, Return Receipt Requested, to:

Barry A. Smith  
Steel Dynamics, Inc.  
4500 County Road 59  
Butler, Indiana 46721

I also certify that a copy the Notice of Violation by first class mail to:

David McIver, Chief  
Air Section  
Office of Enforcement  
Indiana Department of Environmental Management  
100 North Senate, Room 1001  
Indianapolis, Indiana 46206-6015

on the 27<sup>th</sup> day of September, 2001.

  
Betty Williams, Secretary  
AECAS (IL/IN)

CERTIFIED MAIL RECEIPT NUMBER: 70993400 0000 95976082