Chapter 145 Interstate Pollution Transport Reduction Preamble

Notice of Final Rulemaking
Department of Environmental Protection
Environmental Quality Board
25 Pa. Code Chapters 123 and 145
Interstate Ozone Transport Reduction

Order

The Environmental Quality Board (Board) by this Order amends 25 Pa. Code Chapter 123 (relating to standards for contaminants) and adopts a new 25 Pa. Code Chapter 145 (relating to interstate ozone transport reduction) as set forth in Annex A.

The regulations establish a program to limit the emission of nitrogen oxides (NOx) from fossil-fired combustion units with rated heat input capacity of greater than 250 MMBtu per hour and electric generating facilities of greater than 25 megawatts. This program which will begin in May 2003 will replace the existing NOx allowance requirements contained at 25 Pa. Code Chapter 123. The program will be applicable to sources located in other states that significantly contribute to nonattainment in Pennsylvania if related Clean Air Act programs are not sufficient to control these sources.

The emission limitations for NOx emissions from stationary reciprocating internal combustion engines and cement manufacturing operations that were included in the proposed regulation in Subchapters B and C are not being finalized at this time.

The Board approved the final regulations at its meeting of July 18, 2000.

A. Effective Date

This rulemaking will go into effect upon publication in the Pennsylvania Bulletin as final rulemaking.

B. Contact Persons

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M. Dukes Pepper, Jr., Assistant Director, Bureau of Regulatory Counsel, 9th Floor, Rachel Carson State Office Building, P.O. Box 8464, Harrisburg, PA 17105-8464 (717) 787-7060. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). The final regulations are available electronically through the Department of Environmental Protection’s (Department) website (http://www.dep.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 (APCA) (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
In the 1990 amendments to the federal Clean Air Act (CAA), Congress recognized that ground level ozone (smog) is a regional problem not confined to state boundaries and established special provisions to address ozone nonattainment areas. Section 182 of the Clean Air Act (42 U.S.C. § 7511a) establishes mandatory control requirements based on the severity of the ozone problem. Section 184 of the Clean Air Act (42 U.S.C. § 7511(c)) establishes the Northeast Ozone Transport Commission (OTC) to assist in developing recommendations for the control of interstate air pollution.

Ozone is not directly emitted by pollution sources, but is created as a result of the chemical reaction of NOx and volatile organic compounds (VOCs), in the presence of light and heat, to form ozone in the air masses traveling over long distances. Exposure to ozone causes decreased lung capacity, particularly in children and elderly individuals. Decreased lung capacity from ozone exposure can frequently last several hours after the initial exposure. All states in the OTC, except for Vermont, have, since 1990, experienced levels of ozone during the months of May through September in excess of the National Ambient Air Quality Standard (NAAQS).

To address the ozone problem, Section 182 of the federal Clean Air Act (42 U.S.C. § 7511(a)) requires that, for areas which exceed the NAAQS for ozone, states must develop and implement reasonably available control technologies (RACT) for existing major stationary sources emitting NOx and VOCs. Because Pennsylvania is included in the OTC, these RACT requirements are applicable throughout the state. Pennsylvania adopted regulations implementing the RACT requirements on January 15, 1994 (24 Pa. B. 459). Implementation of RACT reductions was not sufficient to allow Pennsylvania and other OTC states to achieve the ozone NAAQS.

Because NOx from large fossil-fired combustion units is a major contributor to regional ozone pollution, the OTC member states, including Pennsylvania, proposed development of a regional approach to address NOx emissions. This regional approach resulted in a model rule applicable to "NOx affected sources". NOx affected sources are fossil-fired combustion units with a rated capacity of 250 MMBtus per hour or more and electric generating units of 15 megawatts or greater. This regional approach was adopted by Pennsylvania on November 1, 1997 (27 Pa. B. 5683). These NOx allowance requirements at 25 Pa. Code §§123.101 through 123.120, establish an OTC region-wide market based "cap and trade" program. The "cap and trade" program sets a regulatory limit on mass emissions from the NOx affected sources, allocates allowances (the limited authorization to emit one ton of NOx from May 1 through September 30) to the sources authorizing emissions up to the regulatory limit, and permits trading of allowances to effect cost efficient compliance with the cap. This program is designed to effectuate least cost NOx emission reductions for the years 1999 through 2002.

As additional air quality modeling and analysis was developed, it became apparent that reductions of NOx emissions in the OTC states alone would not result in attainment of the NAAQS along the eastern seaboard (including the Philadelphia Ozone Nonattainment Area). In 1995, the Ozone Transport Assessment Group (OTAG) was formed by the Environmental Council of States and EPA. OTAG’s express goal was to "identify and recommend a strategy to reduce transported ozone and its precursors which, in combination with other measures, will enable attainment and maintenance of the National Ambient Ozone Standard in the OTAG region". OTAG was composed of the 37 eastern most states and included participation by EPA, industry and environmental groups. OTAG undertook a comprehensive modeling effort to evaluate the impact on ozone formation and transport resulting from imposition of various emission reduction strategies. OTAG found that ozone transport does occur and that control of NOx reduces this regional transport. OTAG recommended NOx controls on large fossil fuel-fired combustion units in 22 of the 37 states.

As a result of both the OTAG analysis and independent analysis conducted by Pennsylvania and other northeastern states, on August 14, 1997, Governor Ridge filed a Petition with EPA Administrator Browner for abatement of excess emissions under Section 126(b) of the Clean Air Act (42 U.S.C. § 742.6(b)). Pennsylvania’s Petition requested a finding that large fossil-fired combustion units and electric generating units in mid-western and southern states significantly contribute to nonattainment of the ozone NAAQS in Pennsylvania. Pennsylvania requested that the Administrator of EPA establish emission limitations for these large NOx emitters. Specifically, Pennsylvania petitioned the Administrator to establish a cap and
trade compliance system to provide for the most cost effective emission reductions. Seven other northeastern states filed similar petitions with EPA.

On January 18, 2000, EPA issued the "Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport; Final Rule", 65 Fed. Reg. 2674. In that rulemaking, EPA made a finding that a number of large electric generating units (EGUs) and large industrial boilers and turbines emit in violation of the Clean Air Act prohibition against significantly contributing to nonattainment or interfering with maintenance of the ozone NAAQS in the petitioning States. EPA also finalized the Federal NOx Budget Trading Program as the control remedy for sources affected by the final rule. 40 C.F.R. Part 97. EPA’s action on the States 126 Petitions has been challenged in the U.S. Circuit Court for the District of Columbia Circuit. The cases have been consolidated into a single docket, Appalachian Power Company, et al. v. United States Environmental Protection Agency, Docket No. 99-1200.

Because EPA’s analysis demonstrated that 22 states and the District of Columbia significantly contribute to nonattainment of the ozone NAAQS in other states, on October 27, 1998, EPA promulgated a final rule requiring those 22 states and the District of Columbia to modify their State Implementation Plans (SIPs) to prevent this significant contribution. This "SIP call" establishes a state NOx budget and requires states to develop mechanisms to ensure that the budget is achieved beginning in 2003. One of the mechanisms proposed by EPA to meet the budget is a cap and trade program for large fossil fired combustion boilers and electric generating units greater than 25 megawatts. EPA developed a model cap and trade rule similar to the OTC model rule. EPA’s proposal would extend the market for developing least cost controls to the 22 states and District of Columbia. States were required, by EPA’s final SIP call rule, to establish NOx emission programs on or before September 30, 1999. If states fail to establish SIP based programs, EPA indicated that it would impose a Federal Implementation Plan (FIP) under Section 110 of the Clean Air Act (42 U.S.C.A. §7410).

EPA’s SIP call was challenged in the U.S. Circuit Court for the District of Columbia Circuit. The challenges were consolidated into a single docket, State of Michigan et al. v. United States Environmental Protection Agency, Docket No 98-1497. Midwestern States requested that the Court stay the September 30, 1999 submission deadline until April 27, 2000. The Court issued a stay but did not include a termination date. On March 3, 2000, the Court issued its substantive decision in the case, upholding most of the NOx SIP call rule, but vacating its applicability, in whole or in part, with respect to three States, and remanding certain discrete portions of the rule to EPA for further action. On June 22, 2000, the Court lifted the Stay and required the NOx SIP to be submitted within 128 days.

Pennsylvania’s regulations at 25 Pa. Code Chapter 145, are designed to meet the requirements of the NOx SIP call and the portion of the Section 126 remedy that is applicable to sources located within Pennsylvania. The regulations are necessary for attainment of the ozone NAAQS in the Philadelphia area and are included in the Philadelphia attainment plan. Pennsylvania used EPA’s model cap and trade program rule found in 40 C.F.R. Part 96 and the 126 remedy found in 40 C.F.R. Part 97 as the template for the Chapter 145 rulemaking.

The regulations also represent Pennsylvania’s continuing commitment to do its fair share in reducing ozone transport both within Pennsylvania and throughout the northeast.

**E. Summary of the Regulatory Revisions**

The final amendments to Chapter 145 Interstate Ozone Transport Reduction contain one subchapter. Subchapter A §§ 145.1-145.100 establishes the NOx budget trading program for fossil-fired combustion boilers with a maximum design heat input greater than 250 million MMBtus per hour and electric utility generators with a rated capacity greater than 25 megawatts. The final rule modifies § 123.115 and adds § 123.121 to eliminate the existing NOx allowance requirements in 2003. Action is being deferred on
proposed Subchapters B and C that establish emission limitations for internal combustion engines and cement kilns.


Subchapter A implements the EPA NOx SIP Call, the portion of the Section 126 remedy applicable to Pennsylvania sources and Clean air Act attainment requirements applicable to Pennsylvania. Subchapter A is necessary for the Philadelphia ozone nonattainment area to attain the one-hour ozone standard. Subchapter A uses the framework from EPA’s model rule developed and promulgated at 40 CFR Part 96 and from EPA’s Section 126 remedy promulgated at 40 CFR Part 97. The Pennsylvania cap and trade rule identifies the facilities subject to regulation in § 145.4 and describes the process for NOx allowance allocation for the May 1 through September 30 control periods in § 145.42. The rule also describes the accounting process for deposit, use and transfer of allowances between NOx budget sources in §§ 145.50-145.62. This includes the compliance requirements in § 145.54. The rule also establishes a process for sources not otherwise covered to "opt in" to the provisions of the rule. The opt-in process is described in §§ 145.80-145.88.

Monitoring, recordkeeping and reporting requirements for sources covered by the rule are contained in §§ 145.70-145.76. In general, the monitoring requirements are consistent with the provisions for the existing NOx budget rule and the EPA acid rain requirements at 40 CFR Part 75. For sources located within Pennsylvania, the Department plans to integrate this trading rule into its existing permitting program.

Emission reduction credit provisions are contained in § 145.90.

As discussed in greater detail below, a new § 145.100 has been added to respond to comments raised by facility owners, the Pennsylvania Legislature and the Independent Regulatory Review Commission. These comments raised concern about program implementation of the rule in Pennsylvania placing Pennsylvania facilities at a competitive disadvantage and about the importance of ensuring that NOx budget sources located in other states do their fair share to ensure attainment and maintenance of the one-hour NAAQS in Pennsylvania. To address this concern, § 145.100 would, under certain circumstances, implement the Interstate Ozone Transport Reduction program in states that significantly contribute to nonattainment in Pennsylvania. These states are: Ohio, West Virginia, Maryland, Delaware, North Carolina, New Jersey and New York and Washington D.C. This provision of the rule would only be applicable if the Section 126 remedy was overturned, the State or Washington D.C. failed to submit a SIP meeting the Clean Air Act
requirements related to significant contribution and EPA failed to impose a Federal Implementation Plan under the Clean Air Act requirements.

Finally, the permitting requirements in §§ 145.20-145.25 have been deleted because they are duplicative. The Department will use the existing permit provisions in Chapter 127 to administer applicable permit requirements.

F. Summary of Comments and Changes to the Proposal

The Board held three public hearings during the 66-day comment period on the proposed regulation. Comments were received from 45 commentators. As a result of those comments and the significant public interest in the rulemaking, the Department prepared draft final regulations for additional comment. The Department held three public hearings during this 30-day additional public comment period. Comments were submitted by 134 commentators.

The final rulemaking makes the substantive requirements Pennsylvania program consistent with the remedy established by EPA under Section 126 of the Clean Air Act. Pennsylvania requested that EPA establish this remedy in the Petition filed by Governor Ridge in August of 1997. The final rulemaking also addresses a concern raised by a number of commentators, including the Independent Regulatory Review Commission, and by the Pennsylvania Legislature related to implementation of the rule in surrounding states. These changes as well as a number of other issues are discussed in more detail below.

Summary of Public Comments

A number of commentators suggested that the facilities covered by the rule and the allocation methodology contained in the rule be consistent with those covered under the EPA model rule published at 40 CFR Part 96. The proposed rule was more protective than the EPA model rule in a number of areas. Subsequent to the close of the public comment period, EPA finalized the remedy under Section 126 of the Clean Air Act. That cap and trade program is codified at 40 CFR Part 97 and is an updated version of the model rule. This final rulemaking covers the same facilities and provides the same exemptions as Part 97. In addition, the substantive provisions of the final rule have been revised to be consistent with Part 97. The Department believes that Part 97 establishes an environmentally sound program that can be implemented regionally.

Section 145.4 of the final rule has been modified to cover electric generating units of greater than 25 MW (rather than 15 as proposed) and includes an exception provision allowing units to avoid coverage by taking appropriate permit restrictions. In addition, § 145.42 of the rule has been modified to establish allocations for five year periods using average heat input data and an emission rate of 0.15 lb/MMBtu for electric generating units and 0.17 lb/MMBtu for nonelectric generating units. In addition to being consistent with the EPA rule, these changes address a number of specific comments received on the proposal.

A number of commentators suggested that the Department make the permitting provisions as simple as possible. Because the Department already has a comprehensive permitting program at 25 Pa. Code Chapter 127, the permitting provisions of the proposed rule have been eliminated. The Department will, where appropriate, as required by the Clean Air Act, incorporate the applicable requirements of this rule into permits issued under Chapter 127.

The Board received numerous comments related to the development of the data base used to establish the Pennsylvania budget and allocations. The Department proposed use of the EPA data base and budget. A number of the commentators from the regulated community indicated that the EPA emission inventory contained errors and should not be used. Instead, they suggested that the Department develop its own inventory and consequently its own budget. The Department disagrees with the approach suggested by these commentators.
The final rulemaking uses the EPA inventory to establish the Pennsylvania budget. This inventory was prepared by EPA with extensive input from states and the regulated community. EPA provided numerous comment periods with opportunities for states, source owners and operators and the public to comment. Pennsylvania worked cooperatively with EPA during this inventory development process. The inventory that was used is one of the best and most comprehensive ever developed. It is based, in large part, on information submitted by sources, and has been subject to numerous public comment periods. The Department has determined that it is the best inventory available at this time and is using it both to establish the Pennsylvania budget and will be using it to establish the allocations to Pennsylvania sources.

The Board received numerous comments requesting that the regulation include a "trigger" provision that would tie implementation of the rule to implementation in surrounding states and to implementation of the EPA NOx SIP Call Rule and the EPA Section 126 Remedy. The basis for these comments was that there needs to be a level playing field between all states subject to the rule to address issues of competitiveness and ensure that all states do their fair share to address ozone pollution in Pennsylvania and the northeast. The final regulation does not include this "trigger" because doing so could unnecessarily delay the important public health and environmental benefits of this regulation. In response to these comments, the final regulation contains a provision that ensures that all facilities that significantly contribute to Pennsylvania’s ozone problem reduce their emissions to address the problem. Section 145.100 of the final regulation would, in certain circumstances, require facilities located in states significantly contributing to nonattainment in Pennsylvania to meet the same emission limitations as facilities located in Pennsylvania. This provision of the regulation does not become effective unless the Section 126 remedy fails, the State does not meet the SIP requirements of the Clean Air Act related to significant contribution and EPA does not establish a FIP to meet those requirements. A discussion of the comments received on this provision is included in the ANFR discussion below.

A number of the commentators raised issues regarding the compliance supplement pool. The major issue raised was that the pool should not establish a "cap" on the amount of banked credits allowed to be transitioned from the existing program established in 25 Pa. Code Chapter 123. The Department has retained this cap. First, it is a reasonable limitation on the size of the bank that gets brought into the new program. Second, this issue was litigated in the federal court challenge to the NOx SIP call and the court upheld EPA’s approach.

Several commentators also questioned the compliance provisions contained in § 145.54 of the rule. Specifically, it was suggested that the 3:1 allowance penalty and a failure to hold sufficient allowances being treated as a violation for the entire ozone season were inappropriate. The final regulation retains these provisions. First, these provisions are identical to the provisions in the Department’s existing cap and trade rule at 25 Pa. Code Chapter 123. Second, these provisions are designed to provide a strong incentive for facility owners to comply with the rule. Only facilities that violate the rule are subject to the imposition of these enforcement tools. Finally, in assessing any civil penalty, the Department must use the factors established in Section 9.1 of the Pennsylvania Air Pollution Control Act. These factors take into account the specific factual circumstances of the violation in developing the penalty.

A number of commentators suggested that the monitoring provisions of this regulation should be identical to the provisions in the existing regulation in Chapter 123. The final form regulation includes the monitoring provisions established by EPA in Part 97. The Department believes that these monitoring provisions will provide consistent and reliable data for reporting of emissions from facilities participating in the cap and trade program.

Advance Notice of Final Rulemaking

The majority of the commentators expressed strong support for the regulation. Environmental and public health organizations as well as the public, including a number of physicians, testified about the real and substantial public health problems caused by ozone pollution and the need for the rule to address these problems in Pennsylvania and surrounding states. These commentators strongly urged the Department to implement this rule in Pennsylvania regardless of what occurred in other states. They asserted that it would
be particularly inappropriate for Pennsylvania, a leader in ozone pollution control, to wait until the most recalcitrant of states implemented a regulation before implementing the program in Pennsylvania. In fact, many of these commentators suggested that Pennsylvania should take the next step and implement additional controls to address acid rain, global warming and mercury contamination.

Virtually all commentators provided comments on § 145.100 of the ANFR. A number of commentators representing the regulated community asserted that this section violated both the Supremacy and Commerce Clauses of the United States Constitution. These same commentators generally suggested that the regulation be made nonseverable so that if a court overturned § 145.100, the remainder of the regulation would not be implemented. The commentators generally asserted that they were seeking a level playing field with other states. A number of these commentators are actively litigating in federal court to prevent imposition of the level playing field they assertedly support in their comments.

Other commentators, primarily those representing environmental, public health and the public supported § 145.100 but suggested that, because of the possibility of successful challenges to that section, it should be severable from the remainder of the rule.

The final regulation retains § 145.100 but provides that this section is not applicable unless the Section 126 remedy fails, the state fails to implement a SIP that meets the significant contribution provisions of the Clean Air Act and EPA fails to promulgate a FIP to meet those Clean Air Act requirements. The Department believes that the provision can be supported under both the Commerce and Supremacy Clauses of the United States Constitution. However, if it becomes necessary to implement the provision and the matter is litigated, this will be a case of first impression in a very difficult area of environmental law. Consequently, the Department is following the general provisions of statutory construction that this provision is severable from the remainder of the regulation.

A number of commentators raised concerns about the 1% set aside for addressing errors in the allocations to individual facilities. The final form regulation eliminates this additional set aside and, instead, allows the 5% set aside to be used for this purpose. This will make the allocations consistent with the approach taken by EPA.

A number of commentators suggested changes to the compliance supplement pool provisions to encourage the development, installation and operation of control technology. Other commentators suggested that the Department require reductions for additional pollutants including sulfur dioxide, carbon dioxide and mercury. The final regulation in § 145.43 includes incentives for the installation and operation of NOx control equipment and for the development of innovative technology that will reduce NOx as well as other pollutants.

Finally, a number of commentators repeated the comments they submitted on the proposed regulation in areas where the ANFR did not make the changes they recommended.

The Department worked with the Air Quality Technical Advisory Committee (AQTAC) technical aspects of this regulation. At that May 23, 2000, meeting the AQTAC recommended that the Department forward the final regulations to the EQB. The AQTAC did, however, express concern about several issues in the area where the Department has not made the recommended changes. Specifically, AQTAC expressed concern over the allocation methodology, monitoring requirements, source coverage, penalties and renewable energy. In each area, the Department has followed the approach included by EPA in the NOx SIP Call and 126 remedy. This supports the national approach for addressing the issues.

G. Benefits, Cost and Compliance

Benefits
Executive Order 1996-1 requires a cost benefit analysis of the amendments. Overall, the citizens of this Commonwealth will benefit from the proposal because the regulation will provide appropriate protection of air quality both in this Commonwealth and the entire eastern United States. In addition to reducing ozone pollution, this program will assist the Commonwealth in meeting its requirements for reasonable further progress and attainment under the Clean Air Act.

Compliance Cost

The controls required to implement this rule are highly cost effective. Compliance costs for sources covered by the trading program are expected to be less than one half of one percent of revenues for the utility sector.

Compliance Assistance Plan

The Department plans to educate and assist the regulated community and the public with understanding these new regulatory requirements.

Paperwork Requirements

These regulatory changes will have little additional paperwork impact on the regulated entities. This regulation simply extends and builds upon the existing NOx allowance requirements contained in Chapter 123.

H. Sunset Review

This regulation will be reviewed in accordance with the Sunset Review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on April 16, 1997, the Department submitted a copy of the proposed rulemaking to IRRC and the Chairpersons of the Senate and House Environmental Resources and Energy Committees. In compliance with section 5(c) of the Regulatory Review Act (71 P.S. § 745.5(c), the Department also provided IRRC and the Committees with copies of the comments, as well as other documentation.

In preparing these final-form regulations, the Department has considered the comments received from IRRC and the public. These comments are addressed in the Preamble. The Committees did not provide comments on the proposed rulemaking.

Under section 5.1(d) of the Regulatory Review Act (71 P.S. § 745.5(d)), these final-form regulations were deemed approved by the House and Senate Environmental Resource Resources and Energy Committees on __________. IRRC met on _______, and approved the final-form regulations.

J. Findings of the Board

The Board finds that:

(1) Public notice of the proposed rulemaking was given under Sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. Sections 1201 and 1202) and the regulations promulgated thereunder at 1 Pa. Code Sections 7.1 and 7.2.
(2) A public comment period and public hearings were provided as required by law.

(3) The modifications to the amendments do not enlarge the purpose of the proposed amendments published at 29 Pa.B. 1319 (March 6, 1999).

(4) This rulemaking is necessary and appropriate for the administration, enforcement and implementation of the Air Pollution Control Act.

(5) This rulemaking is necessary and appropriate to satisfy obligations imposed under the Clean Air Act.

(6) This rulemaking is necessary to achieve and maintain the National Ambient Air Quality Standard for ozone.

K. Order

(a) The regulations of the Department of Environmental Protection are amended to read as set forth in Annex A.

(b) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau as required by law.

(c) This order shall take effect upon publication in the Pennsylvania Bulletin.

James M. Seif
Chairperson