2) *A regulatory compliance discussion demonstrating compliance with 20 NMAC 2.20 Lime Manufacturing Plants - Particulate Matter Sections 109B, 111, 112, 113 and 114. The application correctly identifies 2.20 as an applicable requirement, but does not include compliance discussion as specified in 20 NMAC 2.72 203 A.4.*

Regulation *20 NMAC 2.20.109.B.* notes "the owner or operator of a new lime manufacturing plant shall not permit, cause, suffer, or allow emissions of particulate matter to the atmosphere to... exceed 0.15 pounds per ton of lime feed to any lime hydrator." [11/30/95]

As is noted in Table A-1 of the permit application, the emission factors used for Item 26 (loading from belt feeder FD-001 [Unit 514] to premixer MX-001 [Unit 518]) are 0.0054 and 0.0025 pounds per ton for total suspended particulate (TSP) and particulate matter less than ten microns (PM_{10}), respectively. Also as noted in Table A-1 of the application, the emission factors used for Item 28 (loading from premixer MX-001 [Unit 518] to seasoning chamber MX-002 [Unit 520]) are 0.0020 and 0.0010 for TSP and PM_{10}, respectively. The lime is hydrated in the premixer and the seasoning chamber, though the seasoning chamber acts as the official hydrator.

As these emission factors are less than the 0.15 pounds per ton noted in the regulation, CLC's Belen facility is in compliance with this regulation.

Regulation *20 NMAC 2.20.111* notes "Any person owning or operating a lime manufacturing plant shall equip and maintain all crushers, screens or other size classification units, hoppers and chutes with: A. Systems of enclosures, dust suppressant sprays and other measures as necessary to prevent the release of particulate matter emissions to the atmosphere; or B. Equip such process units with hoods, fans and fabric filters, wet scrubbers or other collection and control systems approved by the Department as at least as effective to reduce particulate matter emissions to the atmosphere." [11/30/95]

The equipment at the Belen facility is enclosed and all emissions are routed to baghouses. Thus, CLC's Belen facility is in compliance with this regulation.

Regulation *20 NMAC 2.20.112* notes "The owner or operator of lime manufacturing plants shall not permit, cause, suffer or allow emissions of particulate matter to the atmosphere from a lime kiln or lime hydrator except through stacks equipped with sampling ports and platforms in such number, location and size to allow accurate sampling to be performed." [11/30/95]

Emissions from the seasoning chamber (hydrator) are routed to a baghouse. The stack on the baghouse/fan unit is equipped to allow accurate sampling and has been tested to show

compliance with previous NMED-AQB permits. Thus, CLC's Belen facility is in compliance with this regulation.

Regulation *20 NMAC 2.20.113* notes "Compliance with Sections 109 and 110 of this part shall be determined consistent with the method for manual stack testing set forth by the US EPA at 40 CFR, Part 60, Appendix A, Methods 1 through 5, or any other method receiving prior approval from the Department. Upon request of the Department, the owner or operator of lime manufacturing plants shall perform stack testing according to the method stated above and report the results of such test in the format and time period specified by the Department. The owner or operator shall inform the Department of the dates and times of such testing so that the Department may have opportunity to have an observer present during the testing." [11/30/95]

CLC's Belen facility has submitted stack-testing results, which satisfied NMED-AQB requirements in the past, and will continue to meet the requirements of this regulation. Thus, the facility is in compliance with this regulation.

Regulation *20 NMAC 2.20.114* notes "the owner or operator of a new lime manufacturing plant shall not permit, cause, suffer or allow operation of the new lime manufacturing plant unless the plant is equipped with continuous monitoring systems as specified in 40 CFR, Part 60, Subpart HH, Section 60.343." [11/30/95]

Per *40 CFR 60.340(a)*, "the provisions of this subpart are applicable to each rotary lime kiln used in the manufacture of lime." Per *40 CFR 60.343(a)*, "the owner or operator of a facility that is subject to the provisions of this subpart shall install, calibrate, maintain and operate a continuous monitoring system except as provided in paragraphs (b) and (c) of this section to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40 percent opacity." *40 CFR 60.343(b)* and *(c)* also refer to rotary lime kilns.

CLC does not operate a kiln at the Belen facility; therefore, this regulation does not apply.

20 NMAC 2.20 LIME MANUFACTURING PLANTS - PARTICULATE MATTER [11/30/1995]

Air Quality Bureau

LIME MANUFACTURING PLANTS - PARTICULATE MATTER -- 20NMAC 2.20

Statutory Authority: Environmental Improvement Act, NMSA 1978, Section 74-1-8(A)(4) and (7), and Air Quality Control Act, NMSA 1978, Sections 74-2-1 et seq., including specifically, Section 74-2-5(A), (B) and (C)

Effective Date of Latest Revision: 11/30/95

Download text copy

NEW MEXICO ENVIRONMENTAL IMPROVEMENT BOARD
P. O. BOX 26110/1190 ST. FRANCIS DRIVE
SANTA FE, NM 87502-0110

TITLE 20 ENVIRONMENTAL PROTECTION
CHAPTER 2 AIR QUALITY (STATEWIDE)
PART 20 LIME MANUFACTURING PLANTS - PARTICULATE MATTER

100. ISSUING AGENCY: Environmental Improvement Board. [11-30-95]

101. SCOPE: All geographic areas within the jurisdiction of the Environmental Improvement Board. [11-30-95]

102. STATUTORY AUTHORITY: Environmental Improvement Act, NMSA 1978, Section 74-1-8(A)(4) and (7), and Air Quality Control Act, NMSA 1978, Sections 74-2-1 et seq., including specifically, Section 74-2-5(A), (B) and (C). [11-30-95]

103. DURATION: Permanent. [11-30-95]

104. EFFECTIVE DATE: November 30, 1995. [11-30-95]

105. OBJECTIVE: The objective of this Part is to establish particulate matter emission standards for lime manufacturing plants. [11-30-95]

106. AMENDMENT AND SUPERSESSION OF PRIOR REGULATIONS: This Part amends and supersedes Air Quality Control Regulation ("AQCR") 509 - Lime Manufacturing Plants - Particulate Matter last filed November 21, 1978. [11-30-95]

A. All references to AQCR 509 in any other rule shall be construed as a reference to this Part. [11-30-95]

B. The amendment and supersession of AQCR 509 shall not affect any administrative or judicial enforcement action pending on the effective date of such amendment nor the validity of any

permit issued pursuant to AQCR 509. [11-30-95]

107. DEFINITIONS: In addition to the terms defined in Part 2 - Definitions, as used in this Part: [11-30-95]

A. "Commenced" means that an owner or operator has undertaken a continuous program of construction or that an owner or operator has entered into a binding contractual obligation to undertake and complete within a reasonable time a continuous program of construction. [11-30-95]

B. "Existing lime manufacturing plant" means any plant that produces lime by calcination that was constructed and operational, or at which construction was commenced, prior to May 3, 1977, and includes all crushers, conveyors, screens and other size-classification units, hoppers, chutes and kilns. [11-30-95]

C. "Lime" means the product of the calcination process and includes, but is not limited to, calcitic lime, dolomitic lime, and dead burned dolomite. [11-30-95]

D. "Lime hydrator" means a unit used to produce hydrated lime. [11-30-95]

E. "Modification" means a physical change or change in the manner of operation which increases the amount of any air contaminant emitted by the lime manufacturing plant or which results in the emission of any air contaminant not previously emitted. [11-30-95]

F. New lime manufacturing plant" means any plant that produces lime by calcination at which construction or modification was commenced on or after May 3, 1977, and includes all crushers, conveyors, screens and other size-classification units, hoppers, chutes and kilns. New lime manufacturing plant also includes any plant which produces hydrated lime, the construction or modification of which was commenced on or after May 3, 1977. [11-30-95]

G. "Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. [11-30-95]

H. "Part" means an air quality control regulation under Title 20, Chapter 2 of the New Mexico Administrative Code, unless otherwise noted; as adopted or amended by the Board. [11-30-95]

I. "Rotary lime kiln" means a unit with an inclined rotating drum which is used to produce lime from limestone by calcination. [11-30-95]

108. DOCUMENTS: Documents cited in this Part may be viewed at the New Mexico Environment Department, Air Quality Bureau, Runnels Building, 1190 Saint Francis Drive, Santa Fe, NM 87505. [11-30-95]

109. EMISSIONS LIMITATIONS - NEW PLANT: The owner or operator of a new lime manufacturing plant shall not permit, cause, suffer or allow emissions of particulate matter to the atmosphere to:

A. Exceed 0.30 pounds per ton of limestone feed, or exhibit ten percent opacity or greater, from any lime kiln; or

B. Exceed 0.15 pounds per ton of lime feed to any lime hydrator. [11-30-95]

110. EMISSIONS LIMITATIONS - EXISTING PLANT: The owner or operator of an existing lime manufacturing plant shall not

permit, cause, suffer or allow emissions of particulate matter to the atmosphere to exceed 10 pounds per hour from any rotary lime kiln. [11-30-95]

111. EMISSION CONTROLS: Any person owning or operating a lime manufacturing plant shall equip and maintain all crushers, screens or other size-classification units, hoppers and chutes with:

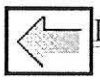
A. Systems of enclosures, dust suppressant sprays and other measures as necessary to prevent the release of particulate matter emissions to the atmosphere; or

B. Equip such process units with hoods, fans, and fabric filters, wet scrubbers or other collection and control systems approved by the Department as at least as effective to reduce particulate matter emissions to the atmosphere. [11-30-95]

112. STACK REQUIREMENTS: The owner or operator of lime manufacturing plants shall not permit, cause, suffer or allow emissions of particulate matter to the atmosphere from a lime kiln or lime hydrator except through stacks equipped with sampling ports and platforms in such number, location and size to allow accurate sampling to be performed. [11-30-95]

113. STACK TESTING: Compliance with Sections 109 and 110 of this Part shall be determined consistent with the method for manual stack testing set forth by the US EPA at 40 CFR, Part 60, Appendix A, Methods 1 through 5, or any other method receiving prior approval from the Department. Upon request of the Department, the owner or operator of lime manufacturing plants shall perform stack testing according to the method stated above and report the results of such tests in the format and time period specified by the Department. The owner or operator shall inform the Department of the dates and times of such testing so that the Department may have opportunity to have an observer present during testing. [11-30-95]

114. CONTINUOUS EMISSION MONITORS - NEW PLANTS: The owner or operator of a new lime manufacturing plant shall not permit, cause, suffer or allow operation of the new lime manufacturing plant unless the plant is equipped with continuous monitoring systems as specified in 40 CFR, Part 60, Subpart HH, Section 60.343. [11-30-95]

 Return to Regulations Page

 Return to Home Page

This page last updated 10/7/96

Questions or comments? Send e-mail to Cecil_Severs@nmenv.state.nm.us

40 CFR PART 60 SUBPART HH [7/1/1999]

(3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.

(d) The owner or operator shall determine compliance with the sulfur content standard in §60.333(b) as follows: ASTM D 2880–71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072–80, D 3031–81, D 4084–82, or D 3246–81 shall be used for the sulfur content of gaseous fuels (incorporated by reference—see §60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

(e) To meet the requirements of §60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

(f) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) Instead of using the equation in paragraph (b)(1) of this section, manufacturers may develop ambient condition correction factors to adjust the nitrogen oxides emission level measured by the performance test as provided in §60.8 to ISO standard day conditions. These factors are developed for each gas turbine model they manufacture in terms of combustion inlet pressure, ambient air pressure, ambient air humidity, and ambient air temperature. They shall be substantiated with data and must be approved for use by the Administrator before the initial performance test required by §60.8. Notices of approval of custom ambient condition correction factors will be published in the FEDERAL REGISTER.

[54 FR 6675, Feb. 14, 1989, as amended at 54 FR 27016, June 27, 1989].

Subpart HH—Standards of Performance for Lime Manufacturing Plants

SOURCE: 49 FR 18080, Apr. 26, 1984, unless otherwise noted.

§ 60.340 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to each rotary lime kiln used in the manufacture of lime.

(b) The provisions of this subpart are not applicable to facilities used in the manufacture of lime at kraft pulp mills.

(c) Any facility under paragraph (a) of this section that commences construction or modification after May 3, 1977, is subject to the requirements of this subpart.

§ 60.341 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in the General Provisions.

(a) *Lime manufacturing plant* means any plant which uses a rotary lime kiln to produce lime product from limestone by calcination.

(b) *Lime product* means the product of the calcination process including, but not limited to, calcitic lime, dolomitic lime, and dead-burned dolomite.

(c) *Positive-pressure fabric filter* means a fabric filter with the fans on the upstream side of the filter bags.

(d) *Rotary lime kiln* means a unit with an inclined rotating drum that is used to produce a lime product from limestone by calcination.

(e) *Stone feed* means limestone feedstock and millscale or other iron oxide additives that become part of the product.

§ 60.342 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no

owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any rotary lime kiln any gases which:

(1) Contain particulate matter in excess of 0.30 kilogram per megagram (0.60 lb/ton) of stone feed.

(2) Exhibit greater than 15 percent opacity when exiting from a dry emission control device.

§ 60.343 Monitoring of emissions and operations.

(a) The owner or operator of a facility that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate a continuous monitoring system, except as provided in paragraphs (b) and (c) of this section, to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40 percent opacity.

(b) The owner or operator of any rotary lime kiln having a control device with a multiple stack exhaust or a roof monitor may, in lieu of the continuous opacity monitoring requirement of § 60.343(a), monitor visible emissions at least once per day of operation by using a certified visible emissions observer who, for each site where visible emissions are observed, will perform three Method 9 tests and record the results. Visible emission observations shall occur during normal operation of the rotary lime kiln at least once per day. For at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed, and the corresponding feed rate of the kiln shall also be recorded. Records shall be maintained of any 6-minute average that is in excess of the emissions specified in § 60.342(a) of this subpart.

(c) The owner or operator of any rotary lime kiln using a wet scrubbing emission control device subject to the provisions of this subpart shall not be required to monitor the opacity of the gases discharged as required in paragraph (a) of this section, but shall install, calibrate, maintain, operate, and record the resultant information from the following continuous monitoring devices:

(1) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be accurate within ±250 pascals (one inch of water).

(2) A monitoring device for continuous measurement of the scrubbing liquid supply pressure to the control device. The monitoring device must be accurate within ±5 percent of the design scrubbing liquid supply pressure.

(d) For the purpose of conducting a performance test under § 60.8, the owner or operator of any lime manufacturing plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device for measuring the mass rate of stone feed to any affected rotary lime kiln. The measuring device used must be accurate to within ±5 percent of the mass rate over its operating range.

(e) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity of the visible emissions from any lime kiln subject to paragraph (a) of this subpart is greater than 15 percent or, in the case of wet scrubbers, any period in which the scrubber pressure drop is greater than 30 percent below the rate established during the performance test. If visible emission observations are made according to paragraph (b) of this section, reports of excess emissions shall be submitted semiannually.

[49 FR 18080, Apr. 26, 1984, as amended at 52 FR 4773, Feb. 17, 1987; 54 FR 6675, Feb. 14, 1989]

§ 60.344 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.342(a) as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E=(c_s Q_{sd})/PK)$$

where:
E=emission rate of particulate matter, kg/Mg (lb/ton) of stone feed.
c_s=concentration of particulate matter, g/dscm (g/dscf).
Q_{sd}=volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
P=stone feed rate, Mg/hr (ton/hr).
K=conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5 shall be used at negative-pressure fabric filters and other types of control devices and Method 5D shall be used as positive-pressure fabric filters to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).

(3) The monitoring device of §60.343(d) shall be used to determine the stone feed rate (P) for each run.

(4) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c) During the particulate matter run, the owner or operator shall use the monitoring devices in §60.343(c)(1) and (2) to determine the average pressure loss of the gas stream through the scrubber and the average scrubbing liquid supply pressure.

[54 FR 6675, Feb. 14, 1989]

Subpart KK—Standards of Performance for Lead-Acid Battery Manufacturing Plants

SOURCE: 47 FR 16573, Apr. 16, 1982, unless otherwise noted.

§60.370 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the affected facilities listed in paragraph (b) of this section at any lead-acid battery manufacturing plant that produces or has the design capacity to produce in one day (24 hours) batteries containing an amount of lead equal to or greater than 5.9 Mg (6.5 tons).

(b) The provisions of this subpart are applicable to the following affected facilities used in the manufacture of lead-acid storage batteries:

(1) Grid casting facility.

(2) Paste mixing facility.

(3) Three-process operation facility.

(4) Lead oxide manufacturing facility.

(5) Lead reclamation facility.

(6) Other lead-emitting operations.

(c) Any facility under paragraph (b) of this section the construction or modification of which is commenced after January 14, 1980, is subject to the requirements of this subpart.

§60.371 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Grid casting facility* means the facility which includes all lead melting pots and machines used for casting the grid used in battery manufacturing.

(b) *Lead-acid battery manufacturing plant* means any plant that produces a storage battery using lead and lead compounds for the plates and sulfuric acid for the electrolyte.

(c) *Lead oxide manufacturing facility* means a facility that produces lead oxide from lead, including product recovery.

(d) *Lead reclamation facility* means the facility that remelts lead scrap and casts it into lead ingots for use in the battery manufacturing process, and which is not a furnace affected under subpart L of this part.

(e) *Other lead-emitting operation* means any lead-acid battery manufacturing plant operation from which lead emissions are collected and ducted to the atmosphere and which is not part of a grid casting, lead oxide manufacturing, lead reclamation, paste mixing, or three-process operation facility, or a furnace affected under subpart L of this part.

(f) *Paste mixing facility* means the facility including lead oxide storage, conveying, weighing, metering, and charging operations; paste blending, handling, and cooling operations; and plate pasting, takeoff, cooling, and drying operations.

(g) *Three-process operation facility* means the facility including those processes involved with plate stacking, burning or strap casting, and assembly of elements into the battery case.