

Notice of Proposed Rulemaking
Department of Environmental Protection
Environmental Quality Board
25 Pa. Code Chapters 121, 129 and 145

The Environmental Quality Board (Board) proposes to amend 25 Pa. Code Chapters 121 (relating to definitions), 129 (relating to standards for sources) and 145 (relating interstate pollution transport reduction) as set forth in Annex A.

This notice is given under Board order at its meeting of _____, 2008.

A. Effective Date

These amendments will be effective upon publication in the *Pennsylvania Bulletin* as final rulemaking.

B. Contact Persons

For further information, contact Jane Mahinske, Air Quality Program Specialist, Division of Air Resource Management, Bureau of Air Quality, 12th Floor, Rachel Carson State Office Building, P.O. Box 8468, Harrisburg, PA 17105-8468, telephone: 717-787-9495 or Robert “Bo” Reiley, Assistant Counsel, Bureau of Regulatory Counsel, 9th floor, Rachel Carson State Office Building, P.O. Box 8464, Harrisburg, PA 17105-8464, telephone: 717-787-7060.

Information regarding submitting comments on this proposal appears in Section J of this preamble. Persons with a disability may use the AT&T Relay Service by calling 1-800-654-5984 (TDD users) or 1-800-654-5988 (voice users). This proposal is available electronically through the DEP Web site (<http://www.depweb.state.pa.us>).

C. Statutory Authority

This action is being taken under the authority of section 5(a)(1) of the Air Pollution Control Act (35 P.S. §4005(a)(1)), which grants to the Board the authority to adopt regulations for the prevention, control, reduction and abatement of air pollution.

D. Background and Summary

When ground-level ozone is present in concentrations in excess of the Federal health-based standards, public health is adversely affected. The United States Environmental Protection Agency (EPA) has concluded that there is an association between ambient ozone concentrations and increased hospital admissions for respiratory ailments, such as asthma. Further, although children, the elderly and those with respiratory problems are most at risk, even healthy individuals may experience increased respiratory ailments and other symptoms when they are exposed to ambient ozone while engaged in activity that involves physical exertion. Though these symptoms are often temporary, repeated exposure could result in permanent lung damage. The implementation of additional measures to address ozone air quality nonattainment in this Commonwealth is necessary to protect the public health.

The purpose of this proposed rulemaking is to reduce emissions of NO_x from cement kilns in order to reduce levels of ground-level ozone. Ground-level ozone is not directly emitted by pollution sources, but is created as a result of the chemical reaction of NO_x and volatile organic compounds (VOC) in the presence of light and heat. The reduction of NO_x emissions will also help protect the public health from high levels of fine particulates, of which NO_x is a precursor component. Fine particulates, as well as ozone, are health hazards. The reduction of NO_x emissions also reduces visibility impairment and acid deposition. This proposed rulemaking is reasonably necessary to achieve and maintain the ozone and PM_{2.5} national ambient air quality standards.

Pennsylvania, along with the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont and Virginia, and the District of Columbia, are members of the Ozone Transport Commission (OTC), which was created under Section 184 of the Federal Clean Air Act, 42 U.S.C. §7511c, to develop and implement regional solutions to the ground-level ozone problem in the Northeast and Mid-Atlantic regions. To date, states from the OTC, including Pennsylvania, have established a number of regulatory programs to reduce ozone precursor emissions, including programs related to portable fuel containers, architectural and industrial maintenance coatings and consumer products. Consistent with its strategy to achieve equitable ozone precursor emission reductions from all industrial sectors, Pennsylvania, along with other OTC states, has met with representatives of the cement industry to discuss reductions of NO_x emissions from their kilns.

In Pennsylvania there are 21 cements kilns, which in 2005 emitted 12,967 tons of NO_x emissions in this Commonwealth. Of these 21 kilns in Pennsylvania, 14 of them are “long” kilns. These are older technology kilns and are less energy efficient than pre-heater kilns and the newest technology, pre-calciner kilns. The higher energy efficiency of the pre-heater and pre-calciner kilns results in inherently lower NO_x emissions than those from long wet and dry kilns, per ton of product.

Control technologies are readily available to achieve NO_x emission reductions of greater than 20% from cement kilns. These technologies include: conversion to indirect firing systems with low-NO_x burners with approximately 20-30% reduction; mid-kiln firing of whole tires in long kilns with approximately 20-40% reduction; staged combustion in precalciner kilns with approximately 30-45% reduction; selective noncatalytic reduction (SNCR) in precalciner kilns with approximately 30-70% reduction; and selective catalytic reduction (SCR) with approximately 80-90% reduction. SNCR has been used on preheater kilns and has been proposed for long kiln applications. All of these technologies, except SCR, are demonstrated on kilns in the United States.

The proposed NO_x emission limits should allow a number of Pennsylvania’s cement manufacturers to develop and implement compliance strategies without the need for widespread installation of control equipment on long kilns which will likely be replaced with more energy efficient technologies over time. However, an additional compliance option includes allowing the purchase of Clean Air Interstate Rule (CAIR) NO_x Ozone Season Allowances to account for emissions in excess of the proposed limits, as a near term compliance option.

The Department of Environmental Protection (Department) worked with the Air Quality Technical Advisory Committee (AQTAC) in the development of these proposed regulations. At its July 26, 2007, meeting, the AQTAC concurred with the Department's recommendation that the Environmental Quality Board (Board) consider the adoption of these proposed regulations. However, the AQTAC would like to receive comment on the ability of owners and operators to demonstrate compliance on an inter-company emissions averaging basis. For instance, under the proposal, the owner or operator of a Portland cement kiln or multiple Portland cement kilns shall demonstrate compliance with the emission requirements specified in § 129.402 (relating to emission requirements) on a kiln-by-kiln basis, a facility-wide emissions averaging basis or a system-wide averaging basis among Portland cement kilns under the common control of the same owner or operator in this Commonwealth. The AQTAC recommends that the Board seek comment on whether averaging should be expanded to cement kilns that are not under the common control of the same owner or operator.

E. Summary of Regulatory Revisions

The proposed amendments add the following new definitions and terms to *25 Pa. Code* § 121.1 (relating to definitions) used in the substantive provisions under §§ 129.401 – 129.405 (relating to emissions of NO_x from cement manufacturing): “Calcine,” “Clinker,” “Long dry-process cement kiln,” “Long wet-process cement kiln,” “Portland cement,” “Portland cement kiln,” “Precalciner cement kiln,” and “Preheater cement kiln.” In addition, the proposed amendments revise the following definition and term in § 121.1, “CEMS-Continuous emissions monitoring system.”

Proposed § 129.401 (relating to applicability) provides that 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.

Proposed § 129.402 (relating to emission requirements) requires that the owner or operator of a Portland cement kiln 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: 3.88 pounds of NO_x per ton of clinker produced for long wet-process cement kilns; 3.44 pounds of NO_x per ton of clinker produced for long dry-process cement kilns; and 2.36 pounds per ton of clinker produced for preheater cement kilns and for precalciner cement kilns.

Proposed § 129.403 (relating to compliance determination) requires, among other things, that not later than May 1, 2009, the owner or operator of a Portland cement kiln shall install, operate and maintain CEMS for NO_x emissions, and report CEMS emissions data to the Department in accordance with the CEMS requirements of Chapter 139, Subchapter C (relating to requirements for continuous in-stack monitoring for stationary sources).

Proposed § 129.404 (relating to compliance demonstration) provides, among other things, that by October 31, 2009, and of each year thereafter, the owner or operator of a Portland cement kiln shall report certain information to the Department, in a format reasonably prescribed by the Department. The owner or operator of a Portland cement kiln or multiple Portland cement kilns shall demonstrate compliance with the emission requirements specified in § 129.402 on a kiln-by-kiln basis, a facility-wide emissions averaging basis or a system-wide averaging basis among

Portland cement kilns under the common control of the same owner or operator in this Commonwealth. Additionally, for the period from May 1 through September 30, 2009, and of each year thereafter, the owner or operator of a Portland cement kiln shall surrender to the Department one CAIR NOx Ozone Season allowance for each ton of NOx emissions by which the combined actual emissions exceed the allowable emissions of the Portland cement kiln subject to this section.

Proposed § 129.405 (relating to recordkeeping) provides that the owner or operator of a Portland cement kiln shall maintain an operating log for each Portland cement kiln that includes certain monthly information.

Under Chapter 145, Subchapter C (relating to emissions of NOx from cement manufacturing), it is proposed in § 145.141 (relating to applicability) that beginning May 1, 2009, an owner or operator of a Portland cement kiln would comply with §§ 129.401-129.405.

F. Benefits, Costs and Compliance

Benefits

Overall, the citizens of this Commonwealth will benefit from these proposed amendments because the amendments will result in improved air quality by reducing ozone precursor emissions and will encourage new technologies and practices, which will reduce emissions.

Compliance Costs

The proposed regulation will include emissions averaging and use of CAIR NOx Ozone Season allowances as near term compliance options. This will allow an owner or operator of an affected cement kiln to elect the least-cost compliance alternative, including emissions averaging or the use of CAIR NOx Ozone Season allowances to demonstrate compliance with the NOx emission limits. Based on 2005 ozone season emissions, implementation of the proposed rule is estimated to result in a reduction of 1300 tons of NOx emissions. Based on a long-term average CAIR NOx Ozone Season allowance price of \$1000, the cost of 1300 NOx allowances would be \$1,300,000. The proposed regulation includes minor changes to existing administrative requirements. These changes are not expected to have a significant cost.

Compliance Assistance Plan

The Department plans to educate and assist the public and regulated community in understanding the newly revised requirements and how to comply with them. This will be accomplished through the Department's ongoing Regional Compliance Assistance Program.

Paperwork Requirements

The proposed regulations will not significantly increase the paperwork that is already generated during the normal course of business operations.

G. Pollution Prevention

The Federal Pollution Prevention Act of 1990 established a national policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials, and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This proposed regulation will provide the owners and operators of all cement kilns the opportunity to improve the energy efficiency at their operations, which will result in lower NOx emissions.

H. Sunset Review

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

I. Regulatory Review

Under Section 5(a) of the Regulatory Review Act, 71 P.S. § 745.5(a), on (blank), the Department submitted a copy of these proposed amendments to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees. In addition to submitting the proposed amendments, the Department has provided IRRC and the Committees with a copy of a detailed regulatory analysis form prepared by the Department. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed regulations within 30 days of the close of the public comment period. The comments, recommendations or objections shall specify the regulatory review criteria that have not been met. The Act specifies detailed procedures for review of these issues by the Department, the General Assembly and the Governor prior to final publication of the regulations.

J. Public Comments

Written Comments - Interested persons are invited to submit comments, suggestions or objections regarding the proposed regulation to the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301). Comments submitted by facsimile will not be accepted. Comments, suggestions or objections must be received by the Board by (blank) (within 60 days of publication in the *Pennsylvania Bulletin*). Interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by (blank) (within 60 days following publication in the *Pennsylvania Bulletin*). The one-page summary will be provided to each member of the Board

in the agenda packet distributed prior to the meeting at which the final regulation will be considered.

Electronic Comments - Comments may be submitted electronically to the Board at RegComments@state.pa.us and must also be received by the Board by ___(date)__. A subject heading of the proposal and a return name and address must be included in each transmission.

K. Public Hearings

The Environmental Quality Board will hold __ public hearings for the purpose of accepting comments on this proposal. The hearings will be held at __ p.m. on the following dates:

_____(blank)_____
_____(blank)_____
_____(blank)_____

Persons wishing to present testimony at a hearing are requested to contact the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477, 717-787-4526, at least one week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to ten minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

Persons in need of accommodations as provided for in the Americans with Disabilities Act of 1990 should contact the Environmental Quality Board at 717-787-4526 or through the Pennsylvania AT&T Relay Service at 1-800-654-5984 (TDD) to discuss how the Department may accommodate their needs.

BY:

KATHLEEN A. MCGINTY
Chairperson
Environmental Quality Board