

(Adopted February 7, 1986)(Amended December 4, 2009)

**RULE 1112.1. EMISSIONS OF PARTICULATE MATTER AND CARBON MONOXIDE FROM CEMENT KILNS**

(a) Definitions

For the purpose of this rule, the following definitions shall apply:

- (1) Kiln Feed means all materials except fuels entering the kiln, including raw feed and recycle dust, measured on a dry basis.
- (2) Cement Kiln is a device for the calcining and clinkering of limestone, clay, other raw materials and recycle dust in the dry-process manufacture of gray cement.
- (3) Clinker is a mass of fused material produced in a cement kiln from which the finished cement is manufactured by milling and grinding.
- (4) Clinker Cooler is a device for the air-cooling of clinker, into which the clinker is discharged from the cement kiln.

(b) Requirements

- (1) No person shall operate a cement kiln and clinker cooler capable of discharging particulate matter into the atmosphere unless such discharge of particulate matter into the atmosphere from such cement kiln and clinker cooler when combined is limited to no more than:
  - (A) 0.40 pound per ton of kiln feed for kiln feed rates less than 75 tons per hour.
  - (B) 30 pounds per hour for kiln feed rates of 75 tons per hour or greater.
- (2) No person shall operate a cement kiln capable of emitting carbon monoxide (CO) into the atmosphere unless the CO concentration is limited to no more than:
  - (A) the limit of Rule 407(a)(1); or
  - (B) 1,900 ppm averaged over eight (8) consecutive hours and 6,000 ppm averaged over fifteen (15) consecutive minutes, both corrected to 3% oxygen (O<sub>2</sub>) by volume, and measured on a dry basis.

**(c) Compliance Determination**

- (1) For the purposes of this rule, particulate matter emissions from the cement kiln and clinker cooler shall be measured concurrently and shall be averaged over one hour.
- (2) Measurement of particulate matter emissions from the clinker cooler shall provide for the evaporation and heating of any impinger solutions at a temperature of at least 800°C for at least 30 minutes prior to weighing.
- (3) Measurement of particulate matter emissions from the cement kiln shall provide for concurrent measurement of particulate matter emissions and sulfur dioxide emissions. Any measured gaseous sulfur dioxide emissions shall be excluded from the measurement of particulate matter emissions by subtracting from the mass of material collected in any impingers a mass equivalent to the amount of measured sulfur dioxide emissions based upon sulfuric acid dihydrate.
- (4) Measurement, monitoring and recordkeeping of carbon monoxide (CO) emissions from the cement kiln shall be conducted according to the provisions of District Rule 218 – Continuous Emission Monitoring.
- (5) A District approved Continuous Emissions Monitoring System (CEMS) for carbon monoxide (CO) and oxygen (O<sub>2</sub>) must be installed no later than December 31, 2009, or prior to commencement of operation for sources beginning operation after December 4, 2009, and operated according to the provisions of District Rule 218 – Continuous Emission Monitoring.
- (6) The CEMS certification tests and other sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the District Laboratory Approval Program (LAP) for the cited District reference test methods, where LAP approval is available. For District reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available

**(d) Test Methods**

- (1) Carbon Monoxide emission concentration shall be determined according to the procedures in District Source Test Method 100.1 – Instrumental Analyzer Procedures for Continuous Gaseous Emission Sampling.

- (2) Particulate matter emissions shall be determined according to the procedures in District Source Test Method 5.3 – Determination of Particulate Matter from Stationary Sources Using an In-Stack Filter.
  - (3) Other test methods may be used as determined to be equivalent and approved before the test in writing by the Executive Officer, the California Air Resources Board, and the United States Environmental Protection Agency.
- (e) Exemptions
- Cement kilns and clinker coolers subject to the provisions of this rule shall be exempt from the provisions of Rule 404 and Rule 405.