

**SOUTH CAROLINA
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**

AIR POLLUTION CONTROL REGULATIONS AND STANDARDS

**REGULATION 61-62.99
NITROGEN OXIDES (NO_x) BUDGET PROGRAM REQUIREMENTS FOR
STATIONARY SOURCES NOT IN THE TRADING PROGRAM**

SUBPART B - EMISSIONS OF NITROGEN OXIDES FROM CEMENT MANUFACTURING

Section 99.41 - Applicability.

The requirements of this subpart apply only to kilns with process rates of at least the following: long dry kilns-12 tons per hour (TPH); long wet kilns - 10 TPH; preheater kilns - 16 TPH; precalciner and preheater/precalciner kilns - 22 TPH and/or have NO_x emissions greater than 1 ton per day.

Section 99.42 - Definitions.

(a) "Alternative control technique" means a control technique that may include but not be limited to the following:

(1) an add-on control device that achieves the same reductions as low- NO_x burners or mid-kiln firing, or

(2) an operational control technique such as NO_x emission rates (which may be seasonal limitations and may be facility-wide or unit specific), operational limits, or other means of compliance as approved by the Department and EPA. Any owner or operator of a unit subject to this rule that chooses to comply with this regulation through the use of an operational control technique shall submit a compliance monitoring plan for review and approval by the Department and EPA. Unless otherwise authorized by the Department and EPA, this monitoring plan must demonstrate that the operational control technique achieves at least a thirty percent reduction in NO_x emissions from uncontrolled levels. The owner or operator may request that the Department and EPA approve a rate of NO_x emission reductions less than thirty percent. If the Department and EPA concur that the proposed reduction rate is appropriate, the Department and EPA may authorize a reduction rate lower than thirty percent.

(b) "Clinker" means the product of a Portland cement kiln from which finished cement is manufactured by milling and grinding.

(c) "Long dry kiln" means a kiln which employs no preheating of the feed. The inlet feed to the kiln is dry.

(d) "Long wet kiln" means a kiln which employs no preheating of the feed. The inlet feed to the kiln is a slurry.

(e) "Low-NO_x burners" means combustion equipment designed to reduce flame turbulence, delay fuel/air mixing, and establish fuel-rich zones for initial combustion.

(f) "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that

are caused in part by poor maintenance or careless operation are not malfunctions.

(g) "Mid-kiln firing" means the secondary firing in kilns by injecting solid fuel at an intermediate point in the kiln using a specially designed feed injection mechanism for the purpose of decreasing NO_x emissions through (1) burning part of the fuel at a lower temperature and (2) reducing conditions at the solid waste injection point that may destroy some of the NO_x formed upstream in the kiln burning zone.

(h) "Portland cement" means 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.

(i) "Portland cement kiln" means 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.

(j) "Precalciner kiln" means a kiln where the feed to the kiln system is preheated in cyclone chambers and utilizes a second burner to calcine material in a separate vessel attached to the preheater prior to the final fusion in a kiln which forms clinker.

(k) "Preheater kiln" means a kiln where the feed to the kiln system is preheated in cyclone chambers prior to the final fusion in a kiln which forms clinker.

(l) "Shutdown" means the cessation of operation of a Portland cement kiln for any purpose.

(m) "Startup" means the setting in operation of a Portland cement kiln for any purpose.

Section 99.43 - Standard Requirements.

(a) For the control period that begins on May 31, 2004, an owner or operator of any Portland cement kiln subject to this rule shall not operate the kiln during May 31 through September 30 unless the kiln has installed and operates during May 31 to September 30 with low- NO_x burners, mid-kiln firing, or alternative control techniques, as defined under Section 99.42(a). In all subsequent control periods, an owner or operator of any Portland cement kiln subject to this rule shall not operate the kiln during May 1 through September 30 unless the kiln has installed and operates during May 1 to September 30 with low-NO_x burners, mid-kiln firing, or alternative control techniques, as defined under Section 99.42(a).

Section 99.44 - Reporting, monitoring and recordkeeping.

(a) Reporting requirements. Any owner or operator subject to the requirements of Section 99.43 shall comply with the following requirements:

(1) By May 31, 2004, submit to the Department the identification number and type of each unit subject to the section, the name and address of the plant where the unit is located, and the name and telephone number of the person responsible for demonstrating compliance with the section.

(2) Submit a report to the Department by October 31 of each year documenting for that unit the total NO_x emissions. For the control period that starts on May 31, 2004, the report shall document the total emissions from May 31 through September 30. For all subsequent control periods, the report shall document the total NO_x emissions from May 1 through September 30.

(b) Monitoring Requirements.

(1) Any owner or operator of a unit subject to this rule shall complete an initial performance test and subsequent annual testing consistent with the requirements of 40 CFR 60, Appendix A, Method 7, 7A, 7C, 7D, or 7E.

(2) Alternatively, the owner or operator can also comply with this subsection by the continuous monitoring of a process parameter that the owner/operator has demonstrated to the Department and EPA is related to NO_x emissions.

(3) Any owner or operator of a unit subject to this rule that chooses to comply with this regulation through the use of an operational control technique shall submit a compliance monitoring plan pursuant to Section 99.42(a).

(c) Recordkeeping Requirements. Any owner or operator of a unit subject to this rule shall produce and maintain records which shall include, but are not limited to:

(1) The emissions, in pounds of NO_x per ton of clinker produced from each affected Portland cement kiln.

(2) The date, time and duration of any startup, shutdown or malfunction in the operation of any of the cement kilns or the emissions monitoring equipment.

(3) The results of any performance testing.

(4) Daily cement kiln production records.

(5) All records required to be produced or maintained shall be retained on site for a minimum of 2 years and be made available to the EPA or State or local agency upon request.

Section 99.45 - Exemptions.

The requirements of Section 99.43, Section 99.44, and Section 99.45 shall not apply to the following periods of operation:

(a) Start-up and shut-down periods and periods of malfunction, not to exceed 36 consecutive hours;

(b) Regularly scheduled maintenance activities.

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