

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. 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 by no later than October 14, 2008.

7. 40 C.F.R. § 63.1206(b) sets forth compliance with standards:

- (i) Applicability. The emission standards and operating requirements set forth in this subpart apply at all times except:
 - a. During periods of startup, shutdown, and malfunction; and
 - b. 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.

8. Pursuant to 40 C.F.R. § 63.1201, a “continuous monitor” means a device which continuously samples the regulated parameter specified in 40 C.F.R. § 63.1209 without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds, except during allowable periods of calibration and except as defined otherwise by the CEMS Performance Specifications in 40 C.F.R. Part 60, Appendix B.

9. Pursuant to 40 C.F.R. § 63.1201(b), the term “CMS” means continuous monitoring system.

10. 40 C.F.R § 63.1209(a)(1)(ii) states:

- (A) Cement kilns under § 63.1204. Except as provided by paragraphs (a)(1)(iv) and (a)(1)(v) of the section, must use a [continuous opacity monitoring system] COMS to demonstrate and monitor compliance with the opacity standard under §§ 63.1204(a)(7) and (b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks.
- (B) Cement kilns under § 63.1220. Except as provided by paragraphs (a)(1)(iv) and (a)(1)(v) of the section and unless your source is equipped with a bag leak detection system under § 63.1206(c)(8), you must use a COMS to demonstrate and monitor compliance with the opacity standard under § 63.1220(a)(7) and (b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks.
- (C) You must maintain and operate each COMS in accordance with the requirements of § 63.8(c) except for the requirements under § 63.8(c)(3). The requirements of § 63.1211(c) shall be complied with instead of § 63.8(c)(3); and
- (D) Compliance is based on a six-minute block average.

11. Pursuant to 40 C.F.R. § 63.1220(a)(7)(ii), you must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain, for particulate matter,

opacity greater than 20 percent, unless your source is equipped with a bag leak detection system under 40 C.F.R. § 63.1206(c)(8) or a particulate matter detection system under 40 C.F.R. § 63.1206(c)(9).

12. Pursuant to 40 C.F.R. § 63.10(e)(3)(i), the owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to EPA semiannually.

13. Pursuant to 40 C.F.R. § 63.1211(a), you are required to submit excessive emissions and continuous monitoring system performance reports and summary reports referenced in 40 C.F.R. § 63.10(e)(3) to EPA or the delegated authority.

14. Pursuant to 40 C.F.R. § 63.10(e)(3)(vi)(E) and 40 C.F.R. § 63.10(e)(3)(vi)(I):

As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of this section, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled “Summary Report—Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance” and shall contain the following information:

(E) The emission and operating parameter limitations specified in the relevant standard(s). . .

(I) An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;

15. Pursuant to 40 C.F.R. § 63.10(e)(3)(vii), if the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by EPA or the delegated authority.

16. Pursuant to 40 C.F.R. § 63.10(e)(3)(viii), if the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

COMS and CEMS Requirements

17. 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.

18. 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.*

19. On June 25, 2021, EPA approved Indiana Administrative Code (IAC) 326 IAC-3-5-1 of the Indiana State Implementation Plan (SIP). *See 86 Fed. Reg. 33525.*

20. On October 23, 2013, EPA approved 326 IAC 3-5-2 and 326 IAC 3-5-8 of the Indiana SIP. *See 78 Fed. Reg. 63093.*

21. Title V 017-41677-00005, Condition D.2.7(a) states: Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) continuous opacity monitoring systems (COMS) for Kiln #1 and Kiln #2 shall be calibrated, maintained, and operated for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2.

22. Pursuant to 326 IAC-3-5-1(a)(5), continuous monitoring requirements for applicable pollutants applies to portland cement plants to determine compliance with an emission limitation or standard.

23. Pursuant to 326 IAC 3-5-2(2)(A), cycling times, which include the total time a monitoring system requires to sample, analyze, and record an emission measurement, shall be as follows: (A) Continuous monitoring systems for measuring opacity shall complete a minimum of one (1) cycle of operation (sampling, analyzing, and data recording) for each successive ten (10) second period.

24. Pursuant to 326 IAC 3-5-8(c), except for periods when the: (1) affected emissions unit is not operating; (2) affected source or emissions unit is operating under a scenario that does not require CEMS or COMS; (3) the owner or operator is repairing the CEMS or COMS; (4) CEMS or COMS is experiencing a malfunction; or (5) the owner/operator is conducting CEMS or COMS quality assurance and quality control activities, including, but not limited to: (A) calibration checks; (B) zero and span adjustments; (C) calibration gas audits; or (D) other required quality assurance/quality control activities; all CEMS and COMS shall be in continuous operation.

25. Pursuant to 40 C.F.R. § 63.8(c)(4)(i), except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

26. Section E.4.1(a) of Title V Permit 017-41677-00005, states: Pursuant 40 CFR 63.1 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, for the emission units listed above, except as otherwise specified in 40 CFR Part 63, Subpart EEE.

27. Pursuant to 40 C.F.R. § 63.1209(a)(1)(i), you must use either a carbon monoxide or hydrocarbon CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen.

Factual Background

28. On April 28, 2017, the Indiana Department of Environmental Management (IDEM) received a Title V permit application from Essroc Cement Corporation requesting a change in ownership and company name to Lehigh Cement Company (Lehigh).
29. On May 16, 2017, IDEM issued Title V Permit 017-35434-00005 to Lehigh, amended to indicate the change in ownership of the source.
30. On October 3, 2019, IDEM issued Title V Permit 017-41677-00005 to Lehigh.
31. Effective January 1, 2023, Lehigh changed its name to Heidelberg Materials US Cement LLC.
32. On January 3, 2023, IDEM received an application from Lehigh requesting to change the source's name to Heidelberg Materials US Cement LLC.
33. On January 11, 2023, IDEM issued Title V Permit 017-46163-00005 to Heidelberg Materials US Cement LLC.
34. Since May 1, 2017, Heidelberg Materials US Cement LLC, formerly known as Lehigh, (HM) has been the operator of the cement manufacturing facility located at 3084 West County Road 225 South, Logansport, Indiana (Logansport Facility).
35. Since July 1, 2018, HM, a construction materials supplier, has been both the owner and operator of the Logansport Facility.
36. HM owns and operates two HWBCKs, Kiln #1 and Kiln #2, at the Logansport Facility.
37. 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.
38. At all times relevant to this Finding of Violation (FOV), the Logansport Facility was and is an "existing source" within the meaning of the HWC MACT at 40 C.F.R. § 63.1201.
39. At all times relevant to this FOV, HM'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).
40. At all times relevant to this FOV, HM owned and operated a stationary portland cement manufacturing plant.
41. At all times relevant to this FOV, HM did not operate its Kiln #2 as required by 40 C.F.R. § 63.1209 (a)(1)(iv) and (a)(1)(v) nor equip its Kiln #2 with a bag leak detection system.
42. HM utilizes a THC (or VOC) CEMS to comply with 40 C.F.R. § 63.1209(a)(1)(i) at Kiln #1 and Kiln #2.
43. Kiln #2 is equipped with an electrostatic precipitator (ESP) to control particulate matter emissions.

44. HM Cement utilizes a COMS to comply with 40 C.F.R. § 63.1209(a)(1)(ii) and to demonstrate and monitor compliance with the opacity standard under 40 C.F.R. § 63.1220(a)(7).

45. On September 28, 2021, EPA issued a FOV to HM for violations of the HWC MACT.

46. On October 22, 2021, EPA issued a section 114 information request (the information request) to HM.

47. On December 7, 2021, HM provided its full response to the information request.

48. On December 7, 2021, EPA and HM held a conference to discuss EPA's FOV.

49. On December 16, 2021, EPA issued a letter to HM requesting further information regarding HM's response to EPA's information request and FOV.

50. On January 31, 2022, HM submitted a response to EPA's December 16, 2021, letter, stating:

Kiln 1 and Kiln 2 at the Logansport Plant operate in one of three modes:

- Mode A: hazardous waste firing in the main and/or mid-kiln burning zones;
- Mode B: hazardous waste firing in the main burning zone only;
- Mode C: without hazardous waste...

When in Mode C, the OPLs related to the burning of LWDF and CWDF are not applicable, but the entire kiln system remains subject to Subpart EEE.

51. HM submits quarterly excessive emissions and continuous monitoring system performance reports as a part of its Quarterly Compliance Reports (QCRs) to IDEM.

52. The quarterly excessive emissions and continuous monitoring system performance reports includes the summary reports referenced in 40 C.F.R. § 63.10(e)(3)(vi) (Summary Reports). If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period, then HM also includes the full excessive emissions and continuous monitoring system performance reports, as referenced in 40 C.F.R. § 63.10(e)(3)(viii).

53. HM reports a Kiln #2 emission limit of 20% opacity in its Summary Reports.

54. HM submitted full excess emissions reports for QCRs on January 25, 2019, April 29, 2019, July 30, 2019, October 29, 2019, January 27, 2020, April 29, 2020, January 27, 2021, April 22, 2021, October 26, 2021, and January 30, 2023.

55. On April 26, 2023, IDEM sent HM an Enforcement Action Letter citing the following violations:

1) Pursuant to Title V 017-41677-00005, Condition D.2.7(a), and 40 CFR 63.1209(a)(1)(ii), Heidelberg is required to operate a COMS for Kiln #2 (EU413). COMS downtime of 8.34% was reported during the 4th quarter 2020 report submitted on 01/28/2021, in violation of permit T017-41677-00005 Condition D.2.7(a), and 40 C.F.R. § 63.1209(a)(1)(ii).

2) Pursuant to Title V 017-41677-00005 and 40 CFR 63.1209(a)(1)(i) Heidelberg is required to operate a VOC CEMS for Kiln #1 (EU401). VOC CEMS downtime of 12.9% was reported in the 2020 2nd Semiannual Summary Report & Excess Emission Report, in violation of permit T017-41677-00005 and 40 C.F.R. § 63.1209(a)(1)(i).

3) Pursuant to Title V 017-41677-00005 and 40 C.F.R. § 63.1209(a)(1)(i) Heidelberg is required to operate a VOC CEMS for Kiln #2 (EU413). VOC CEMS downtime of 11.9% was reported in the 2020 2nd Semiannual Summary Report & Excess Emission Report, in violation of permit T017-41677-00005 and 40 C.F.R. § 63.1209(a)(1)(i).

Violations

56. From October 3, 2018, to December 18, 2022, HM exceeded the HWC MACT 20% opacity limit at Kiln #2 on 1,020 occasions, 380 calendar days, and for a total of 20,916 minutes, or 3,486 six-minute averages. HM self-reported more than 60% of these opacity limit exceedances as being due to an issue with the ESP at Kiln #2.

57. HM violated Title V Permit 017-41677-00005 Condition D.2.7(a) and 40 C.F.R. § 63.1209(a)(1)(ii) by operating the COMS for Kiln #2 with 8.34% downtime during the 4th quarter of 2020. HM was unable to demonstrate and monitor compliance with the HWC MACT opacity standard in accordance with 40 C.F.R. § 63.1209(a)(1)(ii)(B) and did not operate the COMS in accordance with 326 IAC 3-5 and 40 C.F.R. § 63.1209(a)(1)(ii)(C)).

58. HM violated its Title V Permit 017-41677-00005 and 40 C.F.R. § 63.1209(a)(1)(i) by operating the VOC CEMS for Kiln #1 with 12.9% downtime and Kiln #2 with 11.9% downtime during the second half of 2020. HM was unable to demonstrate and monitor compliance with the hydrocarbon standard under the HWC MACT.

Environmental Impact of Violations

59. These violations have caused or can cause excess emissions of particulate matter. Particulate matter, especially fine particulates contains microscopic solids or liquid droplets, which can get deep into the lungs and cause serious health problems. Particulate matter exposure contributes to:

- irritation of the airways, coughing, and difficulty breathing;
- decreased lung function;
- aggravated asthma;
- chronic bronchitis;
- irregular heartbeat;
- nonfatal heart attacks; and
- premature death in people with heart or lung disease.

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