

Virginia Regulatory Town Hall

Final Regulation Agency Background Document

Agency Name:	State Air Pollution Control Board
Regulation Title:	Regulations for the Control and Abatement of Air Pollution
Primary Action:	9 VAC 5 Chapter 40, Article 4 (Rule 4-4)
Secondary Action(s):	9 VAC 5 Chapter 40, Article 8 (Rule 4-8)
Action Title:	Control of Nitrogen Oxides from Stationary Sources (Rev.A99)
Date:	October 2, 2001

Please refer to the Administrative Process Act (§ 9-6.14:9.1 et seq. of the Code of Virginia), Executive Order Twenty-Five (98), and the Virginia Register Form, Style and Procedure Manual for more information and other materials required to be submitted in the final regulatory action package.

Summary

Please provide a brief summary of the new regulation, amendments to an existing regulation, or the regulation being repealed. There is no need to state each provision or amendment or restate the purpose and intent of the regulation.

Rule 4-4 provides a legal mechanism whereby the Board is required to make source specific Reasonable Available Control Technology (RACT) determinations for all currently known major sources subject to source specific NO_x RACT requirements under the federal Clean Air Act. Amendments are being proposed to delete the provisions that address seasonal applicability, certain exemptions and the emission allocation system.

Rule 4-8 establishes emission limits along with compliance testing, monitoring, recordkeeping and reporting requirements for fuel burning equipment. Amendments are being proposed to establish an emissions rate limit for nitrogen oxides for electric generating units and non-electric generating units and create a compliance averaging plan to provide flexibility for the sources subject to the regulation. However, it is appropriate that the proposed changes to Rule 4-8 be withdrawn and not adopted in order to avoid any confusion between this regulation (Rule 4-8) and the Virginia NO_x Emissions Trading Regulation, (i.e. NO_x SIP Call) currently under development.

Substantial Changes Made Since the Proposed Stage

Please briefly and generally summarize any substantial changes made since the proposed action was published. Please provide citations of the sections of the proposed regulation that have been substantially altered since the proposed stage.

Rule 4-4:

No substantial changes have been made since the proposed action was published.

Rule 4-8:

Remove all proposed changes to Rule 4-8 with the exception of the strike-out “these regulations” and adding “the Regulations for the Control and Abatement of Air Pollution” in 9 VAC 5-40-890 A.

The following is the list of changes to be withdrawn:

1. Delete definitions for “Btu”, “Combined cycle system”, “Combustion turbine”, “Continuous emission monitoring system” or “CEMS”, “Electric generating unit”, “Generator”, “Fossil-fuel fired”, “MWe”, “mmBtu”, “Nameplate capacity”, “Non-electric generating unit”, “Opt-in unit”, “Ozone season”, “Ozone season heat input”, and “Ton”. [9 VAC 5-40-890 C]
2. Delete provisions that established a NO_x emission standard for electric generating units and non-electric generating units which applies to existing, new or modified sources. This standard will not override any existing permit or other regulatory requirements. [9 VAC 5-40-925 A]
3. Delete provisions to establish the NO_x emissions rate limit for electrical generating units as 0.25 lb/mmBtu of heat input or 65 percent reduction from 1990 emission rates (lb/mmBtu), whichever is less stringent. [9 VAC 5-40-925 B]
4. Delete provisions to establish the NO_x emissions rate limit for non-electrical generating units as the levels specified in Table 4-4C of 9 VAC 5-40-311 or 46 percent reduction from 1990 (or another year more representative of normal operating conditions) emission rates (lb/mmBtu), whichever is less stringent. [9 VAC 5-40-925 C]
5. Delete provisions to establish that the new NO_x emissions standard for electrical and non-electrical units only applies during the ozone season. [9 VAC 5-40-925 D]
6. Delete provisions that establish a violation if an owner does not demonstrate compliance by November 1 of each year. [9 VAC 5-40-925 E]

7. Delete provisions that allow for emissions averaging during the ozone season through a NOx emissions compliance demonstration. [9 VAC 5-40-926 A]
8. Delete provisions that establish which units may be included in the compliance demonstration and require a baseline NOx emission rate to be established for all units included in the compliance demonstration. [9 VAC 5-40-926 B]
9. Delete provisions that describe the formula to be used to average NOx emissions for the compliance demonstration. [9 VAC 5-40-926 C]
10. Delete provisions to allow the owners of sources not subject to the regulation to “opt-in” to the program provided they meet the monitoring and compliance demonstration sections of the regulation. Tons sold by the “opt-in” sources could be purchased and used by an owner of a source subject to the regulation, if necessary, in the compliance demonstration. [9 VAC 5-40-926 D]
11. Delete provisions to require submittal of the compliance demonstration by November 1 of each year. [9 VAC 5-40-926 E]
12. Delete provisions to identify specific documents be included in the compliance demonstration. [9 VAC 5-40-926 F]
13. Delete provisions to allow the use of NOx credits from sources outside the Commonwealth provided specific conditions are met. [9 VAC 5-40-926 G]
14. Delete provisions to allow the use of early reduction credits (ERCs) in the compliance demonstration provided they meet the requirements of 9 VAC 5-40-928. [9 VAC 5-40-926 H]
15. Delete provisions to allow the use of banked NOx emissions credits in the compliance demonstration provided the banking plan has been approved by and is in a format acceptable to the Board. [9 VAC 5-40-927]
16. Delete provisions to allow the generation of ERCs provided specific requirements are met. [9 VAC 5-40-928]
17. Delete a date for sources subject to the regulation to submit a control program which provides for compliance by May 1, 2004. [9 VAC 5-40-980 B]
18. Delete the requirement that all sources subject to 9 VAC 5-40-925 shall install, calibrate, maintain and operate systems for continuously monitoring and recording specified emissions in accordance with 40 CFR Part 75, subpart H. Sources which opt-in to the program must also meet the monitoring requirements. [9 VAC 5-40-1000 E]

Statement of Final Agency Action

Please provide a statement of the final action taken by the agency, including the date the action was taken, the name of the agency taking the action, and the title of the regulation.

On September 20, 2001, the State Air Pollution Control Board adopted final amendments to regulations entitled "Regulations for the Control and Abatement of Air Pollution", specifically Regulations for the Control and Abatement of Air Pollution (9 VAC Chapter 40, Articles 4 and 8). The regulation amendments are to be effective on January 1, 2002.

Basis

Please identify the section number and provide a brief statement relating the content of the statutory authority to the specific regulation adopted. Please state that the Office of the Attorney General has certified that the agency has the statutory authority to adopt the regulation and that it comports with applicable state and/or federal law.

Section 10.1-1308 of the Virginia Air Pollution Control Law (Title 10.1, Chapter 13 of the Code of Virginia) authorizes the State Air Pollution Control Board to promulgate regulations abating, controlling and prohibiting air pollution in order to protect public health and welfare. Written assurance from the Office of the Attorney General that (i) the State Air Pollution Control Board possesses the statutory authority to promulgate the proposed regulation amendments and that (ii) the proposed regulation amendments comport with the applicable state and/or federal law is available upon request.

Purpose

Please provide a statement explaining the rationale or justification of the regulation as it relates to the health, safety or welfare of citizens.

The purpose of the regulation is to require the owners of large stationary NO_x sources to limit air emissions to a specified level necessary to protect public health and welfare. The regulation amendments are being proposed to make the state version of the non-CTG NO_x RACT rule consistent with the federally approved version.

Substance

Please identify and explain the new substantial provisions, the substantial changes to existing sections, or both where appropriate. Please note that a more detailed discussion is required under the statement providing detail of the changes.

1. Delete the provision that pertains to the seasonal applicability for the NO_x RACT requirements.
2. Delete the provisions that provide an exemption from the RACT requirement for any steam generating unit, process heater or gas turbine with a rated capacity of less than

100,000,000 Btu per hour and any combustion unit with a rated capacity of less than 50,000,000 Btu per hour.

3. Delete the provisions that provide for an emission allocation system to meet the RACT requirement.

Issues

Please provide a statement identifying the issues associated with the regulatory action. The term "issues" means: 1) the primary advantages and disadvantages to the public of implementing the new or amended provisions; and 2) the primary advantages and disadvantages to the agency or the Commonwealth. If there are no disadvantages to the public or the Commonwealth, please include a sentence to that effect.

1. Public: The primary advantage to the general public is air quality improvement with limited regulatory confusion. The Commonwealth is required to submit regulations to EPA for approval into the State Implementation Plan (SIP). Rule 4-4 provides a legal mechanism whereby the Board is required to make source specific Reasonable Available Control Technology (RACT) determinations for all currently known major sources subject to source specific NO_x RACT requirements under the federal Clean Air Act. The amendments delete the provisions that address seasonal applicability, certain exemptions and the emission allocation system since these provisions were not approved by EPA and included into the SIP. This action will insure that the federal version of the regulations and the state version are identical and, therefore, prohibit any confusion for the regulated community as to which version of the regulation they must comply with. There are no disadvantages to the public with regard to this regulatory action.

2. Department: The primary advantage to the Department is the same as that for the general public, air quality improvement with limited regulatory confusion. By ensuring that the state version of the regulation is consistent with the federal approved version the department can ensure consistency in regulation interpretation and program implementation. There are no disadvantages to the Department with regard to this regulatory action.

Public Comment

Please summarize all public comment received during the public comment period and provide the agency response. If no public comment was received, please include a statement indicating that fact.

A summary and analysis of the public testimony, along with the basis for the decision of the Board, is attached.

Detail of Changes

Please detail any changes, other than strictly editorial changes, made since the publication of the proposed regulation. This statement should provide a section-by-section description of changes.

Rule 4-4:

No changes, other than strictly editorial changes, have been made since the proposed regulation was published.

Rule 4-8:

Remove all proposed changes to Rule 4-8 with the exception of the strike-out “these regulations” and adding “the Regulations for the Control and Abatement of Air Pollution” in 9 VAC 5-40-890 A.

The following is the list of changes to be withdrawn:

1. Delete definitions for “Btu”, "Combined cycle system", "Combustion turbine", “Continuous emission monitoring system” or "CEMS", "Electric generating unit", "Generator", "Fossil-fuel fired", "MWe", "mmBtu", "Nameplate capacity", “Non-electric generating unit”, "Opt-in unit", “Ozone season”, “Ozone season heat input”, and “Ton”. [9 VAC 5-40-890 C]
2. Delete provisions that established a NO_x emission standard for electric generating units and non-electric generating units which applies to existing, new or modified sources. This standard will not override any existing permit or other regulatory requirements. [9 VAC 5-40-925 A]
3. Delete provisions to establish the NO_x emissions rate limit for electrical generating units as 0.25 lb/mmBtu of heat input or 65 percent reduction from 1990 emission rates (lb/mmBtu), whichever is less stringent. [9 VAC 5-40-925 B]
4. Delete provisions to establish the NO_x emissions rate limit for non-electrical generating units as the levels specified in Table 4-4C of 9 VAC 5-40-311 or 46 percent reduction from 1990 (or another year more representative of normal operating conditions) emission rates (lb/mmBtu), whichever is less stringent. [9 VAC 5-40-925 C]
5. Delete provisions to establish that the new NO_x emissions standard for electrical and non-electrical units only applies during the ozone season. [9 VAC 5-40-925 D]
6. Delete provisions that establish a violation if an owner does not demonstrate compliance by November 1 of each year. [9 VAC 5-40-925 E]
7. Delete provisions that allow for emissions averaging during the ozone season through a NO_x emissions compliance demonstration. [9 VAC 5-40-926 A]
8. Delete provisions that establish which units may be included in the compliance demonstration and require a baseline NO_x emission rate to be established for all units included in the compliance demonstration. [9 VAC 5-40-926 B]

9. Delete provisions that describe the formula to be used to average NOx emissions for the compliance demonstration. [9 VAC 5-40-926 C]
10. Delete provisions to allow the owners of sources not subject to the regulation to “opt-in” to the program provided they meet the monitoring and compliance demonstration sections of the regulation. Tons sold by the “opt-in” sources could be purchased and used by an owner of a source subject to the regulation, if necessary, in the compliance demonstration. [9 VAC 5-40-926 D]
11. Delete provisions to require submittal of the compliance demonstration by November 1 of each year. [9 VAC 5-40-926 E]
12. Delete provisions to identify specific documents be included in the compliance demonstration. [9 VAC 5-40-926 F]
13. Delete provisions to allow the use of NOx credits from sources outside the Commonwealth provided specific conditions are met. [9 VAC 5-40-926 G]
14. Delete provisions to allow the use of early reduction credits (ERCs) in the compliance demonstration provided they meet the requirements of 9 VAC 5-40-928. [9 VAC 5-40-926 H]
15. Delete provisions to allow the use of banked NOx emissions credits in the compliance demonstration provided the banking plan has been approved by and is in a format acceptable to the Board. [9 VAC 5-40-927]
16. Delete provisions to allow the generation of ERCs provided specific requirements are met. [9 VAC 5-40-928]
17. Delete a date for sources subject to the regulation to submit a control program which provides for compliance by May 1, 2004. [9 VAC 5-40-980 B]
18. Delete the requirement that all sources subject to 9 VAC 5-40-925 shall install, calibrate, maintain and operate systems for continuously monitoring and recording specified emissions in accordance with 40 CFR Part 75, subpart H. Sources which opt-in to the program must also meet the monitoring requirements. [9 VAC 5-40-1000 E]

Family Impact Statement

Please provide an analysis of the regulatory action that assesses the impact on the institution of the family and family stability including the extent to which the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

It is not anticipated that these regulation amendments will have a direct impact on families. However, there will be positive indirect impacts in that the regulation amendments will ensure that the Commonwealth's air pollution control regulations will function as effectively as possible, thus contributing to reductions in related health and welfare problems.

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COMMONWEALTH OF VIRGINIA
STATE AIR POLLUTION CONTROL BOARD
SUMMARY AND ANALYSIS OF PUBLIC TESTIMONY FOR
REGULATION REVISION A99
CONCERNING

Nitrogen Oxide Emissions from Stationary Sources
(9 VAC 5 CHAPTER 40)

INTRODUCTION

At the September, 2000 meeting, the Board authorized the Department to promulgate for public comment a proposed regulation revision concerning nitrogen oxide emissions from stationary sources.

A public hearing was advertised accordingly and held in Richmond on May 3, 2001 and the public comment period closed on June 12, 2001. The proposed regulation amendments subject to the hearing are summarized below followed by a summary of the public participation process and an analysis of the public testimony, along with the basis for the decision of the Board.

SUMMARY OF PROPOSED AMENDMENTS

The proposed regulation amendments concerned provisions covering the following rules:

Rule 4-4 provides a legal mechanism whereby the Board is required to make source specific Reasonable Available Control Technology (RACT) determinations for all currently known major sources subject to source specific NO_x RACT requirements under the federal Clean Air Act. Amendments are being proposed to delete the provisions that address seasonal applicability, certain exemptions and the emission allocation system.

Rule 4-8 establishes emission limits along with compliance testing, monitoring, recordkeeping and reporting requirements for fuel burning equipment. Amendments are being proposed to establish an emissions rate limit for nitrogen oxides for electric generating units and non-electric generating units and create a compliance averaging plan to provide flexibility for the sources subject to the regulation.

A summary of the amendments follows:

1. Deleted the requirement that the control of nitrogen oxides under section 9 VAC 5-40-310 shall apply only from May 1 through September 30. [9 VAC 5-40-310 G]

2. Deleted the definitions for "Combustion unit", Fuel burning equipment installation" and "Total capacity". [9 VAC 5-40-311 B 3]
3. Deleted the provisions that exempted from the RACT determination any steam generating unit, process heater or gas turbine with a rated capacity of less than 100,000,000 Btu per hour and any combustion unit with a rated capacity of less than 50,000,000 Btu per hour. [9 VAC 5-40-311 C 3 a, c]
4. Deleted the section that provided for an emissions allocation system. [9 VAC 5-40-311 D]
5. Added definitions for "Btu", "Combined cycle system", "Combustion turbine", "Continuous emission monitoring system" or "CEMS", "Electric generating unit", "Generator", "Fossil-fuel fired", "MWe", "mmBtu", "Nameplate capacity", "Non-electric generating unit", "Opt-in unit", "Ozone season", "Ozone season heat input", and "Ton". [9 VAC 5-40-890 C]
6. Added provisions that established a NO_x emission standard for electric generating units and non-electric generating units which applies to existing, new or modified sources. This standard will not override any existing permit or other regulatory requirements. [9 VAC 5-40-925 A]
7. Added provisions to establish the NO_x emissions rate limit for electrical generating units as 0.25 lb/mmBtu of heat input or 65 percent reduction from 1990 emission rates (lb/mmBtu), whichever is less stringent. [9 VAC 5-40-925 B]
8. Added provisions to establish the NO_x emissions rate limit for non-electrical generating units as the levels specified in Table 4-4C of 9 VAC 5-40-311 or 46 percent reduction from 1990 (or another year more representative of normal operating conditions) emission rates (lb/mmBtu), whichever is less stringent. [9 VAC 5-40-925 C]
9. Added provisions to establish that the new NO_x emissions standard for electrical and non-electrical units only applies during the ozone season. [9 VAC 5-40-925 D]
10. Added provisions that establish a violation if an owner does not demonstrate compliance by November 1 of each year. [9 VAC 5-40-925 E]
11. Added provisions that allow for emissions averaging during the ozone season through a NO_x emissions compliance demonstration. [9 VAC 5-40-926 A]
12. Added provisions that establish which units may be included in the compliance demonstration and require a baseline NO_x emission rate to be established for all units included in the compliance demonstration. [9 VAC 5-40-926 B]

13. Added provisions that describe the formula to be used to average NOx emissions for the compliance demonstration. [9 VAC 5-40-926 C]
14. Added provisions to allow the owners of sources not subject to the regulation to “opt-in” to the program provided they meet the monitoring and compliance demonstration sections of the regulation. Tons sold by the “opt-in” sources could be purchased and used by an owner of a source subject to the regulation, if necessary, in the compliance demonstration. [9 VAC 5-40-926 D]
15. Added provisions to require submittal of the compliance demonstration by November 1 of each year. [9 VAC 5-40-926 E]
16. Added provisions to identify specific documents be included in the compliance demonstration. [9 VAC 5-40-926 F]
17. Added provisions to allow the use of NOx credits from sources outside the Commonwealth provided specific conditions are met. [9 VAC 5-40-926 G]
18. Added provisions to allow the use of early reduction credits (ERCs) in the compliance demonstration provided they meet the requirements of 9 VAC 5-40-928. [9 VAC 5-40-926 H]
19. Added provisions to allow the use of banked NOx emissions credits in the compliance demonstration provided the banking plan has been approved by and is in a format acceptable to the Board. [9 VAC 5-40-927]
20. Added provisions to allow the generation of ERCs provided specific requirements are met. [9 VAC 5-40-928]
21. Established a date for sources subject to the regulation to submit a control program which provides for compliance by May 1, 2004. [9 VAC 5-40-980 B]
22. Require that all sources subject to 9 VAC 5-40-925 shall install, calibrate, maintain and operate systems for continuously monitoring and recording specified emissions in accordance with 40 CFR Part 75, subpart H. Sources which opt-in to the program must also meet the monitoring requirements. [9 VAC 5-40-1000 E]

SUMMARY OF PUBLIC PARTICIPATION PROCESS

A public hearing was held in Richmond, Virginia on May 3, 2001. Three persons attended the hearing, with two of those offering testimony; and one additional written comment was received during the public comment period. As required by law, notice of this hearing was given to the public on or about February 12, 2001 in the Virginia Register and in seven major newspapers (one in each Air Quality Control Region) throughout the Commonwealth. In addition, personal notice of this hearing and the opportunity to

comment was given by mail to those persons on the Department's list to receive notices of proposed regulation revisions. A list of hearing attendees and the complete text or an account of each person's testimony is included in the hearing report which is on file at the Department.

ANALYSIS OF TESTIMONY

Below is a summary of each person's testimony and the accompanying analysis. Included is a brief statement of the subject, the identification of the commenter, the text of the comment and the Board's response (analysis and action taken). Each issue is discussed in light of all of the comments received that affect that issue. The Board has reviewed the comments and developed a specific response based on its evaluation of the issue raised. The Board's action is based on consideration of the overall goals and objectives of the air quality program and the intended purpose of the regulation.

1. **SUBJECT:** Support for Regulations that Improve Air Quality

COMMENTER: Robert Solley, Program Director for the American Lung Association of Virginia

TEXT: American Lung Association of Virginia supports "any reasonable regulations that would help to enhance the quality of the air for the Richmond area or, for that matter, the entire state of Virginia."

RESPONSE: Support for the proposal is appreciated.

2. **SUBJECT:** Withdraw Rule 4-8

COMMENTER: Leonard R. Dupuis, Manager, Environmental Policy, Dominion

TEXT: Sources subject to the more stringent NOx SIP Call rule currently under development would also be subject to Rule 4-8. The simultaneous implementation of these rules would be superfluous, and would impose additional burden on sources affected by the rules as well as additional administrative burden upon the DEQ. The DEQ should provide for the final implementation of an approvable NOX SIP Call rule and to withdraw Rule 4-8 once the state's NOx SIP Call rule is officially adopted and finalized.

RESPONSE: Regulatory burden and confusion should be avoided whenever possible. Any potential confusion would be alleviated should the changes proposed to Rule 4-8 be withdrawn sooner rather than later. The timing afforded under the Administrative Process Act could very well exacerbate the problem of potential and unnecessary confusion should the changes to Rule 4-8 proceed to the final adoption stage. The adoption timeframe of Rule 4-8 could spill-over to the adoption timeframe of the NOx Budget Trading Program. Therefore, the withdrawal of proposed changes to

Rule 4-8 should occur much sooner. The Virginia response to the federal NOx SIP Call requirements is under development and all indications are that it will be finalized in time to avoid any federal sanctions. It would, therefore, be prudent to withdraw changes to Rule 4-8 in the final adoption of this regulation revision.

3. **SUBJECT:** Early Reduction Credits (ERCs)

COMMENTER: Leonard R. Dupuis, Manager, Environmental Policy,
Dominion

TEXT: The proposed rule 4-8 requires that a source must reduce emissions below the emission limit established by the rule to generate ERCs. An ERC is calculated as the tonnage generated from the difference between the limit imposed in the rule and the rate achieved by the reduction. Reductions achieved earlier than required by the rule should receive full credit on a ton-for-ton basis for the actual reductions achieved. It is recommended that the credit be calculated as the tonnage generated from the difference between the "current" emission rate (prior to reduction) and the deduction rate achieved. This would provide incentive to achieve early reductions.

RESPONSE: There is some question as to when a source should receive ERCs as evident by the comment. Others believe that no ERCs should be given until a source has reduced below the level that it is either required to operate at via permit limit or by the regulation requirements. Still others pose the following argument: Source A is currently permitted to operate below the regulatory rate, therefore, the source should receive credit for the difference between their lower permit limit and the limit that is required by the regulation which is a higher limit than the current permit limit.

One's opinion of when ERCs should be granted will depend on what level a source is currently permitted to operate and often very greatly from source to source. To require a source to reduce below the level specified in the regulation is a reasonable position that ensures that air quality benefits are actually occurring prior to any economic benefits derived by the generation of ERCs.

No changes have been made to the proposal based on this comment.