

**CHAPTER 145. INTERSTATE POLLUTION
TRANSPORT REDUCTION**

**Subchapter C. EMISSIONS OF NO_x FROM
CEMENT MANUFACTURING**

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§ 145.141. Applicability.

Beginning May 1, 2005, an owner or operator of a Portland cement kiln shall comply with this subchapter.

§ 145.142. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

CEMS—Continuous Emission Monitoring System—The equipment required under this subchapter or Chapter 139 (relating to sampling and testing) to sample, analyze, measure and provide, by readings taken at least every 15 minutes of the measured parameters, a permanent record of NO_x emissions.

Calcine—To heat a substance to a high temperature, but below its melting or fusing point, to bring about thermal decomposition or a phase transition in its physical or chemical constitution.

Clinker—The product of a Portland cement kiln from which finished cement is manufactured by milling and grinding.

Long dry-process cement kiln—A Portland cement kiln that employs no preheating of the feed. The inlet feed to the kiln is dry.

Long wet-process cement kiln—A Portland cement kiln that employs no preheating of the feed. The inlet feed to the kiln is a slurry.

Portland cement—A hydraulic cement produced by pulverizing clinker consisting essentially of hydraulic calcium silicates, usually containing one or more of the forms of calcium sulfate as an interground addition.

Portland cement kiln—A system, including any solid, gaseous or liquid fuel combustion equipment, used to calcine and fuse raw materials, including limestone and clay, to produce Portland cement clinker.

Precalciner cement kiln—A Portland cement kiln where the feed to the kiln system is preheated in cyclone chambers and a second burner is used to calcine material in a separate vessel attached to the preheater prior to the final fusion in a kiln that forms clinker.

Preheater cement kiln—A Portland cement kiln where the feed to the kiln system is preheated in cyclone chambers prior to the final fusion in a kiln that forms clinker.

System-wide—Two or more Portland cement kilns under the common control of the same owner or operator, or multiple owners, in this Commonwealth.

Authority

The provisions of this § 145.142 amended under section 5(a)(1) of the Air Pollution Control Act (35 P. S. § 4005(a)(1)).

Source

The provisions of this § 145.142 amended June 18, 2010, effective June 19, 2010, 40 Pa.B. 3346. Immediately preceding text appears at serial page (333589).

§ 145.143. Standard requirements.

(a) By October 31, 2005, and each year thereafter, the owner or operator of a Portland cement kiln shall calculate the difference between the actual emissions from the unit during the period from May 1 through September 30 and the allowable emissions for that period.

(b) The owner or operator of a Portland cement kiln may not operate a Portland cement kiln in a manner that results in NO_x emissions in excess of its allowable emissions, except as otherwise specified in this section.

(1) Beginning May 1 through September 30, 2005, and each year thereafter, the owner or operator shall determine allowable emissions by multiplying the tons of clinker produced by the Portland cement kiln for the period by 6 pounds per ton of clinker produced.

(2) Beginning May 1 through September 30, 2011, and each year thereafter, the owner or operator of a Portland cement kiln shall determine allowable emissions of NO_x by multiplying the tons of clinker produced by the Portland cement kiln for the period by:

- (i) 3.88 pounds of NO_x per ton of clinker produced for long wet-process cement kilns.
- (ii) 3.44 pounds of NO_x per ton of clinker produced for long dry-process cement kilns.
- (iii) 2.36 pounds of NO_x per ton of clinker produced for:

- (A) Preheater cement kilns.

- (B) Precalciner cement kilns.

(c) The owner or operator of a Portland cement kiln subject to subsection (b)(1) shall install and operate a CEMS, and shall report CEMS emissions data, in accordance with the CEMS requirements of either Chapter 139 or 145 (relating to sampling and testing; and interstate pollution transport reduction) and calculate actual emissions using the CEMS data reported to the Department. Any data invalidated under Chapter 139 shall be substituted with data calculated using the potential emission rate for the unit or, if approved by the Department in writing, an alternative amount of emissions that is more representative of actual emissions that occurred during the period of invalid data.

(d) The owner or operator of a Portland cement kiln subject to this section shall surrender to the Department one CAIR NO_x allowance and one CAIR NO_x Ozone Season allowance, as defined in 40 CFR 96.102 and 96.302 (relating to definitions), for each ton of NO_x by which the combined actual emissions exceed the allowable emissions of the Portland cement kilns subject to this section at a facility from May 1 through September 30. The surrendered allowances shall be of current year vintage. For the purposes of determining the amount of allowances to surrender, any remaining fraction of a ton equal to or greater than 0.50 ton is deemed to equal 1 ton and any fraction of a ton less than 0.50 ton is deemed to equal zero tons.

(e) If the combined allowable emissions from Portland cement kilns at a facility from May 1 through September 30 exceed the combined actual emissions from Portland cement kilns subject to this section at the facility during the same period, the owner or operator may deduct the difference or any portion of the difference from the amount of actual emissions from Portland cement kilns at the owner or operator's other facilities located in this Commonwealth for that period.

(f) By November 1, 2005, and each year thereafter, an owner or operator subject to this subchapter shall surrender the required NO_x allowances to the Department's designated NO_x allowance tracking system account, as defined in § 121.1 (relating to definitions), and shall provide in writing to the Department, the following:

- (1) The serial number of each NO_x allowance surrendered.
- (2) The calculations used to determine the quantity of NO_x allowances required to be surrendered.

(g) If an owner or operator fails to comply with subsection (f), the owner or operator shall by December 31 surrender three NO_x allowances of the current or later year vintage for each NO_x allowance that was required to be surrendered by November 1.

(h) The surrender of NO_x allowances under subsection (g) does not affect the liability of the owner or operator of the Portland cement kiln for any fine, penalty or assessment, or an obligation to comply with any other remedy for the same violation, under the CAA or the act.

(1) For purposes of determining the number of days of violation, if a facility has excess emissions for the period May 1 through September 30, each day in that period (153 days) constitutes a day in violation unless the owner or operator of the Portland cement kiln demonstrates that a lesser number of days should be considered.

(2) Each ton of excess emissions is a separate violation.

Authority

The provisions of this § 145.143 amended under section 5(a)(1) of the Air Pollution Control Act (35 P. S. § 4005(a)(1)).

Source

The provisions of this § 145.143 amended April 11, 2008, effective April 12, 2008, 38 Pa.B. 1705; amended June 18, 2010, effective June 19, 2010, 40 Pa.B. 3346. Immediately preceding text appears at serial pages (333589) to (333590).

Cross References

This section cited in 25 Pa. Code § 145.144 (relating to compliance determination); and 25 Pa. Code § 145.145 (relating to compliance demonstration and reporting requirements).

§ 145.144. Compliance determination.

(a) By April 15, 2011, the owner or operator of a Portland cement kiln subject to § 145.143(b)(2) (relating to standard requirements) shall:

(1) Install, operate and maintain CEMS for NO_x emissions.

(2) Report CEMS emissions data, in accordance with the CEMS requirements of Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), to the Department.

(3) Calculate actual emissions using the CEMS data reported to the Department.

(b) If approved by the Department in writing, data invalidated under Chapter 139, Subchapter C, shall be substituted with one of the following:

(1) The highest valid 1-hour emission value that occurred under similar source operating conditions during the reporting quarter for an invalid data period during that quarter.

(2) If no valid data were collected during the reporting quarter, one of the following shall be reported to the Department:

(i) The highest valid 1-hour emission value that occurred under similar source operating conditions during the most recent quarter for which valid data were collected.

(ii) The highest valid 1-hour emission value that occurred under similar source operating conditions during an alternative reporting period.

(3) An alternative method of data substitution.

(c) The owner or operator of a Portland cement kiln subject to this section shall submit to the Department quarterly reports of CEMS monitoring data in pounds of NO_x emitted per hour, in a format approved by the Department, which is in compliance with Chapter 139, Subchapter C.

(d) The CEMS for NO_x installed under the requirements of this section must meet the minimum data availability requirements in Chapter 139, Subchapter C.

Authority

The provisions of this § 145.144 issued under section 5(a)(1) of the Air Pollution Control Act (35 P. S. § 4005(a)(1)).

Source

The provisions of this § 145.144 adopted June 18, 2010, effective June 19, 2010, 40 Pa.B. 3346.

§ 145.145. Compliance demonstration and reporting requirements.

(a) By October 31, 2011, and each year thereafter, the owner or operator of a Portland cement kiln subject to § 145.143(b)(2) (relating to standard requirements) shall submit a written report to the Department, in a format approved by the Department, which includes the following:

(1) The difference between the actual NO_x emissions from the kiln during the interval from May 1 through September 30 and the allowable emissions for that period.

(2) The calculations used to determine the difference in emissions, including the CEMS data and clinker production data used to show compliance with the allowable emission limits in § 145.143(b)(2). The clinker production data must consist of the quantity of clinker, in tons, produced per day for each kiln.

(b) The owner or operator of a Portland cement kiln shall demonstrate compliance with the standard requirements in § 145.143(b)(2) on one of the following:

- (1) A kiln-by-kiln basis.
- (2) A facility-wide basis.
- (3) A system-wide basis.

Authority

The provisions of this § 145.145 issued under section 5(a)(1) of the Air Pollution Control Act (35 P. S. § 4005(a)(1)).

Source

The provisions of this § 145.145 adopted June 18, 2010, effective June 19, 2010, 40 Pa.B. 3346.

§ 145.146. Recordkeeping.

(a) The owner or operator of a Portland cement kiln shall maintain an operating log for each Portland cement kiln. The operating log must include the following on a monthly basis:

- (1) The total hours of operation.
- (2) The type and quantity of fuel used.
- (3) The quantity of clinker produced.

(b) The records maintained by the owner or operator of a Portland cement kiln must include the following:

- (1) Source tests and operating parameters established during the initial source test and subsequent testing.
- (2) The date, time and duration of any start-up, shutdown or malfunction of a Portland cement kiln or emissions monitoring system.
- (3) The date and type of maintenance, repairs or replacements performed on the kilns, control devices and emission monitoring systems.

(c) The owner or operator of a Portland cement kiln shall maintain the records required under this section onsite for 5 years. The records shall be made available to the Department upon request.

Authority

The provisions of this § 145.146 issued under section 5(a)(1) of the Air Pollution Control Act (35 P. S. § 4005(a)(1)).

Source

The provisions of this § 145.146 adopted June 18, 2010, effective June 19, 2010, 40 Pa.B. 3346.