

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:

Cleveland-Cliffs Riverdale LLC
Riverdale, IL
Proceedings Pursuant to
Section 113(a)(1) of the
Clean Air Act, 42 U.S.C.
§ 7413(a)(1)

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FINDING OF VIOLATION

EPA-5-24-IL-19

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The U.S. Environmental Protection Agency (EPA) is issuing this Finding of Violation under Section 113(a)(1) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a)(1). EPA finds that Cleveland-Cliffs Riverdale LLC (CC Riverdale) is violating its Title V Permit, as follows:

Statutory and Regulatory Background

1. Title V of the CAA, 42 U.S.C. §§ 7661–7661f, and its implementing regulations at 40 C.F.R. Part 70, establish an operating permit program for certain sources, including major sources, and other sources made subject under Section 502(a) of the CAA, 42 U.S.C. § 7661a(a).
2. Pursuant to Section 502(b) of the CAA, 42 U.S.C. § 7661a(a), 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. 32,295 (July 21, 1992). Those regulations are codified at 40 C.F.R. Part 70.
3. On March 7, 1995, EPA granted interim approval of Illinois’ Title V operating permit program. EPA granted final approval effective on November 30, 2001. 40 C.F.R. Part 70, Appendix A. The Illinois Title V operating permit program, known as the Clean Air Act Permit Program (CAAPP), is codified at 415 ILCS 5/39.5.
4. Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), and EPA’s implementing regulations at 40 C.F.R. § 70.7(b) have at all relevant times made it unlawful for any person to violate any requirement of a permit issued under Title V or to operate a major source except in compliance with a permit issued by a permitting authority under Title V.
5. Pursuant to 40 C.F.R. § 70.2, a “major source” for Title V purposes includes major stationary sources as defined in Section 302 of the CAA, 42 U.S.C. § 7602, that directly emit, or have the potential to emit, 100 TPY or more of any air pollutant subject to regulation.
6. Pursuant to 40 C.F.R. § 70.2, a “stationary source” means any building, structure, facility, or installation that emits or may emit any regulated air pollutant or any pollutant listed under section 112(b) of the CAA.

Title V Permit Conditions

7. The Illinois Environmental Protection Agency (IEPA) issued a CAAPP permit (Permit No. 02110058) to CC Riverdale's predecessor ArcelorMittal Riverdale LLC for the facility located at 13500 South Perry Avenue, Riverdale, Illinois 60827 on June 28, 2016, revised May 22, 2019 (Title V Permit).
8. Condition 2.3(c) of the Title V Permit sets forth that the source shall maintain all equipment covered under the Title V Permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.
9. Section 4.1 of the Title V Permit established requirements for the Basic Oxygen Furnace (BOF) Melt Shop.
10. Condition 4.1.2(a)(ii)(A), (B), and (C) of the Title V Permit states that the permittee shall conduct opacity observations of the BOF shop openings, electrostatic precipitator (ESP) stack(s), and BOF shop stack(s) in accordance with Method 9 of 40 C.F.R Part 60, Appendix A-4.
11. Condition 4.1.2(a)(ii)(D)(iii) of the Title V Permit states that the permittee shall prevent particulate matter from escaping the ESP dust collection room by keeping it wholly enclosed.
12. Condition 4.1.2(a)(ii)(F) of the Title V Permit states that the Permittee shall keep the records of all opacity observations performed at the source.
13. Condition 4.1.2(b)(ii)(C) of the Title V Permit sets forth that pursuant to 40 C.F.R. Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, the BOF ESP and BOF baghouse are subject to 40 C.F.R. Part 64. The Permittee shall comply with the monitoring requirements of the CAM Plan described in Condition 7.5 and Tables 7.5.1 and 7.5.2, pursuant to 40 C.F.R. Part 64 as submitted in the Permittee's CAM plan application. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, pursuant to 40 C.F.R. § 64.7(a) and (b).
14. Condition 4.1.2(g)(i)(A) of the Title V Permit sets forth that the BOF ESP control system shall be operated as follows: (I) the minimum current set point for the ESP fans during charging and refining shall be 60 amps; and (II) the minimum induced duct draft pressure set point measured at the cooling tower exit duct shall be 0.6 inches of water at initiation of refining process and 2.0 inches of water (W.C.) during the remainder of the operation.
15. Condition 4.1.2(g)(ii)(A) of the Title V Permit states that "the Permittee shall visually inspect all visible BOF vessel enclosures, hooding and ducts used to capture and transport emissions for the BOF emissions control system. These inspections shall be conducted on an at least monthly basis."
16. Condition 4.1.2(g)(ii)(B) of the Title V Permit states that "the Permittee shall repair any leaks or areas otherwise noted to be in need of repair as soon as practicable."

17. Condition 4.1.2(g)(ii)(C) of the Title V Permit states that “the Permittee shall **maintain** the BOF emission control system (including the ESP and BOF baghouse) in a manner that assures compliance with the conditions of this permit.” (emphasis added)
18. Condition 4.1.2(g)(ii)(F) of the Title V Permit states that the Permittee shall keep an operating log for the BOF emissions control system that includes the following:
 - I. Operating time of the BOF.
[...]
 - III. Operating time of the ESP and parameters, e.g. voltage and current;
[...]
 - V. All routine and non-routine maintenance performed, including dates and duration of outages, repair actions, and replacements.
19. Section 4.2 of the Title V Permit establishes requirements for the Continuous Casting Operations.
20. Condition 4.2.2(b)(ii)(C) sets forth that pursuant to 40 C.F.R. Part 64, CAM for Major Stationary Sources, the ladle metallurgical furnace (LMF) is subject to 40 C.F.R. Part 64 for PM emissions. The Permittee shall comply with the monitoring requirements of the CAM Plan described in Condition 7.5 and Table 7.5.3 of the Title V Permit. At all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment pursuant to 40 C.F.R. § 64.7(a) and (b).
21. Condition 4.2.2(a)(i)(B) of the Title V Permit sets forth that pursuant to 35 IAC 212.316(f), no person shall cause or allow fugitive particulate matter emissions from any emission unit to exceed an opacity of 20 percent.
22. Condition 7.5(a)(i) of the Title V Permit states that pursuant to 40 C.F.R. § 64.7(b), at all times, the source shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
23. Table 7.5.3 of the Title V Permit establishes the following parameters for the LMF baghouse as indicator ranges which provides a reasonable assurance of compliance:
 - a. Fan Amps: 170–260 amps to each fan as a 60-minute average; and
 - b. Pressure drop: 1.0 to 10 inches W.C. as a 60-minute average.
24. Section 4.1.1 of the Title V Permit states that the Flux Transfer baghouse controls emissions from the Flux Transfer Operation.

EPA Method 9

25. Pursuant to 40 C.F.R. Part 60, Appendix A-4, EPA Method 9 at 2.1. states that the qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140 degree sector to his back.

Relevant Factual Background

26. At all times relevant to this FOV, CC Riverdale owned and operated a stationary source steel facility located at 13500 South Perry Avenue, Riverdale, Illinois (Facility).
27. At all times relevant to this FOV, CC Riverdale was a “person” as that term is defined in Section 302(e) of the CAA, 42 U.S.C § 7602(e).
28. At all times relevant to this FOV, CC Riverdale was an “owner” and an “operator” as those terms are defined in Section 112 of the CAA, 42 U.S.C. § 7412.
29. At all times relevant to this FOV, the Facility was a “major source” as defined at 42 U.S.C. § 7661(2) and 40 C.F.R. § 70.2(3) because the Facility is a stationary source that has the potential to emit 100 TPY or more of any air pollutant subject to regulation and, according to the Facility’s 2021 Annual Emission Report, the Facility’s actual emissions were over 100 TPY of PM, PM10, PM2.5 (particulate matter with a diameter of 2.5 micrometers or less), and carbon monoxide.
30. Emission sources at the Facility includes, among other things:
 - a. BOF Process Melt Shop which includes, but is not limited to:
 - i. BOF Charging;
 - ii. BOF Blowing; and
 - iii. BOF Tapping;
 - b. Continuous Casting Operations which includes, but is not limited to:
 - i. LMF; and
 - ii. Continuous Caster.
31. BOF Charging and BOF Blowing PM and PM10 emissions are controlled by an ESP and BOF baghouse.
32. The LMF PM emissions are controlled by the LMF baghouse.
33. On October 1, 2021, and November 8, 2021, EPA conducted an inspection of the Facility.
34. On October 26, 2022, EPA issued an information request to CC Riverdale under Section 114 of the CAA, 42 U.S.C. § 7414 (Section 114 Information Request).
35. On December 13, 2022, March 1, 2023, September 27, 2023, November 8, 2023, November 30, 2023, May 16, 2024, and June 11, 2024, CC Riverdale submitted to EPA responses to the Section 114 Information Request (Section 114 Response).
36. The Section 114 Response included, among other things:
 - a. Method 9 opacity observations at the BOF Melt Shop;
 - b. Emissions tests conducted at the Facility for the BOF Melt Shop and Continuous Casting Operations from March 2017 to October 2022;
 - c. Operating log for the BOF emission control system;

- d. Visual inspections of all visible BOF vessel enclosures and repairs;
- e. Third party inspections of the ESPs;
- f. Operation and maintenance manuals for the ESPs;
- g. Daily Inspection PM-Work Orders for the ESPs;
- h. Routine and non-routine maintenance associated with the BOF emissions control system;
- i. Operating log for the LMF baghouse; and
- j. Third party inspections of the Flux Transfer Operation.

Method 9 Opacity Observations at BOF Melt Shop

- 37. EPA reviewed Method 9 opacity observations at the BOF Melt Shop (weekly BOF Roof Monitor for 2022, monthly ESP stack for 2021–2022, and semiannual BOF baghouse stack for 2019–2022 (together, the “Method 9 Records”)).
- 38. The Method 9 Records do not consistently identify the position of the observer taking Method 9 opacity readings at the BOF Melt Shop as it relates to the location of the sun to demonstrate that the observer had the sun oriented in the 140 degrees sector to their back.

ESP Induced Duct Draft Pressure

- 39. EPA reviewed the operating time of the BOF and the capture system performance parameters of the Section 114 Response and found that between January 1, 2020 and December 30, 2022, CC Riverdale operated the BOF ESP control system for the operation that is not the initiation of the refining process for 57,095 minutes when the induced duct draft pressure did not meet the minimum requirement of 2 inches W.C.¹

BOF Capture Inspections and Repairs

- 40. EPA reviewed records of monthly visual inspections of all visible BOF vessel enclosures, hooding and ducts used to capture and transport emissions for the BOF emissions control system from 2020 to 2022. The records identified repeat leaks in the same areas that were not repaired as soon as practicable. For example:
 - a. A damper door was found leaking intermittently from March 2020–April 2022 (13 months out of 27 months). Inspection records for three months noted that some repairs were made, but the issue reoccurred soon after. New damper doors were installed in May 2022.
 - b. A cooling tower was found leaking and/or in need of patches from March 2020–August 2021 (13 months out of 19 months). Inspection records noted that some repairs were made, but the issue reoccurred soon after. A new cooling tower was installed in October 2021.

¹ For the purpose of this analysis, EPA assumed that when the oxygen flow rates are greater 6,000 cfm, the initiation of the refining process was complete.

- c. Repeat holes and leaking at duct work were found from May 2020 to August 2020 at the following locations: each precipitator section, outlet plenum, fan housing, and fan duct to stack.

Maintaining the BOF Control System

- 41. As further explained below, based on the Section 114 Response, EPA identified instances where CC Riverdale failed to maintain the ESPs in accordance with the Facility's Operation and Maintenance Manual for ESPs 4 and 5 (O&M Manual), including failing to 1) ensure rappers were functioning properly and maintain level rappers; 2) properly align insulators and ensure adequate air flow through the purge air system; and ensure sufficient temperature levels at the purge air heater; and 3) maintain ESPs free of moisture to prevent condensation of gas and corrosion.

1) Rappers

- 42. EPA reviewed inspection and maintenance reports for ESPs 4 and 5 prepared by TRK Engineering Services Inc. and dated May 11–14, 2021 (2021 Report) and May 16–25, 2022 (2022 Report) (together, the "2021 and 2022 Reports").
- 43. The ESPs contain magnetic-impulse gravity impact rappers, which remove dust deposits from the collecting surfaces and discharge electrodes. The plunger within the rapper is raised by a magnetic field of a coil and then gravity drops the plunger, which provides the force to remove the dust deposits.
- 44. The 2021 and 2022 Reports identified the following issues at the rappers:
 - a. The 2021 Report states that on "some rappers [...] the fiber coil sleeve has started to detach and fall. This can lead to rapper coil wear and eventual lift weakening and failure." The 2022 Report describes the same issue.
 - b. The 2021 Report states that "it was also observed that some of the insulated high voltage rapper shafts varied in height. Height variations of the insulated rapper shafts can affect the performance of the rapping system by changing the proper 4.5 inch slug exposure and varying the position of the rapper slug in the coil. This can result in inconsistent lift from one rapper to another" and "inconsistent rapper impact". The 2022 Report describes the same issue.
- 45. EPA reviewed routine inspection logs submitted by the Facility for 2022, referred to as Precipitator Daily Insp. EMT. Consistently, the logs identify failed rappers with no action taken.
- 46. EPA reviewed the Operation and Maintenance Manual for ESP 4 and 5 (O&M Manual). The O&M Manual requires CC Riverdale to:
 - a. "Energize the Rapper Control and ascertain that all rappers and vibrators are functioning properly." O&M Manual at Section III(D).

- b. Maintain the rapper so that it is “level for proper operation. If the rapper is tilted, the plunger will rub on the coil and cause it to fail.” O&M Manual at Section VI(A)(4).

2) Purge air system insulator alignment, air flow, and temperature

- 47. The ESP contains high voltage frame support insulators that support high voltage frames. There are a set of holes or nozzles through the top plates/covers on each insulator to allow heated purge air to flow into the precipitators, reducing dust and moisture build up on the interior surfaces. Purge air also flows into the penthouse.
- 48. The 2021 and 2022 Reports identified the following issues with the insulators and the air flow in the purge air systems for ESPs 4 and 5:
 - a. The 2021 Report states that “[w]hile inspecting the hot roof/penthouse floor many of the support insulators on both units were found failed.” The 2021 Report also states that “[v]isual inspections of the support insulators found that the purge air inlets in the top plates did not align with the support insulator opening. The original top plates are too large and allow the top plate to be installed significantly off center of the insulator top opening.” The 2022 Report describes the same issue. The 2022 Report concluded that this misalignment “most likely contributed to the large amount of insulator failures.”
 - b. Based on the inspections of ESPs 4 and 5 penthouses during both visits, “an investigation is recommended to determine if the penthouse purge air system is sized correctly and performing as it was designed.”
 - c. The 2022 Report stated that “[t]here appeared to be insufficient flow through the penthouse purge air system.”
- 49. The O&M Manual Requires CC Riverdale to:
 - a. “[K]eep the suspension rods centered (new gaskets must be used)” and re-level and realign the high voltage structure when a high voltage system support insulator is replaced. O&M Manual at Section VI(C)(5).
 - b. Ensure insulators are “kept free of dust and moisture to prevent arc-over.” O&M Manual at Section II(A)(4).
 - c. Ensure that the penthouse purging system is “kept operating when gas is passing through the precipitator, and [...] kept on during all but lengthy outages.” O&M Manual at Section II(A)(4).
- 50. The O&M Manual states that the purge air system is designed to “pressurize the penthouse compartment to prevent flue gas infiltration into the compartment [...] [to prevent] the condensation of gases onto the high voltage insulators” by, among other things:
 - a. Operating the purge air blower continuously in order to maintain purge volume to the support insulators; and

- b. Operating the purge air heater to raise the temperature of the ESPs during normal start-up.
- 51. Proper operation of the purge air system, among other things, prevents corrosion within the ESP. The air from the BOF furnaces contains sulfuric acid.
- 52. In order to avoid condensation of sulfuric acid, the temperature of the purge gas must be above the dew point of sulfuric acid. The dewpoint of sulfuric acid is approximately 280°F. Condensation of sulfuric acid results in corrosion.
- 53. The 2022 Daily Inspection PM-Work Orders for the ESP show the following for the purge air system temperature #4 between January 1, 2022 and November 15, 2022: maximum temperature of 159°F; minimum temperature of 62°F; and an average temperature of 116°F.
- 54. The 2022 Daily Inspection PM-Work Orders for the ESP show the following for the purge air system temperature #5 between January 1, 2022 and November 15, 2022: maximum temperature of 149°F; minimum temperature of 44°F; and an average temperature of 103°F.

3) Corrosion

- 55. The 2021 and 2022 Reports also identified several issues with severe corrosion throughout the ESPs, including:
 - a. The 2021 Report states that “[s]ome of the rigid electrodes are apparently corroding just above the bottom frames” and “[t]he broken electrodes found at the bottom of field 5B suggest that more may be found elsewhere.”
 - b. The 2021 Report states that “[i]n field 4C, the lower third of the collecting plates along the trailing edge of all gas passages are severely corroded.”
 - c. The 2021 Report states that “[a]t some time in the past, the hot roof and cold roof had been cut open on the east side over field 4C for work to be completed. When reinstalled a gas tight seal was not achieved and air inleakage is occurring from the cold roof and hot roof. This should be addressed. Air inleakage will accelerate corrosion and can have an adverse effect on ESP performance.” The 2022 Report also describes the same issue.
 - d. The 2022 Report states that “[v]isual inspection of the lower hopper girder that divides fields 5B and 5C revealed that corrosion has worn holes on the west side of the girder next to casing wall.”
 - e. The 2022 Report states that “[m]uch of the damage noted in the fields is at the bottom trailing side of the fields and is the result of past air leaks in the screw conveyor system.”

BOF Control System Maintenance Logs

- 56. EPA reviewed logs of routine and non-routine maintenance associated with the BOF emissions control system, which CC Riverdale described as the official record. The log included the dates of the routine inspections (with no associated maintenance information) and a brief description

of the area in which non-routine maintenance was performed. The routine inspections log did not include any associated maintenance information, duration of outage, repair actions, or replacements. The nonroutine inspection logs did not include duration of outages, repair actions, and replacements. CC Riverdale also provided a Requisitions log that did not include duration of outages and some entries did not include descriptions of repair actions or replacements.

57. EPA requested that CC Riverdale also provide the underlying data and work orders for the BOF emissions control logs for the last year covered under the request. The work orders included short descriptions of repair actions but did not include duration of outages. In addition, EPA requested that the company provide 1) any maintenance records that were not associated with an inspection in the responsive time period; and 2) any maintenance records that were associated with the records provided in response to Request 10 of the Section 114 Information Request. This information was not provided.

Records of BOF Operating Time

58. In the Section 114 Information Request, EPA requested records of BOF operating time. EPA reviewed the narrative response to the Section 114 Information Request, which states that “oxygen flow rate is a direct indicator of BOF operating.”
59. According to the description of the process provided during EPA’s inspection, the Method 9 records submitted to EPA, and a May 13, 2024 submission to IEPA follow-up on CC Riverdale’s May 2 and 7, 2024 notifications to IEPA (described in Paragraph 63 and 64, below), the furnace is turned on and material is charged into the furnace minutes (ranging from as little as three to more than 20) prior to the oxygen turning on, accordingly, oxygen flow rate is not a direct indicator of BOF operating time.
60. On September 27, 2023, EPA asked the Facility if they had any alternative records of the BOF operating time. None have been provided to date.

Reported Deviations to IEPA

61. On March 1, 2023, CC Riverdale submitted to IEPA a semiannual monitoring report for the time period of July 1 through December 31, 2022. This monitoring report stated, among other things, that:
- a. On October 10, 2022, opacity from the BOF shop roof monitor was 28 percent as a 3-minute average; and
 - b. On November 23, 2022, the ESP parameter data was not collected for 24 operating minutes.
62. On August 17, 2023, CC Riverdale submitted to IEPA a semiannual monitoring report for the time period of January 1 through June 30, 2023. This monitoring report stated, among other things, that on February 16, 2023, the ESP dust collection room was open during operation.

63. On May 13, 2024, CC Riverdale submitted to IEPA a follow-up to CC Riverdale's May 2 and 7, 2024 notifications to IEPA. This follow-up stated, among other things, that on Monday, April 29, 2024 at 11:07 a.m., an unusual event occurred where visible emissions were greater than what would be observed during normal operations. In regard to the April 29, 2024 event, CC Riverdale stated:
- a. "An investigation indicated that the shop had been down for 4.5 hours prior to opening the ESP fan louvers at 11:07 a.m.";
 - b. "It is believed that dust accumulated during the down time and was released when the louvers opened"; and
 - c. "Charging [at the BOF] was initiated at 11:30 a.m. and oxygen was turned on at 11:56 a.m."
64. On July 24, 2024, EPA emailed CC Riverdale asking for clarification on the details of the April 29, 2024 event. On July 31, 2024, CC Riverdale responded with, among other things, the following information:
- a. "The louvers referenced in our letter, dated May 13, 2024, are located on the inlet side of each electrostatic precipitator (ESP) fan. They are located downstream of the ESP outlets and upstream of the ESP fans. It should be noted that the terms 'louvers' and 'dampers' have at times been used interchangeably here at the facility to describe the inlet dampers for the ESP fans";
 - b. "The fans operate while the louvers (dampers) are both open and closed. When fan amps are greater than zero, the ESP fans are running"; and
 - c. "The system is not capable of having measurable air flow while the louvers (dampers) are closed. The fans are started with the louvers (dampers) closed."
65. The O&M Manual at Section III(D) states that start-up procedures shall include, among other things:
- a. "Crack open both inlet dampers about three (3) inches";
 - b. "About one (1) hour after opening inlet damper three (3) inches, open inlet damper to one (1) foot"; and
 - c. "About one (1) hour after opening inlet dampers one (1) foot, open inlet dampers completely."
66. On April 29, 2024, CC Riverdale opened the ESP fan louvers (dampers) 23 minutes before initiating charging of the BOF emission unit.
67. In accordance with the O&M Manual start-up procedures for the ESPs, opening of the inlet dampers takes at least two hours.

68. On April 29, 2024, CC Riverdale did not open the inlet dampers slowly over the course of two (2) hours, as required by the O&M Manual startup procedure for ESPs, prior to initiating charging to the BOF emission unit.

Flux Transfer Operation

69. EPA reviewed multiple reports that identified capture and control issues related to maintenance of the Flux Transfer Operation.
- a. AM Riverdale Lime May 13, 2019 report stated, “[t]op of ductwork elbow now completely abraded away at material transfer hood. This hood collects emissions from the material falling onto the lower belt that runs up to the storage hoppers. Needs repaired/replaced—little if any emissions being collected at actual hood.”
 - b. AM Riverdale Lime October 9, 2020 report stated, “top of ductwork elbow disconnected,” and “[differential pressure] too low.”

LMF Pressure Drop and Fan Amperage

70. EPA reviewed the operating time of the LMF and the baghouse performance parameters of the Section 114 Response and found that between January 1, 2019 to December 30, 2022, CC Riverdale operated the LMF for 836 occurrences when 60-minute average pressure drop was not between 1.0 to 10 inches W.C. and 1526 occurrences (443 for Fan 1 and 1083 for Fan 2) when 60-minute average fan amps was not between 170–260 amps to each fan.

Violations

Method 9 Opacity Observations at BOF Melt Shop

71. From September 2019 through at least December 2022, CC Riverdale failed to keep sufficient records of Method 9 opacity observations by failing to include the position of the observer as it relates to the location of the sun in the Method 9 Records, in violation of Title V Permit Condition 4.1.2(a)(ii)(F).

ESP Induced Duct Draft Pressure

72. From January 2020 through at least December 2022, CC Riverdale operated the BOF ESP control system during the operation that is not the initiation of the refining process when the induced duct draft pressure did not meet the minimum requirement of 2 inches W.C. for 57,095 minutes, in violation of the Title V Permit Condition 4.1.2(g)(i)(A).

BOF Capture Inspections and Repairs

73. From 2020 to at least 2022, CC Riverdale failed to repair leaks or areas otherwise noted in the visual inspections of all visible BOF vessel enclosures, hooding and ducts used to capture and transport emissions for the BOF emissions control system as soon as practicable, in violation of Title V Permit Conditions 2.3(c) and 4.1.2(g)(ii)(B).

Maintaining the BOF Control System

- 74. From at least May 14, 2021, CC Riverdale failed to maintain the rappers contained in ESPs 4 and 5 in a manner consistent with the O&M Manual, which assures compliance with the conditions of the Title V Permit, in violation of Title V Permit Conditions 2.3(c) and 4.1.2(g)(ii)(C).
- 75. From at least May 14, 2021, CC Riverdale failed to maintain the insulators and purge air system in a manner consistent with the O&M Manual, which assures compliance with the conditions of the Title V Permit, in violation of Title V Permit Conditions 2.3(c) and 4.1.2(g)(ii)(C).
- 76. From January 1, 2022 and November 15, 2022, CC Riverdale failed to maintain the purge air heater at a temperature high enough to prevent condensation of gases, in violation of Title V Permit Conditions 2.3(c) and Condition 4.1.2(g)(ii)(C).
- 77. From at least May 14, 2021, CC Riverdale failed to maintain the ESPs in such a way as to prevent corrosion, which assures compliance with the conditions of the Title V Permit, in violation of Title V Permit Conditions 2.3(c) and 4.1.2(g)(ii)(C).

BOF Control System Maintenance Logs

- 78. From 2020 to at least 2022, CC Riverdale failed to maintain an operating log for the BOF emissions control system that includes all routine and non-routine maintenance performed, including dates and duration of outages, repair actions, and replacements, in violation of Title V Permit Condition 4.1.2(g)(ii)(F)(V).

Records of BOF Operating Time

- 79. From at least 2020 to at least 2022, CC Riverdale failed to keep an operating log for the BOF emission control system that included the operating time of the BOF, in violation of Title V Permit Condition 4.1.2(g)(ii)(F)(I).

Reported Deviations to IEPA

- 80. On October 10, 2022, CC Riverdale failed to operate the BOF shop below 20 percent opacity as a 3-minute rolling average at the roof monitor, in violation of Title V Permit Condition 4.2.2(a)(i)(B).
- 81. On November 23, 2022, CC Riverdale failed to keep an operating log for the operating time of the ESP and parameters, in violation of Title V Permit Conditions 4.1.2(b)(ii)(C), 4.1.2(g)(ii)(F)(III), 7.5(a)(i).
- 82. On February 16, 2023, CC Riverdale failed to operate the ESP dust collection room wholly enclosed, in violation of Title V Permit Condition 4.1.2(a)(ii)(D)(iii).
- 83. On April 29, 2024, CC Riverdale failed to maintain the system in a manner that assures compliance when it did not open the inlet dampers slowly over the course of two (2) hours, as

required by the O&M Manual startup procedure for the ESPs, prior to operating the emission unit, in violation of Title V Permit Conditions 2.3(c) and 4.1.2(g)(ii)(C).

Flux Transfer Operation

- 84. From May 13, 2019 to at least October 9, 2020, CC Riverdale failed to control emissions from the Flux Transfer Operation, in violation of Title V Permit Condition 4.1.1.
- 85. From May 13, 2019 to at least October 9, 2020, CC Riverdale failed to maintain the Flux Transfer Operation in such a way so as to control emissions from the Flux Transfer Operation, in violation of the Title V Permit Condition Section 2.3(c).

LMF Pressure Drop and Fan Amperage

- 86. From January 2019 through December 2022, CC Riverdale failed to operate the LMF baghouse pressure drop between 1.0 to 10.0 inches W.C. on 836 averages, in violation of the Title V Permit Condition 4.2.2(b)(ii)(C) and Table 7.5.3.
- 87. From January 2019 through December 2022, CC Riverdale failed to operate the LMF baghouse fan amperages within 170–260 amps for 443 averages for Fan 1 and 1083 averages for Fan 2, in violation of the Title V Permit Condition 4.2(2)(b)(ii)(C) and Table 7.5.3.

Michael D. Harris
Division Director
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