

# *Virginia Regulatory Town Hall*

## Notice of Intended Regulatory Action Agency Background Document

<b>Agency Name:</b>	State Air Pollution Control Board
<b>Regulation Title:</b>	Regulations for the Control and Abatement of Air Pollution
<b>Primary Action:</b>	9 VAC 5 Chapter 40, Article 4 (Rule 4-4)
<b>Secondary Action(s):</b>	9 VAC 5 Chapter 40, Article 8 (Rule 4-8)
<b>Action Title:</b>	Control of Nitrogen Oxides from Stationary Sources (Rev. A99)
<b>Date:</b>	March 1, 2000

This information is required prior to the submission to the Registrar of Regulations of a Notice of Intended Regulatory Action (NOIRA) pursuant to the Administrative Process Act § 9-6.14:7.1 (B). Please refer to Executive Order Twenty-Five (98) for more information.

NOTE: INFORMATION FOLLOWING HIGHLIGHTED INSTRUCTIONS MUST APPEAR IN THE VIRGINIA REGISTER.

### Purpose

*Please describe the subject matter and intent of the planned regulation.*

The regulation amendments are being proposed to make the state version of the non-CTG NO<sub>x</sub> RACT rule consistent with the federally approved version and to adopt NO<sub>x</sub> controls as may be necessary to address air quality violations.

### Statutory Authority

*Please identify the section number and provide a brief statement relating the content of the statutory authority to the specific regulation contemplated.*

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.

### Legal Requirements

*Please identify the state and/or federal source of the legal requirements that necessitate promulgation of the contemplated regulation. The discussion of these requirements should include a description of their scope and the extent to which the requirements are mandatory or discretionary. Full citations for the legal requirements and, if available, web site addresses for locating the text of the cited legal provisions should be provided.*

### Federal Requirements

Federal Clean Air Act (CAA):

<http://www.epa.gov/ttn/oarpg/gener.html>

Code of Federal Regulations (CFR):

<http://www.access.gpo.gov/nara/cfr/cfr-retrieve.html>

Federal Register (FR):

[http://www.gpo.gov/su\\_docs/aces/aces140.html](http://www.gpo.gov/su_docs/aces/aces140.html)

Section 110(a) of the Clean Air Act (CAA) mandates that each state adopt and submit to EPA a plan which provides for the implementation, maintenance, and enforcement of each primary and secondary air quality standard within each air quality control region in the state. The state implementation plan shall be adopted only after reasonable public notice is given and public hearings are held. The plan shall include provisions to accomplish, among other tasks, the following:

- (1) establish enforceable emission limitations and other control measures as necessary to comply with the provisions of the CAA, including economic incentives such as fees, marketable permits, and auctions of emissions rights;
- (2) establish schedules for compliance;
- (3) prohibit emissions which would contribute to nonattainment of the standards or interference with maintenance of the standards by any state; and
- (4) require sources of air pollution to install, maintain, and replace monitoring equipment as necessary and to report periodically on emissions-related data.

40 CFR Part 51 sets out requirements for the preparation, adoption, and submittal of state implementation plans. These requirements mandate that any such plan shall include several provisions, including those summarized below.

Subpart G (Control Strategy) specifies the description of control measures and schedules for implementation, the description of emissions reductions estimates sufficient to attain and maintain the standards, time periods for demonstrations of the control strategy's adequacy, an emissions inventory, an air quality data summary, data availability, special requirements for lead emissions, stack height provisions, and intermittent control systems.

Subpart K (Source Surveillance) specifies procedures for emissions reports and record-keeping, procedures for testing, inspection, enforcement, and complaints, transportation control measures, and procedures for continuous emissions monitoring.

Subpart L (Legal Authority) specifies the requirements for legal authority to implement plans.

Section 51.230 under Subpart L specifies that each state implementation plan must show that the state has the legal authority to carry out the plan, including the authority to perform the following actions:

- (1) adopt emission standards and limitations and any other measures necessary for the attainment and maintenance of the national ambient air quality standards;
- (2) enforce applicable laws, regulations, and standards, and seek injunctive relief;
- (3) abate pollutant emissions on an emergency basis to prevent substantial endangerment to the health of persons;
- (4) prevent construction, modification, or operation of a facility, building, structure, or installation, or combination thereof, which directly or indirectly results or may result in emissions of any air pollutant at any location which will prevent the attainment or maintenance of a national standard;
- (5) obtain information necessary to determine whether air pollution sources are in compliance with applicable laws, regulations, and standards, including authority to require record-keeping and to make inspections and conduct tests of air pollution sources;
- (6) require owners or operators of stationary sources to install, maintain, and use emission monitoring devices and to make periodic reports to the state on the nature and amounts of emissions from such stationary sources; and
- (7) make emissions data available to the public as reported and as correlated with any applicable emission standards or limitations.

Section 51.231 under Subpart L requires the identification of legal authority as follows:

- (1) the provisions of law or regulation which the state determines provide the authorities required under this section must be specifically identified, and copies of such laws or regulations must be submitted with the plan; and
- (2) the plan must show that the legal authorities specified in this subpart are available to the state at the time of submission of the plan.

Subpart N (Compliance Schedules) specifies legally enforceable compliance schedules, final compliance schedule dates, and conditions for extensions beyond one year.

Part D of the Clean Air Act specifies state implementation plan requirements for nonattainment areas, with Subpart 1 covering nonattainment areas in general and Subpart 2 covering additional provisions for ozone nonattainment areas.

Section 171 defines "reasonable further progress," "nonattainment area," "lowest achievable emission rate," and "modification."

Section 172(a) authorizes EPA to classify nonattainment areas for the purpose of assigning attainment dates. Section 172(b) authorizes EPA to establish schedules for the submission of plans designed to achieve attainment by the specified dates. Section 172(c) specifies the provisions to be included in each attainment plan, as follows:

- (1) the implementation of all reasonably available control measures as expeditiously as practicable and shall provide for the attainment of the national ambient air quality standards;
- (2) the requirement of reasonable further progress;
- (3) a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutants in the nonattainment area;
- (4) an identification and quantification of allowable emissions from the construction and modification of new and modified major stationary sources in the nonattainment area;
- (5) the requirement for permits for the construction and operations of new and modified major stationary sources in the nonattainment area;
- (6) the inclusion of enforceable emission limitations and such other control measures (including economic incentives such as fees, marketable permits, and auctions of emission rights) as well as schedules for compliance;
- (7) if applicable, the proposal of equivalent modeling, emission inventory, or planning procedures; and
- (8) the inclusion of specific contingency measures to be undertaken if the nonattainment area fails to make reasonable further progress or to attain the national ambient air quality standards by the attainment date.

Section 172(d) requires that attainment plans be revised if EPA finds inadequacies. Section 172(e) authorizes the issuance of requirements for nonattainment areas in the event of a relaxation of any national ambient air quality standard. Such requirements shall provide for controls which are not less stringent than the controls applicable to these same areas before such relaxation.

Under Part D, Subpart 2, Section 182(a)(2)(A) requires that the existing regulatory program requiring reasonably available control technology (RACT) for stationary sources of volatile organic compounds (VOCs) in marginal nonattainment areas be corrected by May 15, 1991, to meet the minimum requirements in existence prior to the enactment of the 1990 amendments. RACT is the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. EPA has published control technology guidelines (CTGs) for various types of sources, thereby defining the minimum acceptable control measure or RACT for a particular source type.

Section 182(b) requires stationary sources in moderate nonattainment areas to comply with the requirements for sources in marginal nonattainment areas. The additional, more comprehensive control measures in Section 182(b)(2)(A) require that each category of VOC sources employ RACT if the source is covered by a CTG document issued between enactment of the 1990 Amendments and the attainment date for the nonattainment area. Section 182(b)(2)(B) requires that existing stationary sources emitting VOCs for which a CTG existed prior to adoption of the 1990 Amendments also employ RACT. Section 182(b)(2)(C) requires RACT controls on major VOC stationary sources not covered by an existing CTG (non-CTG sources). Section 182(f) requires that control measures required for major stationary sources of VOCs shall also be required of major stationary sources of nitrogen oxides. A major source in a moderate nonattainment area is defined in Section 302(j) to be a stationary source emitting or having the potential to emit 100 TPY or more of a pollutant.

Section 182(c) requires stationary sources in serious nonattainment areas to comply with the requirements for sources in both marginal and moderate nonattainment areas, and defines a major source as one emitting or having the potential to emit 50 TPY or greater of VOC or NO<sub>x</sub>. Consequently, RACT is required on major non-CTG stationary sources emitting 50 TPY or greater of VOCs and NO<sub>x</sub>.

### State Requirements

Code of Virginia:

<http://leg1.state.va.us/000/cod/codec.htm>

Virginia Administrative Code (VAC):

<http://leg1.state.va.us/000/reg/toc.htm>

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.

## Need

*Please provide an explanation of the need for the contemplated regulation and potential consequences that may result in the absence of the regulation. Also set forth the specific reasons the agency has*

*determined that the proposed regulatory action would be essential to protect the health, safety or welfare of citizens or would be essential for the efficient and economical performance of an important governmental function. Include a discussion of the problems the regulation's provisions are intended to solve.*

One of the primary goals of the federal Clean Air Act (Act) is the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). These standards, designed to protect public health and welfare, apply to six pollutants, of which ozone is the primary focus of this proposed action. Ozone is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) in the air react together in the presence of sunlight. VOCs are chemicals contained in gasoline, polishes, paints, varnishes, cleaning fluids, inks, and other household and industrial products. NO<sub>x</sub> emissions are a by-product from the combustion of fuels and industrial processes.

To reduce ozone concentrations in the ambient air, the emissions of NO<sub>x</sub> and VOCs (ozone precursors) from both mobile and stationary sources must be reduced. VOC and NO<sub>x</sub> emissions from stationary sources can be reduced by employing stationary source controls. Reduction of ozone precursors from stationary sources via stationary source controls can substantially reduce ozone concentrations, and in conjunction with reductions achieved from control measures on other source types, can reduce ozone concentrations to levels at or below the current health standard for ozone.

The National Ambient Air Quality Standard for ozone was established by the U.S. Environmental Protection Agency (EPA) to protect the health of the general public with an adequate margin of safety. When concentrations of ozone in the ambient air exceed the federal standard the area is considered to be out of compliance and is classified as "nonattainment." Failure to develop adequate programs to meet the ozone air quality standard: (i) will result in continued violations of the standard to the detriment of public health and welfare, (ii) may result in assumption of the program by EPA at which time the Commonwealth would lose authority over matters affecting its citizens, and (iii) may result in the implementation of sanctions by EPA, such as prohibition of new major industrial facilities and loss of federal funds for sewage treatment plant development and highway construction. Furthermore, if a particular area fails to attain the federal standard by the legislatively mandated attainment date, EPA is required to reassign it to the next higher classification level (denoting a worse air quality problem), thus subjecting the area to more stringent air pollution control requirements. The Clean Air Act includes specific provisions requiring these sanctions to be issued by EPA if so warranted.

The 1990 Amendments to the Clean Air Act (new Act) represent the most comprehensive piece of clean air legislation ever enacted to address air quality planning requirements for areas that had not attained the federal air quality standard for ozone (that is, nonattainment areas). The new Act established a process for evaluating the air quality in each region and identifying and classifying each nonattainment area according to the severity of its air pollution problem. Nonattainment areas are classified as marginal, moderate, serious, severe and extreme. Marginal areas are subject to the least stringent requirements and each subsequent classification (or class) is subject to successively more

stringent control measures. Areas in a higher classification of nonattainment must meet the mandates of the lower classifications plus the more stringent requirements of its own class.

In 1990, the classifications for Virginia's nonattainment areas were marginal for the Hampton Roads Nonattainment Area, moderate for the Richmond Nonattainment Area, and serious for the Northern Virginia Nonattainment Area. Since that time, air quality has improved. Although Northern Virginia remains as a nonattainment area, Richmond and Hampton Roads have achieved the one-hour ozone standard and are now considered maintenance areas; that is specific strategies that were implemented must continue, however, no additional new requirements are necessary provided the areas do not measure ozone concentrations in levels high enough to reclassify them into nonattainment.

Once the nonattainment areas were defined, each state was then obligated to submit a plan demonstrating how it will attain the air quality standard in each nonattainment area. The Act mandates that all such plans require the implementation of all reasonably available control measures (RACM). For the Northern Virginia Nonattainment Area situation, the Act has defined several RACMs. One of the RACMs is to require emission controls for the precursors of ozone (VOCs and NO<sub>x</sub>) on presently uncontrolled major stationary sources. Thus, in order to have a fully approvable plan, control methods for this category of sources must be analyzed and, if found to be reasonable, implemented.

In order to implement the mandate of the Act, the State Air Pollution Control Board adopted a regulation (Rule 4-4) which provides that the Department must, on case-by-case basis, determine whether there is reasonably available control technology (RACT) to reduce VOC emissions and NO<sub>x</sub> emissions from major sources [ $>50$  tons per year (TPY) potential] located in the Northern Virginia Nonattainment Area for which EPA has not issued control techniques guideline (CTG). CTGs are documents issued to define RACT for a particular source category. EPA has defined RACT as the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

This regulation is a process-oriented, generic regulation which does not include specific and ascertainable emission limits for all major sources and does not provide standards for EPA to approve or disapprove to satisfy the definition of RACT. Therefore, RACT requirements are only satisfied after the specific limits for a specific source have been submitted to EPA as a SIP revision. RACT may be a technology that has been applied to similar, but not necessarily identical, source categories. It is not intended that extensive research and development be conducted before given control technology can be applied to the source. This does not, however, preclude a short term evaluation program to permit the application of a given technology to a particular source. The latter effort is an appropriate technology forcing aspect of RACT. If RACT exists, then a legally enforceable means must be adopted to require the necessary emission reductions.

As previously stated, the Clean Air Act requires states to submit rules to implement RACT on major sources of NO<sub>x</sub> in ozone nonattainment areas designated as moderate or above and throughout the Ozone Transport Region. This includes Northern Virginia which is part of the Metropolitan Washington D.C. serious ozone nonattainment area. Virginia made two submittals with regard to this issue, one on November 9, 1992 and another on April 22, 1996. The November 9, 1992, SIP revision consisted of adopted regulations to impose NO<sub>x</sub> RACT on major sources in the nonattainment area (Rule 4-4 and Appendix T). The November 1992 submittal was supplemented with the submittal of April 22, 1996. EPA notified Virginia via letter dated March 17, 1998, that portions of the 1992 submittal and all of the April 1996 submittal were unacceptable to EPA and should be withdrawn, i.e. removed from the regulation that would be federally approved and included in the SIP. On April 11, 1998, Virginia withdrew, by letter, the following provisions of those submittals as they relate to the control of nitrogen oxides:

1. All of the provisions of the April 22, 1996 submittal.
2. Certain provisions of the November 9, 1992 submittal in regulatory Appendix T relating to exemptions in Sections III C 1 and C 3 and the emission allocation system in Section IV.

The April 11, 1998 letter also included a revised version of Appendix T to correct a technical error which had appeared during publication in the Virginia Register. In addition to the typographical correction, Appendix T was recodified and renumbered as 9 VAC 5-40-311.

As mentioned above, the Richmond area has been redesignated attainment. As part of the request to redesignate the area attainment, the Commonwealth included a maintenance plan designed to ensure that compliance with the air quality standards is maintained. The maintenance plan includes contingency measures, as necessary, to promptly correct any air quality violation that occurs after redesignation of the area. These include, among others, implementation of control requirements on sources of NO<sub>x</sub>. Recent air quality data for the Richmond area, however, suggest that the levels of ozone have been high enough to be considered in violation of the ozone air quality standard. Therefore, the Commonwealth is obligated to take corrective action to eliminate the violations. Air quality analyses performed by the U.S. Environmental Protection Agency and the Department of Environmental Quality indicate that NO<sub>x</sub> controls are necessary to address this issue. In addition, the attainment plans for the Northern Virginia area include an obligation to implement NO<sub>x</sub> controls.

## Potential Issues

*Please supply a statement delineating any potential issues that may need to be addressed as the regulation is developed.*

1. To ensure that the current regulation is consistent with the version in the November 9, 1992 NO<sub>x</sub> reasonably available control technology (RACT)

State Implementation Plan (SIP) submittal, as modified on December 11, 1992 and April 11, 1998. This submittal requires that Virginia submit to EPA source-specific RACT determinations for all currently known major sources subject to source-specific NO<sub>x</sub> RACT requirements.

2. Recent air quality data indicate that the Richmond area is in violation of the ozone air quality standard. The regulation needs to address any control actions needed to bring the Richmond area into compliance with the ozone standard. Air quality analyses performed by the U.S. Environmental Protection Agency and the Department of Environmental Quality indicate that NO<sub>x</sub> controls are necessary to address this issue.

## Alternatives

*Please describe the process by which the agency has considered, or will consider, less burdensome and less intrusive alternatives for achieving the need. Also describe, to the extent known, the specific alternatives to the proposal that have been considered and will be considered to meet the need, and the reasoning by which the agency has rejected any of the alternatives considered.*

Alternatives to the proposed regulation amendments are being considered by the Department. The Department has tentatively determined that the first alternative is appropriate, as it is the least burdensome and least intrusive alternative that fully meets the purpose of the regulatory action. The alternatives being considered by the Department, along with the reasoning by which the Department has rejected any of the alternatives being considered, are discussed below.

1. Amend the regulations to satisfy the provisions of the law and associated regulations and policies. This option is being selected because it meets the stated purpose of the regulatory action: to make the state version of the regulation consistent with the federally approved version and to adopt NO<sub>x</sub> controls as may be necessary to address air quality violations.
2. Make alternative regulatory changes to those required by the provisions of the law and associated regulations and policies. This option is not being selected because it would result in a state regulation that was not consistent with the federally approved version. This would lead to confusion for the general public and the regulated community.
3. Take no action to amend the regulations and continue to implement a regulation that is not consistent with the federally approved SIP version. This option is not being selected due to the same reasons cited in number two above.

## Family Impact Statement

*Please provide a preliminary analysis of the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent 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: 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 fertility disorders, fetal mutation and deformity, chronic and acute illness, premature death, and property damage.

### Public Participation

*Please indicate the nature of the comments the Department is soliciting pursuant to this notice and whether a public meeting is to be held to receive comments on this notice. Indicate that 1) the Department is not holding a meeting because the Board has authorized the Department to proceed without holding a meeting or 2) the Department is holding a meeting. If a public meeting is to be held, indicate where information on the public meeting (i.e. date, time, and place) may be found. Indicate whether it is the Department's intent to hold at least one public hearing on the proposed regulation after it is published in the Virginia Register.*

The Department is soliciting comments on (i) the intended regulatory action, to include ideas to assist the Department in the development of the proposal, and (ii) the costs and benefits of the alternatives stated in this notice or other alternatives. A public meeting will be held by the Department to receive comments on and to discuss the intended action. Information on the date, time, and place of the meeting is published in the Calendar of Events section of the Virginia Register. Unlike a public hearing, which is intended only to receive testimony, this meeting is being held to discuss and exchange ideas and information relative to regulation development.

After publication in the Virginia Register of Regulations, the Department will hold at least one public hearing to provide opportunity for public comment on any regulation amendments drafted pursuant to this notice.

### Ad Hoc Advisory Group

*Please indicate the extent to which an ad hoc advisory group will be used in the development of the proposed regulation. Indicate that 1) the Department is not using the participatory approach in the development of the proposal because the Board has authorized the Department to proceed without the use of the participatory approach; 2) the Department is using the participatory approach in the development of the proposal; or 3) the Department is inviting comment on whether the Department should use the participatory approach to assist the Department in the development of a proposal.*

The Department will form an ad hoc advisory group to assist in the development of the regulation. If you want to be on the group, notify the agency contact in writing by 4:30 p.m.

the last day of the comment period and provide your name, address, phone number and the organization you represent (if any). Notification of the composition of the ad hoc advisory group will be sent to all applicants. If you want to be on the group, you are encouraged to attend the public meeting mentioned above. The primary function of the group is to develop recommended regulation amendments for Department consideration through the collaborative approach of regulatory negotiation and consensus.

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