

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:

ArcelorMittal Burns Harbor LLC
Burns Harbor, Indiana

Proceedings Pursuant to
the Clean Air Act,
42 U.S.C. §§ 7401 et seq.

FINDING OF VIOLATION

EPA-5-21-IN-01

FINDING OF VIOLATION

The U.S. Environmental Protection Agency finds that ArcelorMittal Burns Harbor LLC (ArcelorMittal or you) is violating Section 112 of the Clean Air Act, 42 U.S.C. § 7412, and related requirements in your Title V permit. Specifically, ArcelorMittal is violating the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Integrated Iron and Steel Manufacturing Facilities at 40 C.F.R. Part 63, Subpart FFFFF, as follows:

Regulatory Authority

NESHAP

1. Subpart FFFFF at 40 C.F.R. § 63.7781 provides that you are subject to this subpart if you own or operate an integrated iron and steel manufacturing facility that is (or is part of) a major source of hazardous air pollutants (HAP) emissions. Your integrated iron and steel manufacturing facility is a major source of HAP if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.
2. Subpart FFFFF at 40 C.F.R. § 63.7782, among other things, applies to each new and existing affected source, including a basic oxygen process furnace (BOPF) shop, at an integrated iron and steel manufacturing facility. A BOPF shop, among other things, is considered existing if you commenced construction or reconstruction of the affected source before July 13, 2001.
3. Subpart FFFFF at 40 C.F.R. § 63.7790(a) requires you must meet each emission limit and opacity limit in Table 1 to Subpart FFFFF that applies to you.
4. Table 1 of Subpart FFFFF requires, among other things, that for each existing BOPF shop, you must not cause to be discharged to the atmosphere any secondary emissions that exit an opening in the BOPF shop or any other building housing the BOPF or BOPF shop operation that exhibits opacity greater than 20 percent (3-minute average).
5. Subpart FFFFF at 40 C.F.R. § 63.7790(b) requires you must meet each operating limit for capture systems and control devices in paragraphs (b)(1) through (3) of this section that applies to you.

6. Subpart FFFFF at 40 C.F.R. § 63.7790(b)(1) requires, among other things, you must operate each capture system applied to emissions from secondary emissions from a BOPF at or above the lowest value or settings established for the operating limits in your operation and maintenance plan.

7. Subpart FFFFF at 40 C.F.R. § 63.7790(b)(2) requires, among other things, that for each venturi scrubber applied to meet any particulate emission limit in Table 1 to this subpart, you must maintain the hourly average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.

8. Subpart FFFFF at 40 C.F.R. § 63.7800(a) requires you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in accordance with good air pollution control practices.

9. Subpart FFFFF at 40 C.F.R. § 63.7800(b), requires you must prepare and operate at all times according to a written operation and maintenance plan for each capture system or control device subject to an operating limit in § 63.7790(b). Each plan must address the elements in paragraphs (b)(1) through (7) of this section.

10. Subpart FFFFF at 40 C.F.R. § 63.7800(b)(1) requires monthly inspections of the equipment that is important to the performance of the total capture system (*e.g.*, pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.*, presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan also must include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.

11. Subpart FFFFF at 40 C.F.R. § 63.7800(b)(2) requires preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

12. Subpart FFFFF at 40 C.F.R. § 63.7800(b)(3) requires, among other things, operating limits for each capture system that apply to secondary emissions from a BOPF.

13. Subpart FFFFF at 40 C.F.R. § 63.7800(b)(4) requires, among other things, corrective action procedures for baghouses equipped with bag leak detection systems or continuous opacity monitoring systems (COMS).

14. Subpart FFFFF at 40 C.F.R. § 63.7800(b)(5) requires corrective action procedures for venturi scrubbers equipped with continuous parameter monitoring systems (CPMS). In the event a venturi scrubber exceeds the operating limit in § 63.7790(b)(2), you must take corrective actions consistent with your site-specific monitoring plan in accordance with § 63.7831(a).

Title V Permit Program

15. Title V of the CAA, 42 U.S.C. §§ 7661-7661f, establishes an operating permit program for major sources of air pollution.

16. In accordance with Section 502(b) of the CAA, 42 U.S.C. § 7661a(b), EPA promulgated regulations establishing the minimum elements of a Title V permit program to be administered by any

air pollution control agency. *See* 57 Fed. Reg. 32250 (July 21, 1992). Those regulations are codified at 40 C.F.R. Part 70.

17. Section 502(d) of the CAA, 42 U.S.C. § 7661a(d), provides that each state must submit to EPA a permit program meeting the requirements of Title V.

18. On December 4, 2001, EPA granted full approval of Indiana's Title V operating permit program, set forth at 326 Indiana Administrative Code (IAC) 2-7. *See* 66 Fed. Reg.

19. On May 31, 2019, the Indiana Department of Environmental Management issued Air Emission Permit No. 127-40675-00001 (the Title V Permit) to ArcelorMittal Burns Harbor LLC.

20. The Title V Permit at Section A.1 states that the "permittee owns and operates a stationary steel works plant for the production of coke, limited coal chemical, molten iron, molten steel, steel slabs, hot rolled steel, steel coils, steel plates, cold rolled and/or coated steel sheet and plate," and is a Major Source under Section 112 of the CAA.

21. The Title V Permit at Section E.3.1 states that the "permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, including among other things, the Basic Oxygen Furnace (BOF) Shop operation located in the Steelmaking Department.

22. The Title V Permit at Section E.3.2 states the permittee shall comply with the provisions of the NESHAP including, among other things, 40 C.F.R. § 63.7790(a) – (b), Table 1 emission limits for its BOPF Shop and 40 C.F.R. § 63.7800(a), (b)(1)-(5), and (7) maintain operation and maintenance requirements.

Finding of Facts

23. ArcelorMittal owns and operates an integrated iron and steel manufacturing facility (Facility), which includes its basic oxygen process furnaces shop (BOPF Shop), at 250 U.S. Highway 12 in Burns Harbor, Indiana.

24. ArcelorMittal's Facility is a major source of HAP emissions and is subject to requirements at 40 C.F.R. §§ 63.7780-7852.

25. The BOPF Shop at ArcelorMittal's Facility is subject to the opacity limit of existing BOPF shops in Table 1 of the NESHAP.

26. The BOPF Shop at ArcelorMittal's Facility is subject to the general provisions regarding operation and maintenance (O&M) of Capture and Control Equipment in existing BOPF shops in the Facility's Title V Permit.

27. The BOPF Shop at ArcelorMittal's Facility is subject to the opacity limit of existing BOPF shops in the Facility's Title V Permit.

28. The Burns Harbor – Port of Indiana ambient air monitor, Monitor Site ID: 181270017 (Monitor) is located less than 1.5 miles from iron and steel making operations at the Facility. The Facility is the closest major emitter of manganese to the Monitor. The lowest 12-month rolling average ambient manganese concentration recorded was 0.296 µg/m³ from March 2, 2017 to March 3, 2018. The

highest 12-month rolling average ambient manganese concentration recorded at the Monitor was 0.963 $\mu\text{g}/\text{m}^3$ for the period of April 21, 2019 to April 21, 2020, which is 225% higher than the previous 12-month rolling average. For the period ending September 30, 2020, the 12-month rolling average ambient manganese concentration recorded at the Monitor was 0.765 $\mu\text{g}/\text{m}^3$.

29. On May 20 and 21, 2020, EPA conducted offsite observations in accordance with EPA Alternative Method 082 on the BOPF Shop roof monitor at ArcelorMittal's Facility. EPA observed visible emissions in the afternoon on both days from the BOPF Shop roof monitor. Visible emissions during the observation on May 21, 2020 were analyzed in accordance with EPA Alternative Method 082. The opacity measured on May 21, 2020 was 48%, 37%, 28%, and 81% (3-minute average).

30. On October 21, 2020, EPA conducted offsite observations in accordance with EPA Alternative Method 082 on the BOPF Shop roof monitor at ArcelorMittal's Facility. EPA observed visible emissions in the afternoon from the BOPF Shop roof monitor. Visible emissions during the observation on October 21, 2020 were analyzed in accordance with EPA Alternative Method 082. The opacity measured was 27% (3-minute average).

31. On November 13, 2020, EPA conducted offsite observations in accordance with EPA Alternative Method 082 on the BOPF Shop roof monitor at ArcelorMittal's Facility. EPA observed visible emissions in the afternoon from the BOPF Shop roof monitor. Visible emissions during the observation on November 13, 2020 were analyzed in accordance with EPA Alternative Method 082. The opacity measured was 26% (3-minute average).

32. EPA has conducted offsite compliance monitoring in accordance with EPA Alternative Method 082 on the BOPF Shop roof monitor at ArcelorMittal's Facility a total of 14 days. On three of those 14 days EPA observed violations, and on one of those 14 days, observed multiple violations. EPA observed excess opacity violations from ArcelorMittal's BOPF Shop roof monitor 21% of the days that EPA conducted offsite observations, demonstrating a pattern of on-going noncompliance at the ArcelorMittal Facility.

33. ArcelorMittal reported 10 O&M deviations on the BOPF MACT Baghouse. ArcelorMittal reported these 10 deviations in its Semi-annual Deviation and Compliance Monitoring Reports required by the Facility's Title V Permit (see Appendix A) during 2018 and 2019. These O&M deviations are related to the operation and maintenance of the BOPF Shop.

34. ArcelorMittal reported four O&M deviations in its 2018 and 2019 Quarterly Continuous Gas Cleaning System Monitoring - Basic Oxygen Furnace NO. 3 Reports (see Appendix A) during 2018 and 2019. These O&M deviations are related to the inspection and maintenance of the BOPF Shop.

Violations

35. On May 21, 2020, EPA conducted visible emission observations in accordance with EPA Alternative Method 082 of emissions from ArcelorMittal's BOPF Shop roof monitor and observed excess opacity above 20% as a 3-minute average.

36. On October 21, 2020, EPA conducted visible emission observations in accordance with EPA Alternative Method 082 of emissions from ArcelorMittal's BOPF Shop roof monitor and observed excess opacity above 20% as a 3-minute average.

37. On November 13, 2020, EPA conducted visible emission observations in accordance with EPA Alternative Method 082 of emissions from ArcelorMittal's BOPF Shop roof monitor and observed excess opacity above 20% as a 3-minute average.

38. ArcelorMittal violated the opacity limitations of Table 1 of Subpart FFFFF and of its Title V Permit requirements for its BOPF Shop.

39. The 14 O&M deviations referenced in Appendix A are violations of 40 C.F.R. § 63.7800(b).

Environmental Impact of Violations

40. Violation of opacity standards increases public exposure to unhealthy particulate matter. Particulate matter, especially fine particulate contributes to respiratory problems, lung damage and premature deaths. The particulate matter emitted from certain integrated iron and steel operations contains manganese. Manganese is a neurotoxin at certain concentrations that can cause neuromotor and neuropsychological deficits. Inhaled manganese may be transported to the brain before it is metabolized by the liver. Exposure to elevated concentrations of manganese in the air may lead to a permanent neurological disorder known as manganism, the symptoms of which include tremors, difficulty walking, facial muscle spasms, negative cognitive effects, and mood changes. It may also lead to lung inflammation and impaired lung function. In children, exposure to elevated levels of manganese may result in effects on brain development, including changes in behavior and decreases in learning and memory capacities.

Michael D. Harris
Division Director
Enforcement and Compliance Assurance Division

Appendix A

Date of Deviation Start	Date of Deviation Stop	BOPF Emissions Unit
2019-03-29	2019-03-29	BOF MACT Baghouse
2019-08-26	2019-08-26	BOF MACT Baghouse
2019-06-30	2019-07-08	BOF MACT Baghouse
2019-09-30	2019-09-30	BOF MACT Baghouse
2019-09-27	2019-09-27	BOF Monitoring System NO. 3
2019-09-27	2019-09-27	BOF Monitoring System NO. 3
2018-11-25	2018-11-26	BOF MACT Baghouse
2018-11-18	2018-11-18	BOF MACT Baghouse
2018-11-23	2018-11-23	BOF MACT Baghouse
2018-07-21	2018-07-21	BOF Monitoring System NO. 3
2018-02-03	2018-02-03	BOF MACT Baghouse
2018-04-07	2018-04-07	BOF MACT Baghouse
2018-02-03	2018-02-03	BOF MACT Baghouse
2018-05-15	2018-05-15	BOF Monitoring System No.3

Note: The O&M deviations above are violations of 40 C.F.R. § 63.7800(a), (b)(1)-(5), and (7).