

6. Pursuant to 40 C.F.R. § 63.1200, the HWC MACT applies to the owner or operator of a hazardous waste burning cement kiln (HWBCK), as defined in 40 C.F.R. § 63.1201.

7. Pursuant to 40 C.F.R. § 63.1206(a)(1)(ii), the owner or operator of an existing hazardous waste-burning cement kiln must comply with the emission standards of 40 C.F.R. § 63.1220(a) and the other requirements in the HWC MACT no later than October 14, 2008.

8. 40 C.F.R. § 63.1206(b) sets forth compliance with standards:

(1) Applicability. The emission standards and operating requirements set forth in this subpart apply at all times except:

- i. During periods of startup, shutdown, and malfunction; and
- ii. When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and you have documented in the operating record that you are complying with all otherwise applicable requirements and standards promulgated under authority of sections 112 (e.g., 40 CFR part 63, subparts LLL, DDDDD, and NNNNN) or 129 of the Clean Air Act in lieu of the emission standards under ... § 63.1220 ...; the monitoring and compliance standards of this section and §§ 63.1207 through 63.1209, except the modes of operation requirements of § 63.1209(q); and the notification, reporting, and recordkeeping requirements of §§ 63.1210 through 63.1212.

9. 40 C.F.R. § 63.1207(b)(1) of the HWC MACT sets forth that a source must conduct comprehensive performance tests (CPT) to demonstrate compliance with the emission standards provided by this subpart, establish limits for the operating parameters provided by § 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems.

10. 40 C.F.R. § 63.1207(j)(1) of the HWC MACT sets forth:

- i. Except as provided by paragraphs (j)(4) and (j)(5) of this section, within 90 days of completion of a CPT, you must postmark a Notification of Compliance (NOC) documenting compliance with the emission standards and continuous monitoring system requirements and identifying operating parameter limits (OPLs) under § 63.1209.
- ii. Upon postmark of the [NOC], you must comply with all operating requirements specified in the [NOC] in lieu of the limits specified in the Documentation of Compliance required under § 63.1211(c).

11. ‘Feedrate operating limits’ means limits on the feedrate of materials (e.g., metals, chlorine) to the combustor that are established based on comprehensive performance testing. The limits are established and monitored by knowing the concentration of the limited material (e.g. chlorine) in each feedstream and the flowrate of each feedstream. *See* 40 C.F.R. § 63.1201.

12. ‘Feedstream’ means any material fed into a hazardous waste combustor, including, but not limited to, any pumpable or nonpumpable solid, liquid, or gas. *See* 40 C.F.R § 63.1201.

13. ‘Flowrate’ means any material fed into a hazardous waste combustor. *See* 40 C.F.R. § 63.1201.

14. 40 C.F.R. § 63.1206(b)(7) of the HWC MACT sets forth that except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section, an owner or operator of a HWBCK must:

- i. You must document compliance with the Destruction and Removal Efficiency (DRE) standard under this subpart only once provided that you do not modify the source after the DRE test in a manner that could affect the ability of the source to achieve the DRE standard;
- ii. You may use any DRE test data that documents that your source achieves the required level of DRE provided:
 - 1. You have not modified the design or operation of your source in a manner that could affect the ability of your source to achieve the DRE standard since the DRE test was performed; and
 - 2. The DRE test data meet quality assurance objectives determined on a site-specific basis.

15. 40 C.F.R. § 63.1209(b)(1) of the HWC MACT requires the owner or operator of a HWBCK to use continuous monitoring systems (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits under 40 C.F.R. § 63.1209.

16. 40 C.F.R. § 63.1209(c)(4) of the HWC MACT sets forth that to comply with the applicable feedrate limits of this section, you must monitor and record feedrates as follows:

- i. Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;
- ii. Determine and record the mass or volume flowrate of each feedstream by continuous monitoring system (CMS). If you determine flowrate of a feedstream by volume, you must determine and record the density of the feedstream by sampling and analysis (unless you report the constituent concentration in units of weight per unit volume (e.g. mg/l); and
- iii. Calculate and record the mass feedrate of the parameter per unit time.

17. 40 C.F.R. § 63.1209(j) of the HWC MACT sets forth that to remain in compliance with the DRE standard, the owner or operator of a HWBCK must establish operating limits during the comprehensive performance test (or during a previous DRE test under provisions of 63.1206(b)(7) for the parameters listed in this section, unless the limits are based on manufacturer specifications, and comply with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated).

18. 40 C.F.R. § 63.1209(j)(1) of the sets forth that for minimum combustion chamber temperature, an owner or operator of a HWBCK must:

- i. You must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under § 63.1207(e);

- ii. You must establish a minimum hourly rolling average limit as the average of the test run averages[.]

19. 40 C.F.R. § 63.1209(j)(2) sets forth that as an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages of each run and requires the HWBCK to comply with the feedrate limit(s) on a minimum hourly rolling average basis.

20. 40 C.F.R. § 63.1209(j)(3) sets forth that for maximum hazardous waste feedrate, an owner or operator of a HWBCK must:

- i. You must establish limits as the average of the maximum hourly rolling averages for each run;
- ii. You must comply with the feedrate limit(s) on a hourly rolling average basis.

21. 40 C.F.R. § 63.1209(j)(4) sets forth that for the operation of waste firing system, the owner or operator of a HWBCK must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained.

22. 40 C.F.R. § 63.1209(k)(1) sets forth that the owner or operator of a HWBCK must comply with the dioxin and furans emission standard by establishing and complying with the operating parameter limit, based on operations during the CPT, for gas temperature at the inlet to a dry particulate matter control device.

23. For sources other than a lightweight aggregate kiln, if the combustor is equipped with an electrostatic precipitator, baghouse (fabric filter), or other dry emissions control device where particulate matter is suspended in contact with combustion gas, you must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. You must establish the hourly rolling average limit as the average of the test run averages. 40 C.F.R. § 63.1209(k)(3) sets forth that as an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run and requires the HWBCK to comply with the feedrate limit(s) on a hourly rolling average basis.

24. 40 C.F.R. § 63.1209(k)(4) sets forth that the owner or operator of a HWBCK must:

- i. Establish limits on the maximum pumpable and total (pumpable and nonpumpable) hazardous waste feedrate for each location where waste is fed;
- ii. Establish the limits as the average of the maximum hourly rolling averages for each run; and
- iii. Comply with the feedrate limit(s) on a hourly rolling average basis.

25. 40 C.F.R. § 63.1209(l) sets forth that the owner or operator of a HWBCK must comply with the mercury emission standard by establishing and complying with the operating parameter limits established during the CPT including, among other things, feedrate of mercury.

26. 40 C.F.R. § 63.1209(m)(1) sets forth that the owner or operator of a HWBCK must comply with the particulate matter emission standard by establishing and complying with the operating parameter limit, based on operations during the CPT, for control device operating parameter limits (OPLs):

- iv. For each particulate matter control device that is not a fabric filter or high energy wet scrubber, or is not an electrostatic precipitator or ionizing wet scrubber for which you elect to monitor particulate matter loadings under § 63.1206(c)(9) of this chapter for process control, you must ensure that the control device is properly operated and maintained as required by § 63.1206(c)(7) and by monitoring the operation of the control device set forth in § 63.1209(m)(1)(iv) (A) through (D).

27. 40 C.F.R. § 63.1209(n) requires the owner or operator of a HWBCK to comply with the semivolatile metal (cadmium and lead) and low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the following operating parameter limits, based on operations during the CPT:

- i. Maximum inlet temperature to dry particulate matter air pollution control device; and
- ii. Maximum feedrate of semivolatile and low volatile metals.

28. 40 C.F.R. § 63.1209(n)(2)(iii) sets forth that cement kilns under § 63.1220 must:

- B. When complying with the emission standards under § 63.1220(a)(3)(ii), (a)(4)(ii), (b)(3)(ii), and (b)(4)(ii), you must establish 12-hour rolling average limits for the total feedrate of semivolatile metals (SVM) and low volatile metals (LVM) in all feedstreams as the average of the test run averages.

29. 40 C.F.R. § 63.1220(a)(3) requires the owner or operator of a HWBCK to not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium and lead, SVM, including:

- i. Emissions in excess of 7.6×10^{-4} lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- ii. Emissions in excess of 330 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

30. 40 C.F.R. § 63.1220(a)(4) requires the owner or operator of a HWBCK to not discharge or cause combustion gases to be emitted into the atmosphere that contain arsenic, beryllium, and chromium, LVM, including:

- i. Emissions in excess of 2.1×10^{-5} lbs combined of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and
- ii. Emissions in excess of 56 $\mu\text{gm/dscm}$, combined emissions, corrected to 7 percent oxygen.

31. 40 C.F.R. § 63.1209(o)(1) requires the owner or operator of a HWBCK to comply with the hydrogen chloride and chlorine gas emission standards by establishing and complying with the feedrate of total chlorine and chloride operating parameter limit, based on operations during the CPT. The requirements for the feedrate of total chlorine and chloride operating parameter limit includes:

- i. You must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the test run averages.
- ii. Liquid fuel boiler feedrate limits.

32. 40 C.F.R. § 63.1209(o)(2) requires the owner or operator of a HWBCK to comply with the hydrogen chloride and chlorine gas emission standards by establishing and complying with the maximum flue gas flowrate or production rate operating parameter limit, based on operations during the CPT. The requirements for the maximum flue gas flowrate or production rate operating parameter limit includes:

- i. As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.
- ii. You must comply with this limit on a hourly rolling average basis.

33. 40 C.F.R. § 63.1209(a)(1)(i) requires the owner or operator of a HWBCK to use either a carbon monoxide (CO) continuous emission monitor system (CEMS) or a total hydrocarbon (THC) CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard in 40 C.F.R. § 63.1220(a)(5), and further requires the owner or operator of a HWBCK to use an oxygen (O₂) CEMS to continuously correct the CO or THC concentration to 7% O₂.

34. 40 C.F.R. § 63.1220(a)(5) of the HWC MACT requires the owner or operator of a HWBCK to comply with the carbon monoxide and hydrocarbons emission limits and not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:

- ii. For kilns not equipped with a by-pass duct or midkiln gas sampling system.
 - A. Hydrocarbons in the main stack in excess of 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

35. 40 C.F.R. § 63.1206(c)(1) requires owners or operators to operate only under the operating requirements specified in the Documentation of Compliance under § 63.1206(c) or the Notification of Compliance under §§ 63.1207(j) and 63.1210(d).

36. The HWC MACT sets forth that a source is subject to the startup, shutdown, and malfunction plan requirements of §63.6. *See* 40 C.F.R. § 63.1206(c)(2).

37. 40 C.F.R. § 63.1206(c)(2)(v)(A)(3) requires compliance with the automatic waste feed cutoff (AWFCO) requirements during malfunction. This requires, among other things, a written excessive exceedance report be submitted for each set of 10 exceedances of an emission standard or operating requirement, while hazardous waste remains in the combustion chamber, during a 60-day block period. The owner or operator must:

- i. Within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approached to minimize the frequency, duration, and severity of each exceedance, and revise the startup, shutdown, and malfunction plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance; and
- ii. Record the results of the investigation and evaluation in the operating record and include a summary of the investigation and evaluation and any changes to the startup, shutdown, and malfunction plan, in the excess emissions report required under § 63.10(e)(3).

38. 40 C.F.R. § 63.10(e)(3)(v) sets forth that when no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the excess emissions and monitoring system performance reports and all summary reports.

39. Pursuant to Section 502(a) of the CAA, 42 U.S.C. § 7661a(a), it is unlawful for any person to, among other things, operate a major source subject to Title V except in compliance with a Title V permit after the effective date of any permit program approved or promulgated under Title V of the CAA.

40. Pursuant to Section 502(d), 42 U.S.C. § 7661a(d), on December 4, 2001, EPA approved Indiana's Title V operating permit program. *See* 66 *Fed. Reg.* 62969.

Factual Background

41. Lehigh Cement Company (Lehigh) is a construction materials supplier that owns a cement manufacturing facility at 3084 West County Road 225 South, Logansport, Indiana.

42. Lehigh owns and operates two HWBCKs, Kiln #1 and Kiln #2, at the Logansport Indiana facility.

43. On November 15, 2016, the Indiana EPA issued Title V Permit T017-35434-00005 to Essroc Cement Corporation, the previous owner of Kiln #1 and Kiln #2, to operate the HWBCKs.

44. Since May 1, 2017, Lehigh has been the operator of the Logansport facility. Since July 1, 2018, Lehigh has been both the owner and operator of the facility.

45. On May 16, 2017, the Indiana EPA issued Title V Permit T017-35434-00005 to Lehigh amended to indicate the change in ownership or operational control of the source (2017 Title V Permit).

46. Lehigh was and is a “person,” as that term is defined in Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

47. Kiln #1 is equipped with a Bag Leak Detector System while Kiln #2 is equipped with an electrostatic precipitator (ESP) to control emissions.

48. Each HWBCK is subject to the requirements of the HWC MACT and is an “existing source” as defined in 40 C.F.R. § 63.1201.

49. At all times relevant to this NOV, Lehigh’s facility was and is an “existing source” within the meaning of the HWC MACT at 40 C.F.R. § 63.1201.

50. At all times relevant to this FOV, Lehigh’s hazardous waste burning cement kilns Kiln #1 and Kiln #2 were hazardous waste burning cement kilns as defined in 40 C.F.R. § 63.1201(a).

51. On January 23, 2015, Lehigh submitted a NOC pursuant to 40 C.F.R. § 63.1210(b). The NOC included parameter limitations for a maximum air pollution control device (APCD) inlet temperature, minimum chain zone temperature (with and without buckets), maximum kiln feedrate (with and without buckets), maximum liquid waste-derived fuel (LWDF) feedrate (with and without buckets), and maximum containerized waste-derived fuel (CWDF) feedrate for Kiln #1. It also included parameter limitations for a maximum APCD inlet temperature, minimum chain zone temperature, maximum kiln feedrate, maximum LWDF feedrate, and minimum ESP power for Kiln #2. In this NOC, Lehigh also established parameter limitations for a maximum total SVM feedrate, maximum total SVM thermal feedrate, maximum total LVM feed rate, maximum total LVM thermal feed rate, and maximum total chlorine/chloride feed rate for both Kiln #1 and Kiln #2.

52. On November 21, 2017, Lehigh submitted a NOC pursuant to 40 C.F.R. § 63.1210(b) for a partial comprehensive performance test on Kiln #1. The NOC included parameter limitations for a maximum APCD inlet temperature, minimum chain zone temperature (with and without buckets), maximum kiln feedrate (with and without buckets), maximum LWDF feedrate (with and without buckets), and maximum CWDF feedrate for Kiln #1.

53. On October 29, 2018, Lehigh submitted a NOC pursuant to 40 C.F.R. § 63.1210(b) for a partial comprehensive performance test on Kiln #1. The NOC included parameter limitations for a maximum APCD inlet temperature, minimum chain zone temperature (with and without buckets), maximum kiln feedrate (with and without buckets), maximum LWDF feedrate (with and without buckets), and maximum CWDF feedrate for Kiln #1.

54. On February 15, 2020, Lehigh submitted a NOC pursuant to 40 C.F.R. § 63.1210(b) that established interim operating parameter limits for Kiln #1 and Kiln #2. The NOC included parameter limitations for a maximum APCD inlet temperature, minimum chain zone temperature (with and without buckets), maximum kiln feedrate (with and without buckets), maximum LWDF feedrate (with and without buckets), and maximum CWDF feedrate for Kiln #1. It also included parameter limitations for

a maximum APCD inlet temperature, minimum chain zone temperature, maximum kiln feed rate, maximum LWDF feedrate, and minimum ESP power for Kiln #2. In this NOC, Lehigh also established interim parameter limitations for a maximum total SVM feedrate, maximum total SVM thermal feedrate, maximum total LVM feedrate, maximum total LVM thermal feedrate, and maximum total chlorine/chloride feedrate for both Kiln #1 and Kiln #2.

55. On November 5, 2020, Lehigh submitted a NOC pursuant to 40 C.F.R. § 63.1210(b) that established operating parameter limits for Kiln #1 and Kiln #2. The NOC included parameter limitations for a maximum APCD inlet temperature, minimum chain zone temperature (with and without buckets), maximum kiln feedrate (with and without buckets), maximum LWDF feedrate (with and without buckets), and maximum CWDF feedrate for Kiln #1. It also included parameter limitations for a maximum APCD inlet temperature, minimum chain zone temperature, maximum kiln feedrate, maximum LWDF feedrate, and minimum ESP power for Kiln #2. In this NOC, Lehigh also established parameter limitations for a maximum total SVM feedrate, maximum total SVM thermal feedrate, maximum total LVM feedrate, maximum total LVM thermal feedrate, and maximum total chlorine/chloride feedrate for both Kiln #1 and Kiln #2.

56. Lehigh is required to comply with all operating requirements and AWFCO operating parameter limits established in the NOCs. Lehigh's NOC OPLs include, but are not limited to:

Table 1: Parameter OPLs Set in the NOC [2020].		
HAP/DRE	Parameter/Emission Standard	Subpart EEE Citation
DRE	Minimum Chain Zone Temperature	63.1209(j)(1)
DRE	Maximum Kiln Feedrate	63.1209(j)(2)
DRE	Maximum Pumpable and Total HWDF Feedrate	63.1209(j)(3)
Dioxin/Furan	Maximum Baghouse Inlet Temperature (Kiln #1 Only)	63.1209(k)(1)
Dioxin/Furan	Maximum ESP Inlet Temperature (Kiln #2 Only)	63.1209(k)(1)
Dioxin/Furan	Maximum Kiln Feedrate	63.1209(k)(3)
Dioxin/Furan	Maximum Pumpable and Total HWDF Feedrate	63.1209(k)(4)
Mercury	Maximum Total Mercury Feedrate	63.1209(l)
Mercury	Maximum Mercury HWDF Feed Concentration	63.1209(l)
Particulate Matter	Maximum Kiln Feedrate	63.1209(m)(2)
SVM/LVM	Maximum Baghouse Inlet Temperature (Kiln #1 Only)	63.1209(n)(1)
SVM/LVM	Maximum ESP Inlet Temperature (Kiln #2 Only)	63.1209(n)(1)
SVM/LVM	Maximum Total SVM Feedrate	63.1209(n)(2)
SVM/LVM	Maximum Total LVM Feedrate	63.1209(n)(2)
SVM/LVM	Maximum Pumpable LVM Feedrate	63.1209(n)(2)
SVM/LVM	Maximum Total Chlorine/Chloride Feedrate	63.1209(n)(4)
SVM/LVM	Maximum Kiln Feedrate	63.1209(n)(5)
THC	Maximum THC Emission Rate	63.1220(a)(5)
Chloride/chlorine	Maximum Chlorine/Chloride Feedrate	63.1209(o)(1)
Chloride/chlorine	Maximum Kiln Feedrate	63.1209(o)(2)

57. The Lehigh facility feeds liquid hazardous waste-derived fuel, solid fossil fuel, and off-specification used oil/non-hazardous liquid fuel into the HWBCK units, Kiln #1 and Kiln #2. Kiln #1 also utilizes containerized waste-derived fuel.

58. On February 4, 2021, EPA issued an information request pursuant to Section 114 of the CAA, 42 U.S.C. § 7414, to Lehigh. EPA requested, among other things, HWBCK CO/THC CEMS data from July 1, 2016 to February 4, 2021 and operating parameter monitoring data for each CPMS instrument Lehigh calibrates while burning hazardous waste from July 1, 2016, to February 4, 2021.

59. On May 5, 2021, Lehigh responded to EPA's February 4, 2021 information request by providing, among other things, HWBCK THC CEMS data for July 1, 2016, to February 28, 2021, kiln feedrate, liquid waste-derived fuel feedrate, APCD inlet temperature, and ESP power from November 1, 2016, to February 28, 2021.

60. On July 3, 2020, the Indiana Department of Environmental Management received the Semiannual Startup, Shutdown and Malfunction (SSM) Report from Lehigh (2020 SSM Report).

61. The SSM Report was submitted in accordance with 40 C.F.R. § 63.10(s) for the reporting period of January 1, 2020 through June 30, 2020.

62. The 2020 SSM Report included, among other things, the Periodic SSM Report, Excess Emission Investigation, Kiln #1 SSM Excess Emission Detail & Parameter Exceedance Summary, and Kiln #2 SSM Excess Emission Detail & Parameter Exceedance Summary.

63. The Kiln #1 SSM Excess Emission Detail & Parameter Exceedance Summary of the 2020 SSM Report listed the following as emission/parameters: APCD Pressure Drop; Bag Leak Detectors; APCD Inlet Temperature; THC Emissions; Chainzone Temp; LWDF Rate; CWDF Rate; and Production Rate.

64. The Kiln #2 SSM Excess Emission Detail & Parameter Exceedance Summary of the 2020 SSM Report listed the following as emission/parameters: Opacity Emissions; ESP Inlet Temp; ESP Power; THC Emissions; Chainzone Temp; LDWF Rate; Production Rate; and Pressure Drop.

65. On the dates and times listed in Table 1, Lehigh discharged or caused combustion gases to be emitted from Kiln #1 into the atmosphere that contained THC in excess of 20 parts per million by volume, dry basis, and corrected to 7% O₂, on an hourly rolling average basis during 69 events on 62 days between May 26, 2017 and February 28, 2021. The total duration of the events was 541 minutes, and the time-weighted average concentration was 560 parts per million by volume, dry basis, and corrected to 7% O₂ (ppmV @ 7% O₂).

66. On the dates and times listed in Table 2, Lehigh discharged or caused combustion gases to be emitted from Kiln #2 into the atmosphere that contained THC in exceed of 20 ppmV @ 7% O₂ on an hourly rolling average basis during 36 events on 23 days between February 28, 2018 and January 27, 2021. The total duration of the events was 500 minutes, and the time-weighted average concentration was 102 ppmV @ 7% O₂.

67. On the dates and times listed in Table 3, Lehigh exceeded the minimum chain zone temperature (without buckets) for Kiln #1 on an hourly rolling average basis during 67 events on 41

days between 8/26/2017 and 10/11/2019. The total duration of the events was 2138 minutes, and the time-weighted average temperature was 1220°F.

68. On the dates and times listed in Table 4, Lehigh exceeded the minimum chain zone temperature (with buckets) for Kiln #1 on an hourly rolling average basis during 2009 events on 26 days between 5/24/2017 and 11/18/2019. The total duration of the events was 3508 minutes, and the time-weighted average temperature was 1619 °F.

69. On the dates and times listed in Table 5, Lehigh exceeded the maximum air pollution control device (APCD) inlet temperature for Kiln #1 on an hourly rolling average basis during 24 events on 13 days between 8/22/2017 and 8/7/2020. The total duration of the events was 1399 minutes, and the time-weighted average temperature was 399 °F.

70. On the dates and times listed in Table 6, Lehigh exceeded the maximum kiln feedrate (without buckets) for Kiln #1 on an hourly rolling average basis during 21 events on 16 days between 6/6/2017 and 8/7/2020. The total duration of the events was 966 minutes, and the time-weighted average rate was 66.7 tons/hr.

71. On the dates and times listed in Table 7, Lehigh exceeded the maximum kiln feedrate (with buckets) for Kiln #1 on an hourly rolling average basis during 129 events on 9 days between 6/6/2017 and 11/18/2019. The total duration of the events was 204 minutes, and the time-weighted average rate was 67.3 tons/hr.

72. On the dates and times listed in Table 8, Lehigh exceeded the maximum LWDF feedrate (without buckets) for Kiln #1 on an hourly rolling average basis during 21 events on 9 days between 8/12/2018 and 8/7/2020. The total duration of the events was 407 minutes, and the time-weighted average rate was 376 lbs/min.

73. On the dates and times listed in Table 9, Lehigh exceeded the maximum LWDF feedrate (with buckets) for Kiln #1 on an hourly rolling average basis during 10 events on 3 days between 11/15/2019 and 11/18/2019. The total duration of the events was 14 minutes, and the time-weighted average rate was 366 lbs/min.

74. On the dates and times listed in Table 10, Lehigh exceeded the maximum CWDF feedrate for Kiln #1 on an hourly rolling average basis during 43 events on 13 days between 6/5/2017 and 9/10/2020. The total duration of the events was 1234 minutes, and the time-weighted average rate was 22.9 lbs/min.

75. On the dates and times listed in Table 11, Lehigh exceeded the minimum chain zone temperature for Kiln #2 on an hourly rolling average basis during 66 events on 40 days between 10/29/2017 and 8/6/2020. The total duration of the events was 2602 minutes, and the time-weighted average temperature was 1253 °F.

76. On the dates and times listed in Table 12, Lehigh exceeded the maximum air pollution control device inlet temperature for Kiln #2 on an hourly rolling average basis during 63 events on 25 days between 6/22/2017 and 8/6/2020. The total duration of the events was 6090 minutes, and the time-weighted average temperature was 382 °F.

77. On the dates and times listed in Table 13, Lehigh exceeded the maximum kiln feedrate for Kiln #2 on an hourly rolling average basis during 16 events on 11 days between 11/5/2019 and 8/6/2020. The total duration of the events was 613 minutes, and the time-weighted average rate was 69.2 tons/hr.

78. On the dates and times listed in Table 14, Lehigh exceeded the maximum LWDF feedrate for Kiln #2 on an hourly rolling average basis during 16 events on 12 days between 10/8/2019 and 8/6/2020. The total duration of the events was 471 minutes, and the time-weighted average rate was 290 lbs/min.

79. On the dates and times listed in Table 15, Lehigh exceeded the minimum ESP power for Kiln #2 on an hourly rolling average basis during 100 events on 32 days between 6/6/2017 and 11/18/2019. The total duration of the events was 3346 minutes, and the time-weighted average power was 54.7 kilovolt-amperes (kVA).

Violations

80. Lehigh violated HWC MACT 40 C.F.R. § 63.1206(c)(2)(v)(A)(3) by failing to include all operating parameters in the excess emission report of the 2020 SVM, as required by 40 C.F.R. § 63.10(e)(3)(v). OPLs excluded from the excess emission report include: Maximum Total Mercury Feedrate; Maximum Mercury HWDF Feed Concentration; Maximum Total SVM; Maximum Total LVM; Maximum Total Chlorine/Chloride Feedrate.

81. Lehigh violated HWC MACT 40 C.F.R. § 63.1220(a)(5)(ii)(A) by failing to comply with the maximum THC limit of 20 ppmV @ 7% O₂ for Kilns #1 and #2 during the dates and times listed on Table 1 and 2, respectively.

82. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(1) by failing to comply with the minimum chain zone temperature (without buckets) of 1345°F (2017-2/2020), 1400°F (2/2020-11/2020), and 1415°F (11/2020-present) for Kiln #1 during the dates and times listed in Table 3.

83. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(1) by failing to comply with the minimum chain zone temperature (with buckets) of 1774°F (5/2017-11/2017), 1640°F (11/2017-10/2018), 1690°F (10/2018-2/2020), and 1589°F (2/2020-present) for Kiln #1 during the dates and times listed in Table 4.

84. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(k)(1)(i) by failing to comply with the maximum APCD inlet temperature of 395°F (2017-2/2020) and 389°F (2/2020-present) for Kiln #1 during the dates and times listed in Table 5.

85. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(2), 63.1209(k)(3), 63.1209(m)(2), 63.1209(n)(5), and 63.1209(o)(2) by failing to comply with the maximum kiln feedrate (without buckets) of 62 tons/hr (5/2017-present) for Kiln #1 during the dates and times listed in Table 6.

86. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(2), 63.1209(k)(3), 63.1209(m)(2), 63.1209(n)(5), and 63.1209(o)(2) by failing to comply with the maximum kiln feedrate (with buckets) of 62 tons/hr (5/2017-11/2017), 63 tons/hr (11/2017-10/2018), 55 tons/hr (10/2018-2/2020), and 56 tons/hr (2/2020-present) for Kiln #1 during the dates and times listed in Table 7.

87. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(3) by failing to comply with the maximum LWDF feedrate (without buckets) of 465 lbs/ min (5/2017-11/2017), 358 lbs/min (11/2017-2/2020), and 410 lbs/min (2/2020-present) for Kiln #1 during the dates and times listed on Table 8.

88. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(3) by failing to comply with the maximum LWDF feedrate (with buckets) of 365 lbs/ min (5/2017-11/2017), 364 lbs/min (11/2017-10/2018), 358 lbs/min (10/2018-2/2020), and 370 lbs/min (2/2020-present) for Kiln #1 during the dates and times listed on Table 9.

89. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(3) by failing to comply with the maximum CWDF feed rate of 18.4 lbs/ min (5/2017-11/2017), 19.9 lbs/min (11/2017-10/2018), 19.1 lbs/min (10/2018-2/2020), 24.5 lbs/min (2/2020-11/2020), and 25 lbs/min (11/2020-present) for Kiln #1 during the dates and times listed on Table 10.

90. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(1) by failing to comply with the minimum chain zone temperature of 1210°F (5/2017-2/2020), 1419°F (2/2020-11/2020), and 1368°F (11/2020-present) for Kiln #2 during the dates and times listed in Table 11.

91. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(k)(1)(i) by failing to comply with the maximum APCD inlet temperature of 346°F (5/2017-2/2020) and 360°F (2/2020-present) for Kiln #2 during the dates and times listed in Table 12.

92. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(2), 63.1209(k)(3), 63.1209(m)(2), 63.1209(n)(5), and 63.1209(o)(2) by failing to comply with the maximum kiln feedrate of 42 tons/hr (5/2017-11/2020) and 50 tons/hr (11/2020-present) for Kiln #2 during the dates and times listed in Table 13.

93. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(j)(3) by failing to comply with the maximum LWDF feedrate of 277 lbs/min (5/2017-11/2020) and 289 lbs/min (11/2020-present) for Kiln #2 during the dates and times listed on Table 14.

94. Lehigh violated HWC MACT 40 C.F.R. § 63.1209(m)(1)(iv) by failing to comply with the minimum ESP power of 58.5.4 kVA (5/2017-2/2020), 60.4 kVA (2/2020-11/2020), and 56.6 kVA (11/2020-present) for Kiln #2 during the dates and times listed on Table 15.

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