

US EPA ARCHIVE DOCUMENT

NO<sub>x</sub> POLICY DOCUMENTS FOR THE  
CLEAN AIR ACT OF 1990  
(SUMMARY OF DOCUMENTS  
EPA-452/R-96-005  
MARCH 1996)

OZONE POLICY AND STRATEGIES  
GROUP

This document includes a table of contents and a summary of NO<sub>x</sub> Policy documents issued by the Ozone Policy and Strategies Group (OPSG) in the Office of Air Quality Planning and Standards since the Clean Air Act Amendments of 1990. The documents are located on the Clean Air Act Amendments portion of the TTN Bulletin Board, NO<sub>x</sub> subdirectory of the Ozone directory. A limited number of hard copies of the entire guidance, summaries and memoranda are available from Ted Creekmore of the OPSG at 919-541-5699.

Table of Contents and Key Words/Issues

COMPLETED NOX ACTIONS RELATED TO OZONE POLICY

1. Nitrogen Oxides Supplement to the General Preamble (57 FR 55620, 11-25-92)

Key words/issues: NOx issues not discussed in the April 16, 1992 General Preamble; including NOx RACT, new source review, interaction of Title I and IV, ozone transport regions, section 185 B report and section 182(f). (page 1)

2. Questions & Answers on Nitrogen Oxides Emissions Policy (2-2-93 T. Helms memo to Air Branch Chiefs, Regions I-X)

Key words/issues: Modeling; Deadline for implementing NOx RACT rules; NOx RACT Committal SIPs. (page 14)

3. Fuel Switching to Meet the Reasonably Available Control Technology Requirements for Nitrogen Oxides (July 30, 1993 M. Shapiro memo to EPA Regional Office Division Directors)

Key words/issues: Electric power utilities; switch to natural gas; in the summertime. (page 19)

4. SIP Requirements for Areas Submitting Requests for Redesignation to Attainment of Ozone and CO NAAQS on or after November 15, 1992 (9-17-93 M. Shapiro memo to EPA Regional Office Division Directors)

Key words/issues: NOx RACT exemption request; areas redesignating to attainment. (page 33)

5. NOx Substitution Guidance (December, 1993)

Key words/issues: Substitution of NOx reductions for VOC reductions; post 1996 reasonable further progress. (page 43)

6. Guideline for Determining the Applicability of NOx Requirements Under Section 182(f) (December 16, 1993)

Key words/issues: Exemption from NOx requirements; criteria. (page 54)

7. Nitrogen Oxides (NOx) Reasonably Available Control Technology for the Repowering of Utility boilers (3-9-94 J. Seitz memo to EPA Regional Office Division Directors)

Key words/issues: Replacement of existing boilers. (page 86)

8. Cost-Effective Nitrogen Oxides (NOx) Reasonably Available Control Technology (3-16-94 K. Berry memo to EPA Regional Office Division Directors)

Key words/issues: NOx RACT; Cost effectiveness; cost, and emission reductions. (page 91)

9. Nitrogen Oxides Questions from the Ohio EPA (3-30-94 T. Helms

memo to the Air Enforcement Branch, Region V)

Key words/issues: Seasonal NOx RACT rules; 30 day rolling average; NOx emission trading; Fuel switching; NOx compliance schedules. (page 96)

10. Section 182 (f) NOx Exemptions--Revised Process and Criteria (5-27-94 J. Seitz memo to EPA Regional Office Division Directors)  
Key words/issues: NOx RACT exemptions; process; clean data areas. (page 100)

11. Conformity: General Preamble for Exemption from Nitrogen Oxides Provisions: (6-17-94 59 FR 31238; Office of Mobile Sources General Preamble)  
Key words/issues: Conformity; NOx. (page 110)

12. RACT and Innovative Control Technology Projects (7-5-94 J. Seitz memo to EPA Regional Office Division Directors)  
Key words/issues: Extension of the NOx RACT compliance date; innovative controls; environmental benefits. (page 115)

13. Clarification of Policy for NOx Substitution (8-5-94 J. Seitz memo to EPA Regional Office Division Directors)  
Key words/issues: NOx substitution; attainment plans. (page 119)

14. De Minimis Values for NOx RACT (1-1-95 T. Helms memo to Air Branch Chief, Region I - X)  
Key words/issues: Gas turbine; Internal combustion engines; Process heaters; boilers; de minimis; NOx RACT. (page 123)

15. Scope of NOx Exemptions (1-12-95 T. Helms memo to Air Branch Chiefs, Region I - X)  
Key words/issues: Effect of EPA granting a NOx exemption. (page 151)

16. Section 182(f) NOx Exemptions--Revised Process and Criteria (2-8-95 J. Seitz memo to EPA Regional Office Division Directors)  
Key words/issues: NOx exemptions; interstate transport; section 110(a)(2)(D). (page 154)

17. September 12, 1995 letter from J. Seitz to the Mid-Atlantic Regional Air Management Association, the Northeast States for Coordinated Air Use Management, and the Ozone Transport Commission  
Key words/issues: New source review; attainment demonstrations; Reasonable further progress; geographic considerations. (page 157)



## INTRODUCTION

Title I of the Clean Air Act Amendments of 1990 contains many new and revised requirements for areas that have not attained the air quality standards for criteria pollutants including ozone and nitrogen dioxide. The EPA developed a guidance document, called the General Preamble to Title I to assist States regarding the interpretation of the various provisions of Title I. The general preamble was published on April 16, 1992.

On November 25, 1992, EPA proposed additions to the original General Preamble where it did not cover certain provisions regarding nitrogen dioxide (the control of which is referred to as nitrogen oxides(NOx)). This document includes a copy of the November preamble and several other guidelines and policy memorandum which EPA wrote to explain NOx policy in the Act. The guidelines and memorandums can be grouped as follows:

- Questions and answers that cover such issues as dispersion modeling, deadlines for implementing NOx RACT rules, and NOx RACT Committal SIPs, (RACT means Reasonably Available Control Technology)
- Fuel Switching to meet the RACT requirements for Nitrogen Oxides
- Relationship of NOx RACT requirements to requests for redesignation to attainment for ozone and carbon monoxide
- NOx Substitution Guidance
- Requests for NOx RACT exemptions under Section 182(f) of the Act
- NOx RACT for repowering of utility boilers
- Cost-effective estimates for NOx RACT
- Failure to submit NOx RACT rules
- Deminimis Values for NOx RACT Rules

Document 1 (D-1)

State Implementation Plan; Nitrogen Oxides Supplement  
to the General Preamble for the Implementation of Title I of  
the Clean Air Act Amendments of 1990  
(11-25-92, 57 FR 55620)

This action supplements the original General Preamble (April 16, 1992) by adding provisions concerning emissions of nitrogen oxides (NO<sub>x</sub>). Specifically, the General Preamble did not include a discussion of the new NO<sub>x</sub> provisions with respect to the following topics: RACT, NSR, interaction of titles I and IV, ozone transport regions, section 185B report, and Section 182(f).

Questions and Answers on Nitrogen Oxides Emission Policy  
(2-2-93)

On November 25, 1992, the NOx supplement to the April 16, 1992 General Preamble was published. As the States incorporated this guidance into their rule development process, policy questions rose. This memorandum responds to several NOx questions involving modeling, the deadline for implementing NOx RACT rules, and EPA policy on NOx RACT committal SIPs. It also announces the formation of a NOx policy work group, and includes a list of group members.



Fuel Switching to Meet the Reasonably Available Control  
Technology Requirements for Nitrogen Oxides  
(July 30, 1993)

Under the Clean Air Act, States are required to adopt rules to control emissions from major stationary sources of NO<sub>x</sub>. Typically, those controls have involved modifications to combustion equipment, such as installation of low NO<sub>x</sub> burners.

The new EPA policy allows States to adopt rules that permit utilities to control NO<sub>x</sub> emission by switching to cleaner fuels during the summertime ozone season. It stipulates that the NO<sub>x</sub> emission reductions must be equal to or greater than emission reductions that would have occurred had there been no switch to the cleaner fuel.

SIP Requirements for Areas Submitting Requests for  
Redesignation to Attainment of Ozone and CO  
NAAQS on or after November 15, 1992  
(September 17, 1993)

This memorandum addresses State requests to redesignate from nonattainment to attainment of the ozone and CO NAAQS under section 107. It also allows NO<sub>x</sub> RACT exemptions for areas redesignating to attainment.

NOx Substitution Guidance  
(December, 1993)

Title I of the Clean Air Act (Act) mandates a 15% reduction of volatile organic compound (VOC) emissions from the 1990 base inventory by November, 1996 in all ozone nonattainment areas classified moderate and above. Areas classified serious and above must achieve the 3 % per year VOC reductions past November, 1996 as part of the reasonable further progress (RFP) provision in the Act. However, the Act allows the post-1996 RFP plan to accommodate a less than 3 % per year VOC reduction if it can be demonstrated that substitution of NOx emission reductions (for VOC reductions) yields equivalent ozone reductions.

This guidance is designed to introduce greater flexibility in developing ozone attainment strategies by utilizing NOx emission reductions for meeting RFP requirements after 1996.

Guideline for Determining the Applicability of  
NOx Requirements Under Section 182(f)  
(December, 1993)

The Clean Air Act (Act) includes provisions in section 182(f) to control emissions of nitrogen oxides (NOx) in certain ozone nonattainment areas and ozone transport regions. Section 182(f) also specifies circumstances under which the new NOx requirements would be limited or would not apply. This document describes EPA's views on how EPA should interpret section 182(f) and the circumstances under which EPA would determine that the new NOx requirements would be limited or would not apply.

Nitrogen Oxides (NOx) Reasonably Available Control  
Technology for the Repowering of Utility boilers  
(March 9, 1994)

This memorandum provides guidance on the determination of NOx RACT in cases where a utility commits to repower its boiler in the near future.<sup>1</sup> The guidance is intended primarily for use by State and local air pollution control agencies as they develop and adopt NOx RACT rules for incorporation into their State implementation plans as required under section 182 of the Clean Air Act. The guidance is generally applicable to other source categories including turbines and process heaters.

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<sup>1</sup>"Repowering" is defined in section 402 of the Act and generally means the replacement of an existing boiler with a technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.

Cost-Effective Nitrogen Oxides (NOx) Reasonably  
Available Control Technology  
(3-16-94)

This memorandum provides guidance for determining NOx RACT as it relates to nonutility sources and utility boilers which were not addressed by the Environmental Protection Agency's (EPA's) previous guidance. The NOx supplement to the general preamble (November 25, 1992, 57 FR 55625) identifies emission rates that presumptively meet the NOx RACT requirement for tangential and dry bottom wall-fired utility boilers. The guidance goes on to state that, for other major NOx sources, EPA expects that NOx RACT will be set at levels that are "comparable" to the levels specified for tangential and dry bottom wall-fired utility boilers. The guidance states that: "Comparability shall be determined on the basis of several factors including, for example, cost, cost-effectiveness, and emission reductions." This memorandum primarily addresses one of the factors in a NOx RACT determination--cost effectiveness--and provides guidance on how to determine which control techniques are of "comparable cost-effectiveness for NOx RACT." In addition, this memorandum provides limited discussion of other factors, including emission reductions.

Nitrogen Oxides Questions from the Ohio EPA  
(3-30-94)

This memorandum addresses the NOx reasonably available control technology (RACT) issues raised in a November 30, 1993 memorandum from Richard Schleyer, EPA Region V, to John Silvasi. The issues include the following: Seasonal NOx RACT rules; 30 day rolling average; NOx emission trading; Fuel switching; and NOx compliance schedules.

Section 182 (f) NO<sub>x</sub> Exemptions-Revised Process and Criteria  
(5-27-94)

This memorandum presents updated guidance on how EPA reviews and processes requests for exemption from the NO<sub>x</sub> RACT requirements under section 182(f) of the Clean Air Act (Act). It also revises certain guidance previously issued concerning NO<sub>x</sub> exemptions for areas outside the ozone transport region that have air quality monitoring data showing attainment.



Conformity: General Preamble for Exemption from  
Nitrogen Oxides Provisions  
(6-17-94 FR; 59 FR 31238)

This General Preamble clarifies how EPA believes that nonclassifiable (i.e., submarginal, transitional, and incomplete/no data) ozone nonattainment areas which are outside the Northeast ozone transport region and have ambient monitoring data demonstrating attainment of the national ambient air quality standard for ozone may be exempted from the conformity rules' nitrogen oxides (NOx) requirements. This notice also references a recent memorandum which states EPA's preliminary interpretation for such ozone nonattainment areas which are classified as marginal or above.

RACT and Innovative Control Technology Projects  
(7-5-94 J. Seitz)

The Environmental Protection Agency has been asked to consider whether a State may define RACT for nitrogen oxides (NO<sub>x</sub>) as a phased program extending beyond May 31, 1995 for sources that are actively developing innovative control technology. Because of the important environmental benefits associated with encouraging innovative technology, EPA has determined that States may, in certain cases involving innovative technology, define NO<sub>x</sub> RACT as a stage-by-stage program of measures in order to accommodate the source's development and installation of the innovative controls. This memorandum provides guidance on how EPA would process and approve innovative such controls.

Clarification of Policy for NO<sub>x</sub> Substitution  
(8-5-94 J. Seitz)

The purpose of this memorandum is to clarify past guidance issued by the Environmental Protection Agency (EPA) on NO<sub>x</sub> substitution for the post-1996 rate-of-progress (ROP) plans. Specifically, this memorandum clarifies what the EPA will accept as evidence that NO<sub>x</sub> substitution for volatile organic compounds (VOC) reductions is a viable approach for meeting post-1996 ROP requirements prior to completion of modeling supporting an area's attainment demonstration.

De Minimis Values for NOx RACT  
(1-1-95 T. Helms)

This memorandum presents information that is useful to persons reviewing RACT rules with respect to de minimis values for NOx RACT.

The RACT requirements apply to major stationary sources in certain ozone nonattainment areas and throughout an ozone transport region. A source generally consists of several units which emit pollutants to the atmosphere. The sum of emissions from all units at a facility determines if a unit is major and, thus, subject to the RACT requirements. However, certain units at a facility may be so small that it is clear that no controls are reasonably available for those units, although RACT would still apply at the other units within the facility.

Scope of NOx Exemptions  
(1-12-95 T. Helms)

This memorandum addresses the effects of EPA action to grant an exemption under section 182(f) of the Clean Air Act. Specifically, the issue was raised as to whether a NOx exemption can be made applicable only to NOx Reasonably Available Control Technology (RACT). As described below, where EPA grants a NOx exemption under section 182(f), the exemption applies to RACT, nonattainment New Source Review (NSR), conformity; and inspection/maintenance (I/M).

(Note: This has been modified for conformity--see 60 FR 57179, 11-14-95.)

Section 182(f) NOx Exemptions--Revised Process and Criteria  
(2-8-95 J. Seitz)

This memorandum clarifies guidance previously issued concerning NOx exemptions under section 182(f) of the Clean Air Act (Act) and interstate transport of emissions under section 110(a)(2)(D) of the Act. It decouples NOx exemptions under section 182(f) from interstate transport of emissions under section 110(a)(2)(D), and reiterates policy in document 17 (D-17) under the office directors signature. The policy in D-17 states that, "where EPA grants a NOx exemption under section 182(f), the exemption applies to RACT, nonattainment new source review, conformity, and inspection/maintenance.

(Note: This guidance has been modified for conformity--see 60 FR 57179, 11-14-95.)

157

D-17

Letter from John Seitz, Director, Office of Air Quality  
Planning and Standards to Bruce Carhart, Executive Director,  
Ozone Transport Commission  
(9-12-95)

The letter provided a formal response to Mr. Carhart's  
September 16, 1994 letter, which posed specific questions on  
interstate trading and new source review (NSR) under the nitrogen  
oxides (NOx) emissions budget concept. Major issues discussed  
are as follows:

-Geographical and Interstate Considerations

-New Source Review Considerations

Identical letters were sent to Mr. Jason Grumet, Northeast States  
for Coordinated Air Use Management and to Mr. James Hambright,  
Mid-Atlantic Regional Air Management Association

