

ILLINOIS POLLUTION CONTROL BOARD
February 28, 1991

IN THE MATTER OF:)
)
PM-10 EMISSION LIMITS FOR THE)
PORTLAND CEMENT MANUFACTURING) R91-6
PLANT AND ASSOCIATED QUARRY) (Rulemaking)
OPERATIONS LOCATED SOUTH OF)
THE ILLINOIS RIVER IN)
LASALLE COUNTY, ILLINOIS.)

PROPOSED RULE

FIRST NOTICE

OPINION AND ORDER OF THE BOARD by (B. Forcade):

This matter comes before the Board on a regulatory proposal filed on January 10, 1991 by the Illinois Environmental Protection Agency ("Agency") concerning the PM-10 emission limits for the portland cement manufacturing plant and associated quarry operations located in LaSalle County, Illinois. The proposed regulations are applicable to a single facility owned and operated by Lone Star Industries in Oglesby, Illinois, who agrees with the Agency's proposed regulations. The proposed regulatory changes would amend Part 212, Visible and Particulate Matter Emissions, 35 Ill. Adm. Code 212.110, 212.423, and 212.424, and Part 211, Definitions General Provisions, 35 Ill. Adm. Code 211.122.

The Agency has certified, and USEPA has confirmed and certified, that the proposed rule is a federally required rule as defined in Section 28.2(a) of the Illinois Environmental Protection Act ("Act"). Section 28.2 was amended by P.A. 86-1409, effective January 1, 1991, requiring the Board to accept or reject an Agency certification within 45 days. If the Board does not act within 45 days, the certification shall be deemed granted. The Board notes that the new statute conflicts somewhat with the Board's procedural rules governing Agency certifications (see 35 Ill. Adm. Code 102, Subpart F), but finds that the new statutory provisions govern this proceeding.

USEPA established the National Ambient Air Quality Standards ("NAAQS") for PM-10 in 1987. The 24-hour PM-10 standard is 150 ug/m³ and the annual PM-10 standard is 50 ug/m³. See 52 FR 24634 (July 1, 1987). These standards were authorized pursuant to Sections 108 and 109 of the Clean Air Act, 42 U.S.C. 7408, 7409. Section 110 of the Clean Air Act requires that a State Implementation Plan ("SIP") be adopted to achieve federal air quality standards. 42 U.S.C. 7410. The proposed rule before the Board is intended to satisfy the federal requirements for a SIP for PM-10 for the Oglesby, Illinois area, which area is designated as a "moderate" nonattainment area, based on past air quality violation. See 55 FR 45799. The 1990 Clean Air Act Amendments require submission of a PM-10 SIP by Illinois by

November 15, 1991. The Board hereby accepts this regulatory proposal as a "required rule" under Section 28.2 of the Act.

In order to expedite the regulatory proceeding, the Board is proposing this rulemaking for First Notice prior to hearing and without reaching a conclusion on the substance of the rule. The Board is proposing amendments to Parts 211 and 212 essentially as submitted by the Agency. The Board has made a number of non-substantive changes in preparation for review of the proposed rule by the Administrative Code Division of the Secretary of State's Office and by the Joint Committee on Administrative Rules ("JCAR"). The Board has made particular efforts to clarify any references to applicable standards or limitations to satisfy JCAR concerns for specificity and to use a format for incorporations by reference which JCAR recently approved in R87-31. The Board has attempted to preserve the intent of the Agency's proposal while yet anticipating probable revisions that could otherwise pose delays in adopting the final rule well in advance of the Agency's November 1991 deadline.

The participants will also note that certain terminology was changed and sections were reorganized by the Board. The Agency proposed Section 212.108, Test Methods for PM-10 Emissions, but the Board instead proposes to amend current Section 212.110, Measurement Methods, as a preferred long-term organizational structure. Similarly, the Board repositioned the tests proposed by the Agency for placement in Section 212.423(f) to Section 212.110.

The Board deleted references to "fugitive dust" as this term is not defined in Part 211, and instead used the term "particulate matter", which is found in Part 211. Revisions were also made to clarify the sections on recordkeeping and reporting. The participants are invited to comment on the affirmative duties in proposed sections 212.423(e)(2) and (4) and 212.424(e). The Board is interested in whether these duties can be summarized and consolidated so that recordkeeping and reporting responsibilities are readily identified in a single section in Part 212.

The Board notes that Method 202 is currently proposed at 55 FR 41546, (October 12, 1990). If Method 202 is adopted by USEPA prior to the completion of this proceeding, the Agency proposes to adopt the final version of Method 202, with incorporation by reference of 40 CFR 51, Appendix M, Method 202.

The Board requests comments on the following language proposed by the Agency:

- 1) The reference in Section 212.110(i) to USEPA's continuing, independent authority.

- 2) The reference in Section 212.424(b) to Subpart K of this Part.
- 3) The sentence in Section 212.424(e)(5) which states, "This report shall include those times when subsection (e) of this Section is involved."
- 4) The reference in Section 212.423(a) to the applicability of Sections 212.321 and 212.322 and the impact these sections may have on the requirement of no visible emissions found in Section 212.423(c)
- 5) The reference in Section 212.423(a) to the applicability of Section 201.149.

ORDER

The Board hereby proposes for First Notice the following amendments to 35 Ill. Adm. Code, Subtitle B: Air Pollution, Chapter I, Pollution Control Board, Subchapter c: Emissions Standards and Limitations for Stationary Sources Part 211, Section 211.122 and Part 212, Sections 212.110, 212.423, and 212.424. The Clerk of the Board is directed to file these proposed amendments with the Secretary of State.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND
LIMITATIONS FOR STATIONARY SOURCES

PART 211
DEFINITIONS AND GENERAL PROVISIONS

SUBPART B: DEFINITIONS

Section 211.122 Definitions

"Condensible particulate matter": particulate matter formed immediately or shortly after discharge to the atmosphere, as measured by the applicable test method specified in 35 Ill. Adm. Code 212.110. Condensible particulate matter exists in gaseous and/or vapor form prior to release to the atmosphere, e.g., in the stack, and forms particulate matter upon condensation, when subject to conditions of cooling and dilution in the atmosphere.

"PM-10": particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers, as measured by the applicable test methods specified in 35 Ill. Adm. Code 212.110.

"Portland Cement Manufacturing Process Emission Source": any

items of process equipment or manufacturing processes used in or associated with the production of portland cement, including, but not limited to, a kiln, clinker cooler, raw mill system, finish mill system, raw material dryer, material storage bin or system, material conveyor belt or other transfer system, material conveyor belt transfer point, bagging operation, bulk unloading station, or bulk loading station.

"Portland Cement Process" or "Portland Cement Manufacturing Plant": Any facility or plant manufacturing portland cement by either the wet or dry process.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND
LIMITATIONS FOR STATIONARY SOURCES

PART 212
VISIBLE AND PARTICULATE MATTER EMISSIONS

SUBPART Q: STONE, CLAY, GLASS AND CONCRETE MANUFACTURING

212.423 Emission Limits for Portland Cement Manufacturing Plants Located in LaSalle County, South of the Illinois River

212.424 Fugitive Particulate Matter Control for Portland Cement Manufacturing Plants and Associated Quarry Operations Located in LaSalle County, South of the Illinois River

SUBPART A: GENERAL

Section 212.110 Measurement Methods

- a) Particulate Matter Measurement. Particulate matter emissions from stationary emission sources subject to this Part shall be determined by the procedures described in the American Society of Mechanical Engineers Power Test Code 27-1957 (Determining Dust Concentration in a Gas Stream) as revised from time to time, or by any other equivalent procedures approved by the Illinois Environmental Protection Agency (Agency).
- b) Flow Rate and Gas Velocity Measurement. The volumetric flow rate and gas velocity shall be determined in

accordance with 40 CFR 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3 and 4, incorporated by reference in Section 212.113.

- c) Opacity Measurement. Measurement of opacity shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9 and 40 CFR 60.675(c) and (d), incorporated by reference in Section 212.113.
- d) Visible Emissions Measurement. Detection of visible emissions shall be conducted in accordance with 40 CFR 60, Appendix A, Method 22, incorporated by reference in Section 212.113.
- e) Test Methods for PM-10 Emissions. Emissions of PM-10 shall be measured by any of the following methods at the option of the owner or operator of an emissions source.

 - 1) 40 CFR 51, Appendix M, Method 201 and 55 FR 41546, Method 202, incorporated by reference in Section 212.113.
 - 2) 40 CFR 51, Appendix M, Method 201A and 55 FR 41546, Method 202, incorporated by reference in Section 212.113.
 - 3) 40 CFR 60, Appendix A, Method 5, incorporated by reference in Section 212.113, and 55 FR 41546, Method 202, incorporated by reference in Section 212.113, provided that all Particulate Matter measured by Method 5 shall be considered to be PM-10.
- f) Upon a written request by the Agency, the owner or operator of a PM-10 emission source subject to this Section shall conduct the applicable testing specified in this Section for PM-10 emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Agency within 30 days of conducting the test or within 5 days of receipt of final results whichever is later.
- g) A person planning to conduct testing for PM-10 emissions to demonstrate compliance shall give written notice to the Agency of that intent at least 30 days before the planned initiation of the tests so that the Agency may observe the test. Such notification shall state the specific test methods from this Section that will be used.
- h) The owner or operator of an emission source subject to this Section shall retain records of all tests which are performed. These records shall be retained for at least three years after the date a test is performed.

- i) This Section shall not affect the recordkeeping, inspections, monitoring, and entry authority of the U.S. Environmental Protection Agency under Section 114 of the Clean Air Act (42 U.S.C.A. par. 7401 et seq. (1990)).

Section 212.111 Abbreviations and Units

- a) The following abbreviations are used in this Part:

lbs/hr pounds per hour

Section 212.113 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

- a) ASME Power Test Code 27-1957, Determining Dust Concentration in a Gas Stream, American Society of Mechanical Engineers, United Engineering Center, 345 E. 47th Street, New York, NY 10017.
- b) Ringelmann Chart, Information Circular 833 (Revision of IC7718), Bureau of Mines, U.S. Department of Interior, May 1, 1967.
- c) 40 CFR 60, Appendix A ~~(1987)~~ (1990):
- 1) Method 1: Sample and Velocity Traverses for Stationary Sources;
 - 2) Method 1A: Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts;
 - 3) Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S pitot tube);
 - 4) Method 2A: Direct Measurement of Gas Volume Through Pipes and Small Ducts;
 - 5) Method 2C: Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube);
 - 6) Method 2D: Measurement of Gas Volumetric Flow Rates in Small Pipes and Ducts;
 - 7) Method 3: Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight;

- 8) Method 4: Determination of Moisture Content in Stack Gases;
 - 9) Method 5: Determination of Particulate Emissions From Stationary Sources;
 - 10) Method 9: Visual Determination of the Opacity of Emissions from Stationary Sources;
 - 11) Method 22: Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares.
- d) 40 CFR 51 Appendix M (1990):
- 1) Method 201: Determination of PM-10 Emissions;
 - 2) Method 201A: Determination of PM-10 Emissions (Constant Sampling Rate Procedure).
- e) 40 CFR 60.672 (b), (c), (d) and (e) (1990).
- f) 40 CFR 60.675(c) and (d) (1990).
- dg) ASAE Standard 248.2, Section 9, Basis for Stating Drying Capacity of Batch and Continuous-Flow Grain Dryers, American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085.
- eh) U.S. Sieve Series, ASTM-E11, American Society of Testing Materials, 1916 Race Street, Philadelphia, PA 19103.
- f) This Part incorporates no further editions or amendments.
- i) 55 FR 41546, (October 12, 1990), Method 202: Determination of Condensible Particulate Emissions from Stationary Sources.

(Source: Amended at ____ Ill. Reg. ____, effective _____)

SUBPART Q: STONE, CLAY, GLASS AND CONCRETE MANUFACTURING

Section 212.423 Emission Limits for Portland Cement Manufacturing Plants Located in LaSalle County, South of the Illinois River.

- a) Applicability. This Section shall apply to portland cement manufacturing plants in operation before September 1, 1990 located in LaSalle County, south of the Illinois River. This Section shall not alter the

applicability of Sections 212.321 and 212.322 to portland cement manufacturing processes other than those for which alternate emission limits are specified in subsection (b). This Section shall not affect the applicability of 35 Ill. Adm. Code 201.149.

- b) No person shall cause or allow emissions of PM-10 to exceed either of the emission limits specified for each portland cement manufacturing process emission source listed below:

	PM-10 Emission Limits			
	Rate		Concentration	
	kg/hr	(lbs/hr)	mg/scm	(gr/scf)
1) <u>Raw Mill Roller Mill(RMRM)</u>	6.08	(13.4)	27.5	(0.012)
2) <u>Kiln without RMRM operating</u>	19.19	(42.3)	91.5	(0.040)
3) <u>Kiln with RMRM operating</u>	11.43	(25.2)	89.2	(0.039)
4) <u>Clinker Cooler</u>	4.85	(10.7)	32.0	(0.014)
5) <u>Finish Mill High Efficiency Air Separator</u>	2.77	(6.1)	27.5	(0.012)

- c) No person shall cause or allow visible emissions from any portland cement manufacturing process emission source not listed in subsection (b).

- d) Maintenance and Repair. The owner or operator of any process emission source subject to subsections (b) or (c) shall maintain and repair all air pollution control equipment in a manner that assures that the applicable emission limits and standards in subsections (b) or (c) shall be met at all times. Proper maintenance shall include at least the following requirements:

- 1) Visual inspections of air pollution control equipment shall be conducted:
- 2) An adequate inventory of spare parts shall be maintained:
- 3) Prompt and immediate repairs shall be made upon identification of the need:
- 4) Written records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment shall be kept in accordance with subsection (e).

e) Recordkeeping of Maintenance and Repair.

- 1) Written records shall be kept documenting inspections, maintenance, and repairs of all air pollution control equipment. All such records required under this Section shall be kept and maintained for at least three (3) years, shall be available for inspection by the Agency, and, upon request, shall be copied and furnished to Agency representatives during working hours.
- 2) The owner or operator shall document any period during which any process emission source was in operation when the air pollution control equipment was not in operation or was not operating properly. These records shall be delivered to the Agency at least quarterly and shall include documentation of causes for pollution control equipment not operating or not operating properly, and shall state what corrective actions were taken and what repairs were made.
- 3) A written record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
- 4) Upon written request by the Agency, the owner or operator shall submit any information required pursuant to Subpart Q, for any period of time specified in the request. Such information shall be submitted within ten (10) working days from the date on which the request is received.

f) Compliance Determination. Determination of compliance with PM-10, opacity and detection of visible particulate emissions limitations shall be made in accordance with the measurement methods specified in Section 212.110.

(Source: Added at ___ Ill. Reg. ___ , effective _____)

Section 212.424 Fugitive Particulate Matter Control for Portland Cement Manufacturing Plants and Associated Quarry Operations Located in LaSalle County, South of the Illinois River.

- a) Applicability. This section shall apply to portland cement manufacturing plants in operation before September 1, 1990 and associated quarry operations located in LaSalle County, south of the Illinois River. Associated quarry operations are those operations involving the removal and disposal of overburden, and the extraction, crushing, sizing, and transport of limestone and shale for usage at the Portland cement manufacturing plant.
- b) Applicability of Subpart K of this Part. This Section shall not alter the applicability of Subpart K: Fugitive

Particulate Matter.

c) Fugitive Particulate Matter Control Measures For Roadways at the Plant.

- 1) For the unpaved access roadway to the Illinois Central Silos Loadout, the owner or operator shall spray a 30 percent solution of calcium chloride once every 16 weeks at an application rate of at least 1.58 liters per square meter (0.35 gallons per square yard) followed by weekly application of water at a rate of at least 1.58 liters per square meter (0.35 gallons per square yard).
- 2) The owner or operator of the Portland cement manufacturing plant shall keep written records in accordance with subsection (e).

d) Fugitive Particulate Matter Control Measures for Associated Quarry Operations.

- 1) For the primary crusher, the primary screen, the #3 conveyor from the primary screen to the surge pile, and the surge pile feeders to the #4 conveyor, the owner or operator shall spray a chemical foam spray of at least 1 percent solution of chemical foaming agent in water continuously during operations at a rate of at least 1.25 liters per megagram (0.30 gallons per ton) of rock processed.
- 2) The owner or operator shall water all roadways traveled by trucks to and from the primary crusher in the process of transporting raw limestone and shale to the crusher at an application rate of at least 0.50 liters per square meter (0.10 gallons per square yard) applied once every eight hours of operation except under conditions specified in subsection (d)(3). Watering shall begin within one hour of commencement of truck traffic each day.
- 3) Subsection (d)(2) shall be followed at all times except under the following circumstances:
 - A) Precipitation is occurring such that there are no visible emissions or if precipitation occurred during the previous 2 hours such that there are no visible emissions;
 - B) If the ambient temperature is less than or equal to 0°C (32°F); or
 - C) If ice or snow build-up has occurred on roadways such that there are no visible emissions.
- 4) The owner or operator of the associated quarry operation shall keep written records in accordance with subsection (e).

e) Recordkeeping and Reporting

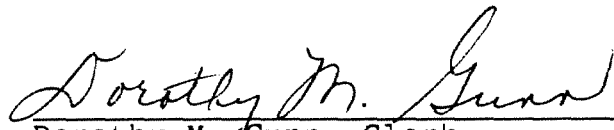
- 1) The owner or operator of any portland cement manufacturing plant and/or associated quarry operations subject to this Section shall keep written daily records relating to the application of each of the fugitive particulate matter control measures required by this Section.
- 2) The records required under this Section shall include at least the following:
 - A) the name and address of the plant;
 - B) the name and address of the owner or operator of the plant and associated quarry operations;
 - C) a map or diagram showing the location of all fugitive particulate matter sources controlled including the location, identification, length, and width of roadways;
 - D) for each application of water or calcium chloride solution, the name and location of the roadway controlled, the water capacity of each truck, application rate of each truck, frequency of each application, width of each application, start and stop time of each application, identification of each water truck used, total quantity of water or calcium chloride, including the concentration of calcium chloride used for each application;
 - E) for each application of chemical foam spray solution, the application rate and frequency of application, name of foaming agent, and total quantity of solution used each day;
 - F) name and designation of the person applying control measures; and
 - G) a log recording all failures to use control measures required by this Section with a statement explaining the reasons for each failure and, in the case of a failure to comply with the roadway watering requirements of subsection (d)(2), a record showing that one of the circumstances for exceptions listed in subsection (d)(3) existed during the period of the failure. Such record shall include, for example, the periods of time when the measured temperature was less than or equal to 0°C (32°F).
- 3) Copies of all records required by this Section shall be submitted to the Agency within ten (10) working days of a written request by the Agency.

- 4) The records required under this Section shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Agency representatives during working hours.
- 5) A quarterly report shall be submitted to the Agency stating the following: the required control measures, the dates required control measures were not implemented, the reasons that the control measures were not implemented, and the corrective actions taken. This report shall include those times when subsection (e) is involved. This report shall be submitted to the Agency 30 calendar days from the end of a quarter. Quarters end March 31, June 30, September 30, and December 31.

(Source: Added at ___ Ill. Reg. ___, effective _____)

IT IS SO ORDERED.

I Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 28th day of February, 1991, by a vote of 6-0.


Dorothy M. Gunn, Clerk
Illinois Pollution Control Board