

PENNSYLVANIA
Nonattainment New Source Review for PM_{2.5}
25 Pa. Code Chapters 121 and 127
40 Pa.B. 703 (February 6, 2010)
Environmental Quality Board Regulation #7-450
(Independent Regulatory Review Commission #2818)

Comment and Response Document

Background

On July 18, 1997, the United States Environmental Protection Agency (EPA) revised the National Ambient Air Quality Standard (NAAQS) for the criteria pollutant particulate matter (PM) to add a new standard for fine particles, using fine particulates equal to and less than 2.5 micrometers in diameter (PM_{2.5}) as the indicator. The EPA set the health-based (primary) and welfare-based (secondary) PM_{2.5} annual standard at a level of 15 micrograms per cubic meter (µg/m³) and the 24-hour standard at a level of 65 µg/m³. See 62 FR 38652. The health-based primary standard is designed to protect human health from elevated levels of PM_{2.5}, which have been linked to premature mortality and other important health effects. The secondary standard is designed to protect against major environmental effects of PM_{2.5} such as visibility impairment, soiling and materials damage. In December 2004, the EPA designated all or portions of the following counties in Pennsylvania as nonattainment areas for the 1997 fine particulate matter annual NAAQS: Allegheny (partial), Armstrong (partial), Beaver, Berks, Bucks, Butler, Cambria, Chester, Cumberland, Dauphin, Delaware, Greene (partial), Indiana (partial), Lancaster, Lawrence (partial), Lebanon, Montgomery, Philadelphia, Pittsburgh/Liberty-Clairton (partial), Washington, Westmoreland and York. See 70 FR 944 at 999 (January 5, 2005). No counties were designated nonattainment for the 1997 24-hour standard.

Subsequently, on October 17, 2006, the EPA lowered the primary and secondary 24-hour NAAQS for PM_{2.5} to 35 µg/m³ from 65 µg/m³. See 71 FR 61236. The following counties or portions thereof have been designated by the EPA as nonattainment for the 2006 24-hour fine particulate NAAQS: Allegheny (partial), Armstrong (partial), Beaver, Bucks, Butler, Cambria, Chester, Cumberland, Dauphin, Delaware, Greene (partial), Indiana (partial), Lancaster, Lawrence (partial), Lebanon, Lehigh, Montgomery, Northampton, Philadelphia, Pittsburgh/Liberty-Clairton (partial), Washington, Westmoreland and York. See 74 FR 58688 at p. 58758 (November 13, 2009).

The EPA published its final rule for the “Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})” at 73 FR 28321 (May 16, 2008). This Federal regulation requires states with PM_{2.5} nonattainment areas to submit revised nonattainment NSR programs to the EPA for State Implementation Plan (SIP) approval within 3 years from the date of publication of the Federal final rule, or by May 16, 2011.

Scientific research has shown that various precursor pollutants participate in secondary particle formation and contribute significantly to ambient PM_{2.5} concentrations, producing approximately half of the PM_{2.5} concentration nationally. Precursor pollutants to particle formation include the following: sulfur dioxide (SO₂); nitrogen oxides (NO_x); volatile organic compounds (VOC); and ammonia. Given the complexity of PM formation processes, new information from the scientific community continues to emerge to improve our understanding of the relationship between sources of PM precursors and secondary particle formation. The Federal final rule published at 73 FR 28321 requires that SO₂ be regulated as a PM_{2.5} precursor; NO_x is presumed regulated; VOC and ammonia are presumed not regulated. See 73 FR 28325.

On February 6, 2010, the Environmental Quality Board (Board, EQB) published in the *Pennsylvania Bulletin* a notice of public comment period and public hearings on a proposed rulemaking that would amend certain sections of 25 Pa. Code Chapters 121 and 127 (relating to

general provisions; and construction, modification, reactivation and operation of sources) (40 Pa.B. 703). The proposed rulemaking would amend the existing nonattainment NSR requirements in Chapter 127, Subchapter E (relating to new source review) to incorporate the 2008 Federal requirements for PM_{2.5} and for PM_{2.5} precursors published at 73 FR 28321.

The proposed rulemaking added requirements to Chapter 127, Subchapter E, § 127.203a (relating to applicability determination) and other sections of Subchapter E to expand the applicability of the existing nonattainment NSR program to include emissions of PM_{2.5} and emissions of the PM_{2.5} precursors SO₂ and NO_x. Because the EPA determined that there is considerable uncertainty related to ammonia as a precursor for PM_{2.5}, the proposed rulemaking did not propose that ammonia to be regulated as a PM_{2.5} precursor. VOCs are also presumed not regulated and were not proposed for regulation as a PM_{2.5} precursor pollutant. Other clarifying amendments for Chapter 127 were also proposed.

The proposed rulemaking amendments would apply to construction of either a major facility, a major modification at an existing major facility, or both, located in an area in this Commonwealth that is nonattainment for the criteria pollutant PM_{2.5}. A facility is a “major facility” if its actual emissions or its potential to emit for a specific pollutant equals or exceeds the major facility threshold for that pollutant. The PM_{2.5} threshold for a new source is 100 tons per year (TPY) of PM_{2.5}. The PM_{2.5} threshold for a major modification at an existing facility is 10 TPY of PM_{2.5}.

The proposed rulemaking also amended § 121.1 (relating to definitions) to add a new term and definition, “PM_{2.5},” and amended the definitions of the following existing terms to include the requirements for PM_{2.5}: “regulated NSR pollutant” and “significant.” In addition the proposed rulemaking deleted an existing term and definition, “maximum allowable emissions,” because this term is no longer needed to support the existing requirements of Subchapter E.

Public Comment Period and Public Hearings

The public comment period opened on February 6, 2010, and closed on April 12, 2010. Three public hearings were held on the proposed rulemaking as follows:

March 9, 2010
1:00 p.m.

Department of Environmental Protection
Southwest Regional Office
Waterfront Conference Room A and B
400 Waterfront Drive
Pittsburgh, PA 15222-4745

March 10, 2010
1:00 p.m.

Department of Environmental Protection
Southeast Regional Office
Delaware Conference Room
2 East Main Street
Norristown, PA 19401

March 12, 2010
1:00 p.m.

Department of Environmental Protection
Southcentral Regional Office
Susquehanna A Conference Room
909 Elmerton Avenue
Harrisburg, PA 17110

The Board received written comments on the proposed rulemaking from eight commentators, including the Independent Regulatory Review Commission (IRRC). This document summarizes the written comments received from the public during the public comment period and the comments received from the IRRC. Each comment is provided with the identifying commentator number for each commentator that made that comment. A list of the commentators, including name, affiliation (if any), and location, can be found on page 6 of this document.

The Board invited each commentator to prepare a one-page summary of the commentator's comments. Two one-page summaries were submitted for this rulemaking; copies are attached at the end of this document in Appendix A.

No testimony was received during the public hearings.

No comments were received from the House and Senate Environmental Resources and Energy Committees.

Abbreviations, acronyms and symbols used in this document:

APCA – Pennsylvania Air Pollution Control Act (35 P.S. §§ 4001-4015)
BACT – Best Available Control Technology
Board – Environmental Quality Board
CAA – Clean Air Act (42 U.S.C.A. §§ 7401—7671q)
CAIR – Clean Air Interstate Rule
CFR – Code of Federal Regulations
CO – Carbon monoxide
DEP – Pennsylvania Department of Environmental Protection
EPA – United States Environmental Protection Agency
EQB – Environmental Quality Board
ERC – Emissions Reduction Credit
FR – Federal Register
IRRC – Independent Regulatory Review Commission
LAER – Lowest Achievable Emission Rate
NAAQS – National Ambient Air Quality Standard
NO_x – Nitrogen oxides
NSR – New Source Review
PM – Particulate matter
PM_{2.5} – Fine particulate matter equal to and less than 2.5 micrometers in diameter
PSD – Prevention of Significant Deterioration
RACT – Reasonably Available Control Technology
SIP – State Implementation Plan
§ - Section
§§ - Sections
SO₂ – Sulfur dioxide
SO_x – Sulfur oxides
TPY – Tons per year
VOC – Volatile Organic Compound

Commentator List for Nonattainment New Source Review for PM_{2.5}

ID	Name/Address	Submitted one page Summary for distribution to EQB	Provided Testimony	Requested Final Rulemaking following EQB Action
1.	Mr. Luis A. Comas Environmental Manager Consultant Sunoco, Inc. 10 Industrial Highway MS4 Lester, PA. 19029			
2.	Mr. Jeff A. McNelly, Executive Director ARIPPA 2015 Chestnut Street Camp Hill, PA. 17011			
3.	Ms. Carol F. McCabe, Esquire Manko, Gold, Katcher and Fox, LLP 401 City Avenue, Suite 500 Bala Cynwyd, PA. 19004	X		
4.	Mr. John Shimshock Senior Air Environmental Specialist RRI Energy, Inc. 121 Champion Way, Suite 200 Canonsburg, PA.15317	X		
5.	Mr. M. Gary Helm Senior Environmental Consultant Conectiv Energy Gary.Helm@Conectiv.com			
6.	Mr. Sean McGowan, Manager Environmental Affairs Carpenter Technology Corporation P.O. Box 14662 Reading, PA. 19612-4662			
7.	Mr. Gene Barr, Vice President Government and Public Affairs Pennsylvania Chamber of Business and Industry 417 Walnut Street Harrisburg, PA. 17101-1902			
8.	Ms. Kim Kaufman, Executive Director Independent Regulatory Review Commission 333 Market Street, 14 th Floor Harrisburg, PA 17101			

General Comments

1. Comment: A commentator understands that the proposed rulemaking would amend the existing requirements promulgated in Chapter 127, Subchapter E to incorporate recently promulgated Federal requirements for PM_{2.5} and PM_{2.5} precursors. Although the commentator understands the impetus for the proposed rulemaking, the commentator insists that the proposed changes mirror the new Federal requirements to the extent practicable. This would help to ensure consistency (where appropriate) among the following:

- Federal regulations, especially 40 CFR 51.166 and 40 CFR 52.21, regarding prevention of significant deterioration of air quality (PSD).
- 25 Pa. Code Chapter 127, Subchapter D (relating to prevention of significant deterioration of air quality), which is applicable to attainment and unclassifiable areas - 40 CFR 52.21 is incorporated by reference under Subchapter D.
- 25 Pa. Code Chapter 127, Subchapter E (relating to new source review), which is applicable to nonattainment areas - Subchapter E regulations supersede 40 CFR 51.166 regulations in Pennsylvania.

(4)

Response: The Department of Environmental Protection (Department) agrees with the commentator that there should be consistency between the Federal requirements and the Commonwealth's regulations. The proposed rulemaking amended provisions of Subchapter E to incorporate the EPA's requirements for PM_{2.5} and precursor emissions. These requirements are found in the EPA's final rule for the "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})" published at 73 FR 28321 (May 16, 2008). This final rule amends the Federal NSR regulations to establish the minimum elements for State programs implementing nonattainment NSR for the PM_{2.5} NAAQS. The Department's proposed rulemaking included the elements of the Federal final rule that were necessary to expand the applicability of the Commonwealth's existing nonattainment NSR program to include emissions of PM_{2.5} and emissions of the PM_{2.5} precursors SO₂ and NO_x.

Further, the Department would like to clarify that Chapter 127, Subchapter D, implements the PSD requirements of 40 CFR 51.166 and 52.21, applicable in PM_{2.5} attainment and unclassifiable areas. The PSD program applies when a major source that is located in an area that is designated as attainment or unclassifiable for a criteria pollutant is constructed or undergoes a major modification. The Federal regulations applicable to PSD programs are found at 40 CFR 51.165(b), 51.166, and 52.21. Chapter 127, Subchapter E, implements the requirements of 40 CFR 51.165, regarding permit requirements, for nonattainment NSR and does not supersede the requirements of 40 CFR 51.166. The nonattainment NSR program applies when a major source that is located in an area that is designated as nonattainment for a criteria pollutant is constructed or undergoes a major modification. The Federal regulations applicable to nonattainment NSR are found at 40 CFR 51.165, 51 Appendix S, and 52.24. See 73 FR 28321 at p. 28323 (May 16, 2008).

2. Comment: A commentator states that the Proposed NSR Amendments constitute the Board's response to revisions made by the EPA to the Federal NSR program in May 2008. See 73 FR 28321 (May 16, 2008) (hereinafter the "Federal PM_{2.5} NSR Rule"). However, the Proposed NSR Amendments differ from the Federal PM_{2.5} NSR Rule in several important respects. In general, if promulgated, the Proposed NSR Amendments would render Pennsylvania's NSR regulations significantly more stringent than the Federal PM_{2.5} NSR Rule. These overly stringent regulations would directly interfere with economic development in Pennsylvania and place Pennsylvania businesses at a significant competitive disadvantage relative to other states.

A fundamental difficulty with the Proposed NSR Amendments is the Board's attempt to meet the requirements of the Federal PM_{2.5} NSR Rule by applying Pennsylvania's existing NSR provisions to PM_{2.5}. Because Pennsylvania's existing NSR rules were developed specifically to address particular issues relating to Pennsylvania's ozone nonattainment areas, and have been amended many times over many years, the rules are not suited in many respects to also address PM_{2.5}. The application of these longstanding ozone nonattainment NSR concepts to PM_{2.5} will create undue burdens on the regulated community, will discourage new projects, and will have an adverse economic impact on Pennsylvania's industrial facilities. In this context, the Board must meet its obligation under the Pennsylvania Air Pollution Control Act (APCA) (35 P.S. §§ 4001-4015) to demonstrate that these more-stringent-than-Federal requirements are necessary to achieve or maintain ambient air quality standards for PM_{2.5}. Relying on past determinations relevant to ozone nonattainment is not sufficient. Additionally, for each provision of the Proposed NSR Amendments that is more stringent than the Federal PM_{2.5} NSR Rule, the Board should conduct a specific evaluation under section 5(a) of the Pennsylvania Regulatory Review Act, 71 P.S. § 745.5, to ensure that in light of the adverse economic effects of the Proposed NSR Amendments, the regulation is promulgated in the public interest. (3)

Response: The Board did not propose amendments at 40 Pa.B. 703 (February 6, 2010) to many existing provisions of the NSR requirements found in Chapter 127, Subchapter E, which were published at 24 Pa.B. 443 (January 15, 1994). These provisions addressed the construction or modification of certain air contamination facilities in a nonattainment area or having an impact on a nonattainment area. The owners and operators of these facilities were subject to special permit requirements if the facility had the potential to emit 100 TPY or more of the following pollutants: particulate matter of 10 micrometers or less (PM-10), sulfur oxides (SO_x), carbon monoxide (CO) or lead. Further, the 1994 provisions applied to the owner or operator of a facility that emitted volatile organic compounds (VOC) or nitrogen oxides (NO_x) in certain ozone nonattainment or unclassifiable/attainment areas that met the applicable requirements. The 1994 final-form regulation was approved by the EPA as a revision to the SIP at 62 FR 64722 (December 9, 1997), and is codified in 40 CFR 52.2020, regarding identification of plan – Pennsylvania. Subsequent to the 1994 final rulemaking, the EPA initiated a number of changes to the Federal requirements for NSR, which are discussed in the Order to the Board's final rulemaking published at 37 Pa.B. 2365 (May 19, 2007). Amendments to Subchapter E, published at 37 Pa.B. 2365, were effective May 19, 2007. The 2007 amendments were submitted to the EPA on August 9, 2007, as an equivalency demonstration and revision to the SIP. The Department has relied on the requirements implemented under the 1994 and 2007 rulemakings, including aggregation of de minimis emissions for the regulated pollutants, as part of the Commonwealth's efforts to attain and maintain the NAAQS for certain criteria pollutants established under section 109 of the Clean Air Act (42 U.S.C.A. § 7409, regarding National

primary and secondary ambient air quality standards) and implementing regulations. These provisions must be maintained to satisfy the anti-backsliding provisions of sections 110 and 193 of the CAA (42 U.S.C.A. §§ 7410 and 7515, regarding state implementation plans for National primary and secondary ambient air quality standards; and general savings clause).

However, in light of the concerns raised and the limited availability of PM_{2.5} emission reduction credits (ERCs) for emission offsets for new or modified major source projects, the final-form regulation does not require the aggregation of de minimis emissions for PM_{2.5} and PM_{2.5} precursors. Section 127.203a(a)(2) (relating to applicability determination) of the final-form regulation specifically excludes PM_{2.5} and PM_{2.5} precursors, as follows:

“As part of the plan approval application for a proposed de minimis emission increase, the owner or operator of the facility shall use subparagraphs (i) and (ii) to calculate the net emissions increase **FOR A REGULATED NSR POLLUTANT EXCEPT PM_{2.5} AND PM_{2.5} PRECURSORS.** For a proposed de minimis increase in which the net emissions increase calculated using subparagraphs (i) and (ii) meets or exceeds the emissions rate that is significant, only the emissions offset requirements [**in § 127.205(3) (relating to special permit requirements)**] **of this subchapter** apply to the net emissions increase.”

3. Comment: The IRRC stated that there appears to be some inconsistency between the Regulatory Analysis Form (RAF) and Preamble as to whether this proposed regulation is consistent with or more stringent than Federal regulations. Item #24 of the RAF states that the proposal is not more stringent than Federal standards. Meanwhile, the Preamble or Order includes the following statement:

To the extent that any of the proposed revisions are more stringent than any Federal requirements, these revisions are reasonably necessary in order to attain and maintain the PM_{2.5} NAAQS [National Ambient Air Quality Standard for fine particulate matter equal to and less than 2.5 micrometers in diameter]. (8)

Response: The proposed rulemaking is more stringent than Federal regulations in three ways – de minimis aggregation, fugitive emissions, and the contemporaneous period provisions which were approved by the EPA as a revision to the SIP and implemented by the Department for at least 15 years. As a result, the Preamble is correct. However, the final rulemaking does not include de minimis aggregation requirements for PM_{2.5} and PM_{2.5} precursors due to the limited availability of emission offsets for new or modified major source projects. As more fully explained in our response to comment 19, the Board did not propose amendments at 40 Pa.B. 703 to revise the aggregation of de minimis emissions of VOC or NO_x provisions of § 127.203(b)(1) (relating to facilities subject to special permit requirements). This major facility provision was included in the final rulemaking published at 24 Pa.B. 443 (January 15, 1994). The 1994 final rulemaking was approved by the EPA as a revision to the SIP at 62 FR 64722 (December 9, 1997), and is codified in 40 CFR 52.2020, regarding identification of plan – Pennsylvania. The SIP-approved major facility provision includes fugitive emissions from all sources when determining the status of a major facility, rather than considering fugitives for just the 28 source categories listed in the Federal definition of the term “major stationary source” found at 40 CFR 51.165(a)(1)(iv)(A), regarding permit requirements. The more stringent than

provisions were determined by the Board to be reasonably necessary to attain and maintain the NAAQS. In order to attain and maintain the NAAQS in this Commonwealth, the Department has relied on the inclusion of fugitive emissions of all criteria pollutants, including particulate matter, CO and ozone and its precursors, VOC and NOx, from all major facilities. In regards to the contemporaneous provision in § 127.203a (relating to applicability determination), which was adopted in 2007 at 37 Pa.B. 2385 (May 19, 2007), the Department provides clarification of its intention related to this provision as more fully explained in our response to comment 23.

4. Comment: The IRRC stated that the EQB and DEP should identify the specific standards and provisions that apply to PM_{2.5} and are different from the Federal program with cross-references to the specific Federal rules and standards. Where there is a difference, the need for the state rule should be explained and justified. What impacts will the proposal have on Pennsylvania businesses and industries that are competing with the same types of businesses and industries in other jurisdictions? What impact will it have on keeping businesses and industries in Pennsylvania, and attracting new companies to locate in Pennsylvania? Answers to these questions and related information should be provided with the final-form regulation. (8)

Response: See response to comment 3 related to the differences in the Federal and state programs. In addition, the purpose of the new source review rule is to implement control measures on new or modified major sources to prevent increases in PM_{2.5} emissions, or to achieve emission reductions, in order to attain and maintain the PM_{2.5} NAAQS according to the statutory deadlines prescribed by the CAA. When a PM_{2.5} nonattainment area attains the health-based standard, the Department prepares and submit requests to the EPA for the redesignation of the area to attainment—if approved by the EPA, the nonattainment NSR provisions would no longer apply to new or modified major sources. When the Commonwealth brings areas into an attainment status, the permitting becomes easier. If the Commonwealth fails to maintain or bring areas into attainment, then the industries have to do more emissions reductions. Maintaining the Commonwealth's attainment status is important as we look to attract new businesses and avoid implementing additional regulations upon those businesses.

In regards to new sources, the majority of the counties in this Commonwealth are located in PM_{2.5} attainment areas. These attainment areas actually attract new businesses and avoid the implementation of additional regulations.

5. Comment: The IRRC further stated that a related concern is the response to item #25 on page seven of the RAF. The response claims that "a number of neighboring states with PM_{2.5} nonattainment areas are also currently working on amendments to their NSR programs to meet the requirements published by the EPA." Yet, it also states that none of these states have proposed their drafts, and "it is not anticipated that these regulations [this proposed rulemaking] will place this Commonwealth at a competitive disadvantage." There are two concerns. First, if the neighboring states have not yet unveiled proposed drafts of rulemakings, what is the assurance that Pennsylvania industries will not be placed at a competitive disadvantage? Second, if other states are adopting regulations which are consistent with the federal program while the EQB program is more stringent, the EQB and DEP should explain the impact on the competitiveness of Pennsylvania businesses and industries. Coordinating a regional response with the neighboring states may provide a better result for air quality and also help insure that industries in different states are not placed at a competitive disadvantage. (8)

Response: The Department conferred with neighboring states in April and November, 2010, regarding the status of their NSR PM_{2.5} rulemakings. A number of neighboring states are still working on PM_{2.5} amendments to their NSR programs to meet the Federal PM_{2.5} requirements and develop SIP revisions by May 2011. West Virginia finalized NSR requirements for PM_{2.5} on June 1, 2010. Delaware expects to propose its rulemaking by May 1, 2011, and finalize its rulemaking by July 1, 2011. All of the states with PM_{2.5} nonattainment areas must submit SIP revisions that, at a minimum, will implement the EPA's PM_{2.5} requirements for nonattainment areas. It is not anticipated that the final rulemaking will place the owners of affected sources in this Commonwealth at a competitive disadvantage-- the PM_{2.5} de minimis aggregation requirements were omitted from the final-form regulation because of the limited availability of emission offsets.

Definitions

6. Comment: A commentator stated that enactment of the proposed rulemaking amendments would result in two distinct and different sets of definitions for some parameters of interest (for example, two different definitions for a "regulated NSR pollutant" and "significant," with the definitions depending on the attainment status of the pollutant of interest). The commentator insists that the definitions be consistent among the regulations in an attempt to promote understanding among the stakeholders and consistency of usage. (4)

Response: The Board appreciates the commentator's concerns about the definitions of the terms "regulated NSR pollutant" and "significant" and consistency between the Federal regulations and Chapter 127, Subchapters D and E. The proposed rulemaking amended provisions of Subchapter E to incorporate the 2008 Federal requirements for PM_{2.5} and PM_{2.5} precursors in nonattainment NSR areas. The nonattainment NSR program applies when a major source that is located in an area that is designated as nonattainment for a criteria pollutant is constructed or undergoes a major modification. These requirements for PM_{2.5} and PM_{2.5} precursors are found in the EPA's final rule for the "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})" published at 73 FR 28321 (May 16, 2008).

Major new or modified sources in nonattainment areas of this Commonwealth are regulated under the nonattainment NSR provisions in Subchapter E; therefore, the Board proposed amendments that mirror the Federal requirements published at 73 FR 28321 and codified under 40 CFR 51.165, regarding permit requirements. Subchapter D incorporates by reference the Federal requirements for 40 CFR 52, regarding prevention of significant deterioration of air quality, which apply in attainment and unclassifiable areas. The PSD program applies when a major source that is located in an area that is designated as attainment or unclassifiable for a criteria pollutant is constructed or undergoes a major modification. The definitions and requirements for the state-specific NSR and PSD programs mirror the applicable Federal NSR and PSD regulations.

7. Comment: The commentator requested that the Department's definition of the term "significant" under § 121.1 be consistent and verbatim with the EPA's definition of the term found at 40 CFR 52.21(b)(23), which is incorporated by reference under Subchapter D, except where denoted by strikeout for deletions or shading for proposed text, as follows:

Significant—

- (i) In reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed the following emissions rates:

<i>Pollutant</i>	<i>Emissions Rate</i>
Carbon monoxide	100 tons per year (TPY)
Nitrogen oxides	40 TPY
Sulfur dioxide	40 TPY
Particulate matter	25 TPY of particulate matter emissions
PM10	15 TPY
PM _{2.5}	10 TPY of direct PM _{2.5} emissions; 40 TPY of sulfur dioxide emissions; 40 TPY of nitrogen oxide emissions unless demonstrated not to be a PM_{2.5} precursor under paragraph (b)(50) of this section
Ozone	40 TPY of volatile organic compounds or nitrogen oxides
Lead	0.6 TPY
Fluorides	3 TPY
Sulfuric acid mist	7 TPY
Hydrogen sulfide (H ₂ S)	10 TPY

•••

- (ii) Significant means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that ~~paragraph (b)(23)(i) of this section,~~ subsection (i) above does not list, any emissions rate.

- (ii) Notwithstanding ~~paragraph (b)(23)(i) of this section,~~ subsection (i) above, *significant* means any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within 10 kilometers of a Class I area, and have an impact on such area equal to or greater than 1 µg/m³, (24-hour average).

(4)

Response: The EPA’s definition of the term “significant” found at 40 CFR 52.21(b)(23) applies to PSD requirements for attainment and unclassifiable areas, not to nonattainment NSR. The definition of the term “significant” specified in § 121.1 supports existing requirements in Subchapter E for nonattainment NSR and is consistent with the EPA’s definition of “significant” found at 40 CFR 51.165(a)(1)(x)(A) for nonattainment NSR programs. The Department’s proposed amendments to this definition added requirements for PM_{2.5} and PM_{2.5} precursors for nonattainment NSR, in accordance with the EPA’s final rule for the “Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})” published at 73 FR 28321 (May 16, 2008). The definition of the term “significant” found at 40 CFR 51.165(a)(1)(x)(A) for nonattainment NSR addresses only criteria air pollutants and does

not include emission rates for fluorides, sulfuric acid mist, hydrogen sulfides, reduced sulfide compounds, and municipal waste combustor and municipal solid waste landfill emissions.

8. Comment: The IRRC indicated that the proposed amendments to the definition for the term “significant” are similar to language in the Federal regulations at 40 CFR 51.166(b)(23)(i), except that the proposed amendment did not include the language "unless demonstrated not to be a PM_{2.5} precursor." (8)

Response: The Federal regulations at 40 CFR 51.166(b)(23)(i) apply to PSD in attainment and unclassifiable areas. The Department has revised the term “significant” in the final-form rulemaking as follows to allow for the demonstration that the NO_x emissions are not a significant contributor to PM_{2.5} nonattainment in the area, consistent with 40 CFR 51.165(a)(1)(x)(A) and 51.165(a)(1)(xxxvii)(C)(3), which are the EPA definitions that pertain to nonattainment NSR.

“Significant—

(i) In reference to a net emissions increase or the potential of a facility to emit one of the following pollutants at a rate of emissions that would equal or exceed the following emissions rates except as specified in subparagraphs (ii)—(v):

Pollutant	Emissions Rate
Carbon monoxide (CO):	100 TPY
Nitrogen oxides (NO _x):	40 TPY
Sulfur oxides (SO _x):	40 TPY
Ozone:	40 TPY of VOCs or NO _x
Lead:	0.6 TPY
PM-10:	15 TPY
<u>PM_{2.5}:</u>	<u>10 TPY of PM_{2.5}; 40 TPY of SO₂; 40 TPY of NO_x, UNLESS THE DEPARTMENT DEMONSTRATES TO THE EPA’S SATISFACTION OR THE EPA DETERMINES THAT THE NO_x EMISSIONS ARE NOT A SIGNIFICANT CONTRIBUTOR TO PM_{2.5} NONATTAINMENT IN THE AREA.</u>

***”

9. Comment:

Significant—

(i) In reference to a net emissions increase or the potential of a facility to emit one of the following pollutants at a rate of emissions that would equal or exceed the following emissions rates except as specified in subparagraphs (ii)—(v):

<i>Pollutant</i>	<i>Emissions Rate</i>
Carbon monoxide (CO):	100 TPY
Nitrogen oxides (NO _x):	40 TPY
Sulfur oxides (SO _x):	40 TPY
Ozone:	40 TPY of VOCs or NO _x
Lead:	0.6 TPY
PM-10:	15 TPY
<u>PM_{2.5}</u>:	<u>10 TPY of PM_{2.5}; 40 TPY of SO₂; 40 TPY of NO_x</u>

A commentator questions the testing procedures and listed relationships and wonders how it was calculated, and where the ratios came from, and exact dates for early ERC credit calculations. Some of the commentator's facilities may have upgraded/improved baghouses to reduce PM_{2.5} and PM10 emissions during a time period when Clean Air Interstate Rule (CAIR) and Clean Air Mercury Rule (CAMR) regulations were being proposed and debated. The current dates listed would exclude them from any credits, yielding a negative or "no credit" outcome for performing a plant improvement. (2)

Response: The EPA published its final rule for the "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})" at 73 FR 28321 (May 16, 2008). In its discussion of the final action, the EPA stated that NO_x is presumed to be a significant contributor to ambient PM_{2.5} concentrations in all PSD and nonattainment NSR areas. However, a State or the EPA may rebut this presumption for a specific area if the State demonstrates to the Administrator's satisfaction or the EPA demonstrates that NO_x emissions in that area are not a significant contributor to that area's ambient PM_{2.5} concentrations. If a State or the EPA makes such a demonstration, NO_x would not be considered a PM_{2.5} precursor under the NSR program in that area. If a State or the EPA does not make such a demonstration, NO_x must be regulated as a precursor for PM_{2.5} under the PSD, nonattainment NSR, and minor source programs. See 73 FR 28321 at p. 28328. Approximately 162,256 tons of NO_x emissions were reported to the Department in 2009. Therefore, the Department did not conduct an analysis to demonstrate that NO_x emissions in this Commonwealth are not a significant contributor to ambient PM_{2.5} concentrations.

The permissible interpollutant offset trades established in the EPA's final rule published at 73 FR 28321 were the following: 1) reductions in direct PM_{2.5} emissions to offset emission increases of

regulated PM_{2.5} precursors; 2) emission reductions of one regulated PM_{2.5} precursor to offset emission increases of another regulated PM_{2.5} precursor; and 3) reductions in regulated PM_{2.5} precursor emissions to offset increases of direct PM_{2.5} emissions. To facilitate these trading provisions, the EPA established acceptable trading ratios for PM_{2.5} and its precursors. The Board specified the EPA-established trading ratios for PM_{2.5} and PM_{2.5} precursors in the proposed rulemaking for nonattainment NSR PM_{2.5} emissions in § 127.210(a).

On July 15, 2008, however, the Natural Resources Defense Council and the Sierra Club petitioned the EPA to reconsider and administratively stay specific parts of the final rule titled, “Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}),” published on May 16, 2008. The Petition objected to four parts of the final rule, including allowing states to use EPA-recommended PM_{2.5} precursor trading ratios to offset PM_{2.5} emissions increases in PM_{2.5} nonattainment areas. On January 16, 2009, the EPA denied the July 2008 petition. On February 10, 2009, the same petitioners submitted a second reconsideration request for the same four issues and another request for administrative stay. They also requested reconsideration of the January 16, 2009, denial letter. The EPA granted the February 10, 2009, petition for reconsideration in order to allow for public comment on each of the four issues raised, including allowing states to use EPA-recommended PM_{2.5} precursor trading ratios to offset PM_{2.5} emissions increases in PM_{2.5} nonattainment areas. The EPA agreed to reconsider the trading ratios and granted the reconsideration of this policy on the grounds that the agency failed to propose for public comment the EPA-recommended offset ratios contained in the preamble to the final rule published at 73 FR 28321. Therefore, the existing “preferred” precursor offset ratios will no longer be considered presumptively approvable. That is, any precursor offset ratio submitted as part of the NSR SIP for a PM_{2.5} nonattainment area must be accompanied by a technical demonstration showing the suitability of the ratio for that particular nonattainment area.

As a result of the EPA’s reconsideration, the Board developed language for the final-form rulemaking that mirrors the EPA’s intent. This language removes interpollutant trading for PM_{2.5} and PM_{2.5} precursors in the final-form rulemaking and amends § 127.210 to provide that the Department may, based on a technical assessment, establish interpollutant trading ratios for offsetting PM_{2.5} emissions or PM_{2.5} precursor emissions in a specific nonattainment area or geographic area in this Commonwealth. The interpollutant trading ratios shall be subject to public review and comment for at least 30 days prior to submission to the EPA for approval as a SIP revision. Section 127.210 of the final-form rulemaking is further amended to provide that if the EPA promulgates PM_{2.5} interpollutant trading ratios in 40 CFR Part 51, the ratios shall be adopted and incorporated in the final-form regulation by reference.

§ 127.210. Offset ratios.

(b) In complying with the emissions offset requirements of this subchapter, the [emissions] EMISSION offsets obtained shall be of the same NSR regulated pollutant unless interpollutant offsetting is authorized for a particular pollutant [as specified in subsection (a). The offset requirements for PM_{2.5} emissions or emissions of a PM_{2.5} precursor may be satisfied by offsetting PM_{2.5} emissions

or emissions of the PM_{2.5} precursors SO₂ or NO_x] IN ACCORDANCE WITH SUBSECTION (c).

(c) THE DEPARTMENT MAY, BASED ON A TECHNICAL ASSESSMENT, ESTABLISH INTERPOLLUTANT TRADING RATIOS FOR OFFSETTING PM_{2.5} EMISSIONS OR PM_{2.5} PRECURSOR EMISSIONS IN A SPECIFIC NONATTAINMENT AREA OR GEOGRAPHIC AREA IN THIS COMMONWEALTH. THE INTERPOLLUTANT TRADING RATIOS SHALL BE SUBJECT TO PUBLIC REVIEW AND COMMENT FOR AT LEAST 30 DAYS PRIOR TO SUBMISSION TO THE EPA FOR APPROVAL AS A SIP REVISION.

(d) IF THE EPA PROMULGATES PM_{2.5} INTERPOLLUTANT TRADING RATIOS IN 40 CFR PART 51, THE RATIOS SHALL BE ADOPTED AND INCORPORATED HEREIN BY REFERENCE.

The Board did not propose to amend the existing requirements at § 127.207(1) (relating to creditable emissions decrease or ERC generation and creation), which allow for the generation of ERCs if the emissions reductions are not necessary to meet an allowance-based program such as CAIR.

10. Comment: A commentator requested that the Department’s definition of the term “regulated NSR pollutant” under § 121.1 be consistent and verbatim with the EPA’s definition of the term found at 40 CFR 52.21(b)(50), which is incorporated by reference under Subchapter D, except where denoted by ~~strikeout~~ for deletions or ~~shading~~ for proposed text, as follows:

40 CFR 52.21(b)(50) *Regulated NSR pollutant*, for purposes of ~~this section~~ 25 Pa. Code Chapter 127, means the following:

(i) Any pollutant for which a national ambient air quality standard has been promulgated and any pollutant identified under this paragraph ~~(b)(50)(i)~~ as a constituent or precursor for such pollutant. Precursors identified by the Administrator ~~of the EPA~~ for purposes of NSR are the following:

(a) Volatile organic compounds and nitrogen oxides are precursors to ozone in all attainment, ~~nonattainment~~ and unclassifiable areas.

(b) Sulfur dioxide is a precursor to PM_{2.5} in all attainment, ~~nonattainment~~ and unclassifiable areas.

(c) Nitrogen oxides are presumed to be precursors to PM_{2.5} in all attainment, ~~nonattainment~~ and unclassifiable areas, unless the State demonstrates to the Administrator’s satisfaction or EPA demonstrates that emissions of nitrogen oxides from sources in a specific area are not a significant contributor to that area’s ambient PM_{2.5} concentrations.

(d) Volatile organic compounds are presumed not to be precursors to PM_{2.5} in any attainment, ~~nonattainment~~ or unclassifiable area, unless the State demonstrates to the ~~EPA~~ Administrator’s satisfaction or EPA demonstrates that emissions of volatile organic compounds from sources in a specific area are a significant contributor to that area’s ambient PM_{2.5} concentrations.

(vi) Particulate matter (PM) emissions, PM_{2.5} emissions and PM₁₀ emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at

ambient temperatures. On or after January 1, 2011 (or any earlier date established in the upcoming rulemaking codifying test methods), such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM, PM_{2.5} and PM₁₀ in PSD or nonattainment NSR permits. Compliance with emissions limitations for PM, PM_{2.5} and PM₁₀ issued prior to this date shall not be based on condensable particulate matter unless required by the terms and conditions of the permit or the applicable implementation plan. Applicability determinations made prior to this date without accounting for condensable particulate matter shall not be considered in violation of this section unless the applicable implementation plan required condensable particulate matter to be included.

(4)

Response: The EPA's definition of the term "regulated NSR pollutant" found at 40 CFR 52.21(b)(50) applies to PSD requirements for attainment and unclassifiable areas, not to nonattainment NSR, and is adopted by reference under Subchapter D to support the Department's PSD program. The definition of the term "regulated NSR pollutant" specified in § 121.1 supports existing requirements in Subchapter E for nonattainment NSR and is consistent with the EPA's definition of the term "regulated NSR pollutant" found at 40 CFR 51.165(a)(1)(xxxvii) for nonattainment NSR programs. The Board's proposed amendments to this definition added requirements for SO₂ and NO_x, which are PM_{2.5} precursors for nonattainment NSR, in accordance with the EPA's final rule for the "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})" published at 73 FR 28321 (May 16, 2008).

11. Comment: The IRRC indicated that the proposed revisions to the definition for the term "regulated NSR pollutant" are similar to language in the Federal regulations at 40 CFR § 51.165(a)(xxxvii), except that § 51.165(a)(xxxvii)(C)(3) indicates that a state may make a demonstration to the EPA that NO_x emissions from sources in a specific area are not a significant contributor to that area's ambient PM_{2.5} concentrations. The IRRC commented further that the information in the Preamble to the proposed rulemaking and the accompanying materials did not provide information on whether the Department has identified areas where NO_x emissions are not a significant contributor to PM_{2.5} concentrations. The IRRC requested that this information be provided with the final-form rulemaking. (8)

Response: The Board agrees. To this end, the final-form regulation definition of the term "regulated NSR pollutant" has been amended as follows: "Nitrogen oxides are presumed to be precursors to PM_{2.5} in PM_{2.5} nonattainment areas unless the Department demonstrates to the satisfaction of the Administrator of the EPA or the Administrator of the EPA determines that NO_x emissions from a source in a specific area are not a significant contributor to that area's ambient PM_{2.5} concentrations." The Department has not done a study to identify areas where NO_x emissions are not a significant contributor to PM_{2.5} concentrations.

12. Comment: A commentator stated that the proposed NSR amendments require clarification with respect to the manner in which NSR will be applied to PM_{2.5} and its precursors. In particular, consistent with the Federal NSR PM_{2.5} Rule, the proposed NSR amendments have identified SO₂ and NO_x as precursors to PM_{2.5} in the revised definition of the term "regulated NSR pollutant." Further, the proposed NSR amendments identify significant emission rates for SO₂ (40 TPY) and NO_x (40 TPY). However, the proposed NSR amendments fail to clarify that

each regulated NSR pollutant, including PM_{2.5} and its precursors, will be evaluated separately with respect to major source determinations and evaluations of emission increases associated with modification projects.

Given the unique considerations associated with the identification of precursors to a nonattainment pollutant which is itself regulated, the Board should clarify the relationship of major stationary source status for PM_{2.5} emissions and significant net emission increases for its precursors. In particular, the Board should clarify that NSR will be applied on a pollutant-specific basis. For example, a source that qualifies as a major stationary source of a specific pollutant (for example, PM_{2.5}) triggers NSR applicability only if the source undertakes a modification that results in a significant net emission increase of the same pollutant (that is, PM_{2.5}). By contrast, a facility that qualifies as a major stationary source of PM_{2.5} emissions, but not a major stationary source of SO₂ or NO_x, would not trigger NSR applicability for SO₂ or NO_x due to a projected emission increase of those pollutants exceeding their significance thresholds. (3)

Response: The Board's definitions of the terms "major facility" and "net emissions increase" specified in § 121.1 are similar to the EPA's definition of the term "major stationary source" found at 40 CFR § 51.165(a)(1)(iv)(A). During the implementation of the NSR PM_{2.5} provisions, the Department will follow the EPA's policies and interpretations provided for nonattainment NSR for regulating emissions of PM_{2.5} and its precursors SO₂ and NO_x. The EPA's rules require that when a facility qualifies as a major stationary source for PM_{2.5} in a nonattainment area for PM_{2.5}, the facility triggers NSR applicability for PM_{2.5} and also for its precursors SO₂ and NO_x. For more information, please see the EPA's discussion of PM_{2.5} precursors at 73 FR 28326-28334 (May 16, 2008).

13. Comment: A commentator stated that the definition of the term "maximum allowable emissions" should be verbatim with the definition of the term "allowable emissions" found at 40 CFR 52.21(b)(16), regarding prevention of significant deterioration of air quality. (4)

Response: The Board proposed deletion of the term "maximum allowable emissions" and its definition at 40 Pa.B. 703, as denoted by bolded brackets in the published notice, since the term is no longer used to support existing requirements and this term is not used in the Federal NSR regulations under 40 CFR 51.165. The "maximum allowable emissions" definition is omitted from the final-form regulation. The existing definition of the term "allowable emissions" specified in § 121.1 is consistent with the Federal definitions for the term "allowable emissions" found under 40 CFR 51.165, regarding permit requirements.

The definition of the term "allowable emissions" combines the definition of the term "allowable emissions" found at 40 CFR 51.165(a)(xi) and the definition of the term "allowable emissions" used for a plantwide applicability limit found at 40 CFR 51.165(f)(2)(ii). The definition of the term "allowable emissions" found at 40 CFR 51.165(a)(xi) is virtually identical to the definition of the term "allowable emissions" found at 40 CFR 52.21(b)(16).

Aggregation of De Minimis Emission Increases

14. Comment: Several commentators stipulated that the aggregation of de minimis emission increases is inappropriate for PM_{2.5}, indicating that the proposed revisions would make de minimis emissions of PM_{2.5} subject to the 10-year aggregation provisions of § 127.203a (relating to applicability determination) and potentially to the provisions in § 127.203 (relating to facilities subject to special permit requirements). Some commentators also stated that the Board has not demonstrated that aggregation of de minimis emission increases is necessary to achieve and maintain the NAAQS for PM_{2.5}. The de minimis aggregation is particularly problematic for PM_{2.5} sources for several reasons relating specifically to the low significance threshold for PM_{2.5}, including the following:

- The requirement of de minimis aggregation and a 10-year contemporaneous period are likely to result in NSR applicability for projects which may be minor in nature. This would severely hinder implementing even many small projects.
- The inclusion of fugitive emissions in calculating net emission increases of PM_{2.5} over the 10-year contemporaneous period will result in higher calculations of PM_{2.5} emissions than otherwise intended under the Federal NSR PM_{2.5} Rule.
- PM_{2.5} ERCs are extremely scarce and extremely expensive. The logistical and financial burden of securing these credits will weigh heavily on sources of PM_{2.5} emissions.
- There is no equivalent Federal requirement for Pennsylvania to include aggregation of de minimis PM_{2.5} emission increases in the proposed PM_{2.5} nonattainment rules, making the Pennsylvania rule unnecessarily more stringent than the Federal rule. Pennsylvania's APCA prohibits adoption of measures more stringent than those required under the federal Clean Air Act to achieve ambient air quality standards unless, among other things, the Board determines those measures to be reasonably necessary in order to achieve or maintain such standards.
- The de minimis offset requirement will cause economic and operational harm to business as PM_{2.5} offsets are not available and the offset ratios for precursor pollutants are very high. Precursor offsets may not be available if they are required to be generated in the same air basin. Costs to obtain offsets will be exorbitant if they are available.
- There are serious concerns about the competitive impact on Pennsylvania's business and industry of the regulatory provisions that could require the offsetting of de minimis emission increases of PM_{2.5}, particularly given the limited impact such offsetting would have on ambient air quality.
- The de minimis aggregation concept was originally introduced to the Pennsylvania NSR provisions as a means of addressing increases of VOC and NO_x in ozone nonattainment areas. While these provisions may have had their foundation in section 182 of the CAA, 42 U.S.C.A. § 7511a, neither the CAA provisions nor the Federal NSR PM_{2.5} Rulemaking intended application of these provisions to PM_{2.5}.

- Accounting for all PM_{2.5} emission increases over a 10-year period is especially difficult given the lack of both emission factors and a final EPA test method.

The regulation should conform to Federal NSR requirements for PM_{2.5} and not require the aggregation of de minimis emission increases for minor increases in PM_{2.5} emissions.
(1, 3, 5, 6, 7, 8)

Response: In light of the concerns raised and the limited availability of PM_{2.5} ERCs for emission offsets for new or modified major source projects, the final-form regulation does not require the aggregation of de minimis emissions for PM_{2.5} and PM_{2.5} precursors. Section 127.203a(a)(2) (relating to applicability determination) of the final-form regulation specifically excludes PM_{2.5} and PM_{2.5} precursors, as follows:

“As part of the plan approval application for a proposed de minimis emission increase, the owner or operator of the facility shall use subparagraphs (i) and (ii) to calculate the net emissions increase **FOR A REGULATED NSR POLLUTANT EXCEPT PM2.5 AND PM2.5 PRECURSORS.** For a proposed de minimis increase in which the net emissions increase calculated using subparagraphs (i) and (ii) meets or exceeds the emissions rate that is significant, only the emissions offset requirements [**in § 127.205(3) (relating to special permit requirements)**] **of this subchapter** apply to the net emissions increase.”

Offset Ratios

15. Comment: The rule should clearly indicate that offsets shall be provided only once for a particular pollutant. For example, a facility located in the Ozone Transport Region that triggers NSR for NO_x and PM_{2.5} should only provide offsets for either NO_x or NO_x as a precursor for PM_{2.5}, but not for both. (1)

Response: The Board agrees with the commentator. Emissions only need to be offset once. Therefore, if NO_x emissions offsets are provided as an ozone precursor, these offsets can also serve as PM_{2.5} precursor offsets. The EPA provided similar guidance as a response to two commentators in its preamble for the NSR PM_{2.5} final implementation rule published at 73 FR 28321 at p. 28338 (May 16, 2010):

“Two commenters requested that we make clear in the final rule that an increase in precursor emissions need only be offset once, even if the increase triggers nonattainment NSR under, for example, both the ozone and PM_{2.5} programs. We agree with these commenters and are clarifying that a precursor emissions increase only needs to be offset once. A permit applicant will not, for example, need to obtain two sets of offsets for NO_x emissions if NO_x is regulated as a precursor both for ozone and PM_{2.5} in the area. The NO_x precursor emissions need only be offset once in accordance with the applicable ratio. To the extent a higher ratio applies for ozone under subpart 2, the applicant would have to obtain offsets at the higher ratio. However, when the offset ratios are the same, both requirements can be met with a single set of NO_x offsets.”

16. Comment: With respect to § 127.210, relating to offset ratios:

(a) The [emission] emissions offset ratios for NSR purposes and ERC transactions subject to the requirements of this subchapter [shall] must be in an amount equal to or greater than the ratios specified in the following table:

Required Emission [Reductions From] Offsets For Existing Sources, Expressed in Tons per Year

Pollutant/Area	Flue Emissions	Fugitive Emissions
PM-10 and SO _x	1.3:1	5:1
Volatile Organic Compounds		
Ozone Classification Areas		
Severe Areas	1.3:1	1.3:1
Serious Areas	1.2:1	1.3:1
Moderate Areas	1.15:1	1.3:1
Marginal/Incomplete Data Areas	1.15:1	1.3:1
Transport Region	1.15:1	1.3:1
NO _x		
Ozone Classification Areas		
Severe Areas	1.3:1	1.3:1
Serious Areas	1.2:1	1.2:1
Moderate Areas	1.15:1	1.15:1
Marginal/Incomplete Data Areas	1.15:1	1.15:1
Transport Region	1.15:1	1.15:1
Carbon Monoxide		
Primary Nonattainment Areas	1.1:1	1.1:1
Lead	1.1:1	1.1:1
<u>PM2.5</u>		
<u>PM2.5 Nonattainment Area</u>		
<u>PM2.5</u>	<u>1:1</u>	<u>1:1</u>
<u>PM2.5 Precursors</u>		
<u>SO₂</u>	<u>1:1</u>	<u>1:1</u>
<u>NO_x</u>	<u>1:1</u>	<u>1:1</u>
<u>PM2.5 Interpollutant Trading Ratios</u>		
<u>SO₂</u>	<u>40:1</u>	<u>40:1</u>
<u>NO_x</u>	<u>200:1</u>	<u>200:1</u>

A commentator questions the testing procedures and listed relationships and wonder how it was calculated, and where the ratios came from, and exact dates for early ERC credit calculations. Some of the commentator's facilities may have upgraded/improved bughouse's to reduce PM_{2.5} and PM10 emissions during a time period when CAIR and CAMR (air-mercury) regulations

were being proposed and debated. The current dates listed would exclude them from any credits, yielding a negative or "no credit" outcome for performing a plant improvement. (2)

Response: Please see the response to comment 9.

The Department has revised § 127.210 as follows:

(a) The [emission] emissions offset ratios for NSR purposes and ERC transactions subject to the requirements of this subchapter [shall] must be in an amount equal to or greater than the ratios specified in the following table:

Required Emission [Reductions From] Offsets For Existing Sources, Expressed in Tons per Year

Pollutant/Area	Flue Emissions	Fugitive Emissions
PM-10 and SO _x	1.3:1	5:1
Volatile Organic Compounds		
Ozone Classification Areas		
Severe Areas	1.3:1	1.3:1
Serious Areas	1.2:1	1.3:1
Moderate Areas	1.15:1	1.3:1
Marginal/Incomplete Data Areas	1.15:1	1.3:1
Transport Region	1.15:1	1.3:1
NO _x		
Ozone Classification Areas		
Severe Areas	1.3:1	1.3:1
Serious Areas	1.2:1	1.2:1
Moderate Areas	1.15:1	1.15:1
Marginal/Incomplete Data Areas	1.15:1	1.15:1
Transport Region	1.15:1	1.15:1
Carbon Monoxide		
Primary Nonattainment Areas	1.1:1	1.1:1
Lead	1.1:1	1.1:1

PM2.5

PM2.5 Nonattainment Area

<u>PM2.5</u>	<u>1:1</u>	<u>1:1</u>
<u>PM2.5 Precursors</u>		
<u>SO₂</u>	<u>1:1</u>	<u>1:1</u>
<u>NO_x</u>	<u>1:1</u>	<u>1:1</u>

[PM2.5 Interpollutant Trading Ratios]

<u>[SO₂</u>	<u>40:1</u>	<u>40:1]</u>
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[NO_x

200:1

200:1]

(b) In complying with the emissions offset requirements of this subchapter, the [emissions] EMISSION offsets obtained shall be of the same NSR regulated pollutant unless interpollutant offsetting is authorized for a particular pollutant [as specified in subsection (a). The offset requirements for PM_{2.5} emissions or emissions of a PM_{2.5} precursor may be satisfied by offsetting PM_{2.5} emissions or emissions of the PM_{2.5} precursors SO₂ or NO_x] IN ACCORDANCE WITH SUBSECTION (c).

(c) THE DEPARTMENT MAY, BASED ON A TECHNICAL ASSESSMENT, ESTABLISH INTERPOLLUTANT TRADING RATIOS FOR OFFSETTING PM_{2.5} EMISSIONS OR PM_{2.5} PRECURSOR EMISSIONS IN A SPECIFIC NONATTAINMENT AREA OR GEOGRAPHIC AREA IN THIS COMMONWEALTH. THE INTERPOLLUTANT TRADING RATIOS SHALL BE SUBJECT TO PUBLIC REVIEW AND COMMENT FOR AT LEAST 30 DAYS PRIOR TO SUBMISSION TO THE EPA FOR APPROVAL AS A SIP REVISION.

(d) IF THE EPA PROMULGATES PM_{2.5} INTERPOLLUTANT TRADING RATIOS IN 40 CFR PART 51, THE RATIOS SHALL BE ADOPTED AND INCORPORATED HEREIN BY REFERENCE.

Further, it should also be noted that the Board did not propose to amend the existing requirements at § 127.207(1) (relating to creditable emissions decrease or ERC generation and creation), which allow for the generation of ERCs if the emissions reductions are not necessary to meet an allowance-based program such as CAIR.

Interpollutant Trading in Five-county Philadelphia Area

17. Comment: A commentator expressed concern that the provision at § 127.210 does not recognize the interpollutant trading that has already been approved by the EPA for NO_x and VOC ERCs in the five-county Philadelphia area. These NSR regulations should be amended to either include this interpollutant trading, or so as to not exclude this approved ERC trading mechanism. (7)

Response: The final-form regulation does not change the EPA's previously approved interpollutant trading of VOC ERCs for NO_x ERCs using a substitution ratio in the Philadelphia ozone nonattainment area. However, due to concerns raised by the commentators, the Board is clarifying the language in § 127.206(o) (relating to ERC general requirements) of the final-form regulation as follows:

“~~[An]~~ EXCEPT AS PROVIDED UNDER § 127.210 (RELATING TO OFFSET RATIOS), AN ERC created for a regulated criteria pollutant shall only be used for offsetting or netting an emissions increase involving the same criteria pollutant ~~[except interpollutant offsetting authorized under this subchapter]~~ UNLESS APPROVED IN WRITING BY THE DEPARTMENT AND THE EPA.”

18. Comment: The IRRRC stated that commentators expressed concerns with the basis or rationale for the amendments in § 127.210 (relating to offset ratios). One area that is unclear is

the phrase "unless interpollutant offsetting is authorized for a particular pollutant as specified in subsection (a)." One commentator refers to approval by the EPA of interpollutant trading in the five-county southeastern region of the state. Are there other situations where interpollutant offsetting might be authorized? If so, what impact will this section have on those approved interpollutant offsets or trades? (8)

Response: The final rulemaking does not modify the provision which allows the EPA's previously approved interpollutant trading of VOC ERCs for NO_x ERCs using a substitution ratio in the Philadelphia ozone nonattainment area. However, due to concerns raised by the commentators, the Board is clarifying the language in § 127.206(o) in the final-form regulation as indicated in the response to comment 17.

Fugitive Emissions

19. Comment: Three commentators suggested that the proposed NSR amendments should be revised to exclude fugitive emissions in the context of major source determinations for PM_{2.5}, except for source categories specifically listed in the federal regulations. Further, the Department should follow the federal rule (as it continues to be developed) with respect to the consideration of fugitive emissions in the evaluation of emission increases caused by modification projects. In prior applications of the NSR rules, the Department has made the determination that fugitive emissions should be considered in determining the potential to emit, actual emissions and actual emission increases associated with a new or modified facility. In this context, the Department has relied on the language of 25 Pa. Code § 127.204, which notes that such determinations must include "flue emissions, stack and additional fugitive emissions, material transfer, use of parking lots and paved and unpaved roads on the facility property, storage piles....." In this respect, the Department's application of the Pennsylvania rule is more stringent than its federal counterpart, which provides that fugitive emissions shall not be included in determining whether a source is a major stationary source unless the source belongs to a category of sources specifically listed in the federal regulations, as derived pursuant to section 302(j) of the Clean Air Act, 42 U.S.C.A. § 7602(j) ("CAA").

One commentator further specified this aspect of Pennsylvania's NSR program could affect many more sources than intended under the federal program, and would have an even more extreme effect than the consideration of fugitive emissions of volatile organic compounds ("VOC") and nitrogen oxides ("NO_x") in the context of ozone nonattainment. In addition, because calculation methods for such sources may be imprecise, emissions of fugitive PM_{2.5} may be overestimated.

The commentators stated that the fugitive emission sources have not been previously accounted for in any PM_{2.5} attainment plan for Pennsylvania. The Department should not rely on the inclusion of fugitive emissions of criteria air pollutants in that context to demonstrate attainment and maintenance of federally mandated National Ambient Air Quality Standards ("NAAQS"). For attainment planning purposes, the Department should ensure the imposition and enforcement of existing Chapter 123 fugitive dust requirements or otherwise impose best management plans for control of fugitive PM_{2.5} emissions in order to control such emissions. From a regulatory standpoint, existing provisions governing the consideration of fugitive emissions in NSR applicability determinations have not been extended to PM_{2.5}, and the Board should not seek to

do so in the context of this rulemaking. Proper handling of this issue at the outset will avoid a future contention that the requirement cannot be changed due to the anti-backsliding provisions of section 172(e) of the CAA, 42 U.S.C.A. 172(e). [sic]

One of the commentators specified that § 127.204(a) includes "use of parking lots and paved and unpaved roads on the facility property." Similar words do not appear in the description of "fugitive emissions" in the federal rules. This commentator expressed concern that the proposed regulation would impose a regulatory framework that is well beyond the intent of federal rules and standards, and would create unnecessary costs and restrict competition and economic growth. (3, 7, 8)

Response: The Board did not propose amendments to § 127.203(b)(1) at 40 Pa.B. 703 (February 6, 2010). In January 1994, the Board adopted a major facility provision for new source review purposes that includes fugitive emissions when determining NSR applicability (24 Pa.B. 443, January 15, 1994). The more stringent than provisions were determined by the Board to be reasonably necessary to attain and maintain the NAAQS. The 1994 major facility provision, which was approved by the EPA at 62 FR 64722 (December 9, 1997), as a revision to the SIP and codified in 40 CFR 52.2020, includes fugitive emissions from all sources when determining the status of a major facility, rather than considering fugitives for just the 28 source categories listed in the Federal definition of the term "major stationary source" found at 40 CFR 51.165(a)(1)(iv)(A).

In order to attain and maintain the NAAQS, the Department has implemented and enforced the prohibition against fugitive emissions in the outdoor atmosphere from air contamination sources since 1971 in accordance with 25 Pa. Code § 123.1 (relating to prohibition of certain fugitive emissions). Since the nonattainment NSR program, codified in 25 Pa. Code Chapter 127, Subchapter E (relating to new source review), was amended on January 15, 1994, the Department has relied on the inclusion of fugitive emissions of all criteria pollutants, including particulate matter, CO and ozone and its precursors, VOC and NO_x, from all sources for major facility determinations. These provisions, which are approved elements of the Commonwealth's State Implementation Plan, must be maintained to satisfy the anti-backsliding provisions of sections 110 and 193 of the CAA (42 U.S.C.A. §§ 7410 and 7515).

20. Comment: Two commentators indicated that the proposed language at §§ 127.203(b)(2) and (3) would add ambiguous language that could render these provisions more stringent than the present requirements. First, §§ 127.203(b)(2) and (3) would be amended to clarify that "emissions from the proposed project" would be included in determining whether the facility potential to emit is greater than 100 tons or less than 100 tons for these purposes. Since there is a benefit under paragraph (b)(2) for sources with a potential to emit less than 100 tons per year (the substitution of BACT for LAER), this "clarification" would render that benefit unavailable to certain facilities for which potential to emit would increase above 100 tons per year only after a proposed project is operational. The commentators suggested keeping the existing regulatory language unchanged. (3, 7)

Response: The provisions under § 127.203(b) apply to the owners and operators of facilities located in Bucks, Chester, Delaware, Montgomery and Philadelphia counties that emit or have the potential to emit at least 25 TPY of VOCs or NO_x. The requirements at § 127.203 were

amended at 37 Pa.B. 2385 (May 19, 2007). These amendments were submitted to the EPA on August 9, 2007, as an equivalency demonstration and revision to the SIP. These provisions are based on sections 182(c)(7) and (8) of the CAA (42 U.S.C.A. §§ 7511a(c)(7) and (8)), which establish special rules for modifications of sources in serious or severe ozone nonattainment areas. The “emissions from the proposed project” language provided in §§ 127.203(b)(2) and (3) is deleted from the final-form regulation. However, the emissions from the proposed project must be included with the existing facility potential to emit (PTE) to determine whether the facility emissions are more than 100 TPY for consideration of the applicability of control technology requirements such as best available control technology (BACT) or LAER under §§ 127.203(b)(2) and (3).

21. Comment: Two commentators stated that the proposed NSR amendments would add a sentence to § 127.203(b)(1)(i), stating that “the aggregated VOC or NO_x emissions must meet the applicability requirements of paragraph (2) or (3).” The commentators indicated that when evaluated in the context of subparagraphs (2) and (3), use of the phrase “aggregated emissions” is ambiguous, especially in light of the language discussed above related to inclusion of the “emissions of the proposed project” in the source’s potential to emit. For example, if the “aggregated emissions” are intended to be equivalent to the “emissions of the proposed project” that would be included in the source’s potential to emit for these purposes, there may be some double-counting of emissions toward the source’s potential to emit (i.e. some portion of the aggregated emissions would already be accounted for in the source’s potential to emit). This language should be clarified, and should not require emissions associated with a proposed project (aggregated or otherwise) to be included within the determination of potential to emit for application of §§ 127.203(b)(2) and (3). (3, 7)

Response: The Board proposed clarifying language in the proposed rulemaking published at 40 Pa.B. 703 that the aggregated VOC or NO_x emissions must meet the applicability requirements of §§ 127.203(b)(2) or (3). This language clarifies that the applicant needs to use the provisions in §§ 127.203(b)(2) or (3) for a determination of control technology requirements when the net emissions increase is equal to or exceeds the applicable emissions rate that is significant (25 TPY of NO_x or VOCs). Subsections 127.203(b)(2) and (3) do not require aggregation of emissions, therefore there is no double-counting of emissions toward the source’s potential to emit as indicated in the comments. The Board intends to retain the proposed language in the final-form regulation.

Contemporaneous Period

22. Comment: With respect to § 127.203a, a commentator stated that in order to determine if a project will result in a net significant increase, it is required to add increases and decreases in actual emissions of a regulated pollutant that occurred at the facility during the contemporaneous period. The contemporaneous period is defined as the date between 5 years before construction on the project commences and the date that construction is completed. Under the so-called “PM₁₀ Surrogate Policy,” the EPA allows the use of PM₁₀ emissions as a surrogate for PM_{2.5} in NSR applicability determinations. Therefore, many facilities that used the Surrogate Policy in permit applications do not have actual PM_{2.5} contemporaneous emissions. In order to avoid overestimating PM_{2.5} actual contemporaneous emissions, we recommend that the 5- and 10-year aggregation periods described in this section be started prospectively after the effective date of

the rule. The commentator states further, however, that this is a long shot and may be in conflict with the proposed change to allow generating ERCs for reductions accruing after 04/5/2005. (1)

Response: In light of the concerns raised and the unavailability of emission offsets for PM_{2.5} nonattainment areas, the final-form rulemaking will not require the aggregation of de minimis emissions for PM_{2.5} and PM_{2.5} precursors. Section 127.203a(a)(2) in the final-form regulation has been revised to specifically exclude PM_{2.5} and PM_{2.5} precursors, as follows:

“As part of the plan approval application for a proposed de minimis emission increase, the owner or operator of the facility shall use subparagraphs (i) and (ii) to calculate the net emissions increase **FOR A REGULATED NSR POLLUTANT EXCEPT PM2.5 AND PM2.5 PRECURSORS.** For a proposed de minimis increase in which the net emissions increase calculated using subparagraphs (i) and (ii) meets or exceeds the emissions rate that is significant, only the emissions offset requirements [**in § 127.205(3) (relating to special permit requirements)**] **of this subchapter** apply to the net emissions increase.”

23. Comment: The Board should clarify the provisions of § 127.203(b)(1) that 5-year contemporaneous aggregation is required only for proposed emission increases that exceed the significant emission rate for a pollutant, and that 10-year contemporaneous aggregation is required only for proposed emission increases that are de minimis. (3)

Response: The Board did not propose amendments to § 127.203(b)(1) at 40 Pa.B. 703. The current requirements in § 127.203 were published at 37 Pa.B. 2385 (May 19, 2007). These 2007 amendments were submitted to the EPA on August 9, 2007, as an equivalency demonstration and revision to the SIP. The requirements at §§ 127.203(b)(1)(i) and (ii) specify that the net emissions increase be calculated using 5-year and 10-year contemporaneous aggregation provisions. First, the owner or operator needs to calculate the net emissions increase using 5-year contemporaneous aggregation provisions at § 127.203(b)(1)(i). If the net emissions increase is equal to or exceeds the applicable emissions rate that is significant (25 TPY of NO_x or VOCs), the owner or operator needs to use the provisions in subsections 127.203(b)(2) or (3) for the applicability of control technology requirements. If the emissions increase due to the project does not exceed the listed applicable rate, then the owner or operator needs to use the de minimis emissions increase calculation for the 10-year period aggregation of § 127.203(b)(1)(ii) to calculate the net emissions increase.

24. Comment: The commentator requested that the Department issue guidance or amend the language at § 127.203a(a)(5)(iii) that if the projected actual emissions for a regulated NSR pollutant are in excess of the baseline actual emissions and the project results in a net emissions increase which equals or exceeds the applicable significant emissions rate, then the projected actual emissions for the regulated NSR pollutant must be incorporated into the required plan approval or the operating permit as an emission limit. (3)

Response: The final rulemaking clarifies that the projected actual emissions are incorporated as a permit limit when the projected actual emissions minus the excludable emissions (emissions following completion of the project that the existing unit could have accounted for prior to the change and that are also unrelated to the change) exceed the baseline actual emissions.

25. Comment: The commentator requested that § 127.201(g) be deleted or suggested that the requirements be modified for consistency with the Federal regulation. (4)

Response: The Board will amend § 127.201(g) (relating to general requirements) to include condensable emissions in determining whether a source is subject to the major source NSR program beginning January 1, 2011, or earlier date established by the EPA. After January 1, 2011, all sources need to include PM_{2.5} condensable emissions in applicability determinations.

Appendix A

Copies of two 1-page summaries submitted for this rulemaking are attached.

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