

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

SUBPART C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 121. GENERAL PROVISIONS

§ 121.1. Definitions.

* * * * *

CEMS-Continuous emissions monitoring system—**[For purposes of Chapter 127, Subchapter E, all of the equipment that may be required to meet the data acquisition and availability requirements of Chapter 127, Subchapter E to sample, condition, analyze and provide a record of emissions on a continuous basis.]All of the equipment required to meet applicable data acquisition and availability requirements in this article (relating to Air Resources) to sample, condition (if applicable), analyze, measure and provide a permanent record of emissions of air contaminants to the outdoor atmosphere, in accordance with the standards set forth by the Department under Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources).**

* * * * *

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 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.

* * * * *

[Editor's note: Sections 129.401 – 129.405 are new and are printed in regular type to enhance readability.]

EMISSIONS OF NO_x FROM CEMENT MANUFACTURING

Sec.

- 129.401. Applicability.
- 129.402. Emission requirements.
- 129.403. Compliance determination.
- 129.404. Compliance demonstration.
- 129.405. Recordkeeping.

§ 129.401. Applicability.

Beginning May 1, 2009, an owner or operator of a Portland cement kiln shall comply with the requirements in this section and §§ 129.402-129.405.

§ 129.402. Emission requirements.

(a) During the period from May 1 through September 30, 2009, and for each year thereafter, the owner or operator of a Portland cement kiln shall not operate a Portland cement kiln in a manner that results in NO_x emissions in excess of the allowable limits established under subsection (b).

(b) 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 from May 1 through September 30, 2009, and for each year thereafter by:

- (1) 3.88 pounds of NO_x per ton of clinker produced for long wet-process cement kilns.
- (2) 3.44 pounds of NO_x per ton of clinker produced for long dry-process cement kilns.
- (3) 2.36 pounds of NO_x per ton of clinker produced for:

- (i) Preheater cement kilns.
- (ii) Precalciner cement kilns.

§ 129.403. Compliance determination.

(a) Not later than May 1, 2009, the owner or operator of a Portland cement kiln 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 continuous in-stack monitoring for stationary sources), to the Department.

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

(b) Data invalidated under Chapter 139, Subchapter C, shall be substituted with either of the following:

(1) Data calculated using the potential emission rate for the kiln.

(2) If approved by the Department, in writing, the highest valid one-hour emission value that occurred during the reporting quarter for an invalid data period during that quarter. If no valid data were collected during the reporting quarter, one of the following shall be reported to the Department:

(i) The highest valid one-hour emission value that occurred during the most recent quarter for which valid data were collected.

(ii) If approved by the Department, in writing, the highest valid one-hour emission value that occurred during an alternative reporting period.

(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, in writing, and in compliance with Chapter 139, Subchapter C.

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

§ 129.404. Compliance demonstration.

(a) By October 31, 2009, and each year thereafter, the owner or operator of a Portland cement kiln shall report to the Department, in a format approved, in writing, by the Department:

(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 § 129.402 (relating to emission requirements). The clinker production data shall consist of the quantity of clinker, in tons, produced per day for each kiln.

(b) The owner or operator of a Portland cement kiln or multiple Portland cement kilns shall demonstrate compliance with the emission requirements in § 129.402 on either:

(1) A kiln-by-kiln basis.

(2) A facility-wide emissions averaging basis.

(3) A system-wide averaging basis among Portland cement kilns under the common control of the same owner or operator in this Commonwealth.

(c) The owner or operator of a Portland cement kiln may demonstrate compliance with the emission requirements of § 129.402 in accordance with the following:

(1) For the period from May 1 through September 30, 2009, and each year thereafter, the owner or operator of a Portland cement kiln shall surrender to the Department one CAIR NO_x Ozone Season allowance, as defined in § 145.202 (relating to definitions), for each ton of NO_x by which the combined actual emissions exceed the allowable emissions of the Portland cement kilns at a facility subject to this section.

(2) The surrendered CAIR NO_x Ozone Season allowances shall be of current year vintage.

(3) For 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.

(d) 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 at the facility subject to this section and §§ 129.401-129.403 (relating to applicability; emission requirements; and compliance determination) and § 129.405 (relating to recordkeeping) during the same period, the owner or operator may deduct the difference or a portion of the difference from the amount of actual emissions from Portland cement kilns for that period at the owner or operator's other facilities located in this Commonwealth. The owner or operator of a kiln that commences operation after _____ (*Editor's Note: The blank refers to the date of adoption of this proposal*) may average only those emissions that are below the permitted NO_x limit for the kiln or below 1.52 pounds of NO_x per ton of clinker, whichever is lower.

(e) By November 1, 2009, and each year thereafter, an owner or operator of a Portland cement kiln subject to this section and §§ 129.401-129.403 and 129.405 shall surrender the required CAIR NO_x Ozone Season allowances to the Department's designated NATS-NO_x allowance tracking system account as defined in § 121.1 (relating to definitions) and shall provide to the Department, in writing, the following:

(1) The serial number of each CAIR NO_x Ozone Season allowance surrendered.

(2) The calculations used to determine the quantity of CAIR NO_x Ozone Season allowances required to be surrendered.

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

(g) The surrender of CAIR NO_x Ozone Season allowances under subsection (f) 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.

§ 129.405. Recordkeeping.

(a) The owner or operator of a Portland cement kiln shall maintain an operating log for each Portland cement kiln. The operating log shall 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 shall 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 a period of five years. The records shall be made available to the Department upon request.

CHAPTER 145: INTERSTATE POLLUTION TRANSPORT REDUCTION

Subchapter C. EMISSIONS OF NO_x FROM CEMENT MANUFACTURING

§ 145.141. Applicability.

Beginning May 1, 2005, until April 30, 2009, an owner or operator of a Portland cement kiln shall comply with this subchapter. Beginning May 1, 2009, an owner or operator of a Portland cement kiln shall comply with §§ 129.401-129.405.

* * * * *