



Notice of Intended Regulatory Action (NOIRA) Agency Background Document

Agency name	State Air Pollution Control Board
Primary action	Articles 57 and 58 of 9VAC5-40 (Existing Stationary Sources)
Secondary action(s)	None.
Regulation title	Regulations for the Control and Abatement of Air Pollution
Action title	VOC Emission Standards, Miscellaneous (Rev. D09) [2 new regulations]
Date this document prepared	August 28, 2009

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual*.

Purpose

Please describe the subject matter and intent of the planned regulatory action. Also include a brief explanation of the need for and the goals of the new or amended regulation.

The purpose of the proposed action is to adopt new standards for the control of volatile organic compound (VOC) emissions from (1) industrial solvent cleaning operations, and (2) miscellaneous industrial adhesive application processes within the Northern Virginia VOC Emissions Control Area. This action is being taken to allow Virginia to meet its obligation to implement control measures in areas designated as nonattainment under the 0.08 parts per million (ppm) 8-hour ozone standard. It will contribute to the reduction of ozone air pollution, and thereby improve public health and welfare.

Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter numbers, if applicable, and (2) promulgating entity, i.e., the agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

Statutory Authority

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 the State Air Pollution Control Board possesses the statutory authority to promulgate the proposed regulation amendments is available upon request.

Promulgating Entity

The promulgating entity for this regulation is the State Air Pollution Control Board.

Specific Federal Requirements

Ground-level ozone is an air pollutant that forms when volatile organic compounds (VOCs) and nitrogen oxides (NO_x) interact with sunlight. The national standard for ozone measured over an 8-hour period was promulgated by the U.S. Environmental Protection Agency (EPA) on July 18, 1997 (62 FR 38856) at a level of 0.08 parts per million (ppm).

Once EPA establishes a national standard for ozone, it must then designate areas that do not attain the standard (nonattainment areas). In turn, states must develop plans (state implementation plans, or SIPs), including regulations, which will enable nonattainment areas to attain and maintain the standard.

40 CFR Part 81 specifies the designations of areas made under § 107(d) of the federal Clean Air Act and the associated nonattainment classification under § 181 of the Act or 40 CFR 51.903(a). Virginia's designations are in 40 CFR 81.347. On April 30, 2004 (69 FR 23858), EPA published designations for 0.08 ppm 8-hour ozone nonattainment areas and associated classifications.

On April 30, 2004 (69 FR 23951), EPA promulgated phase 1 of a final rule adding Subpart X to 40 CFR Part 51. Subpart X contains the provisions for the implementation of the 8-hour ozone NAAQS, along with associated planning requirements. Specifically, 40 CFR 51.903(a) sets forth the classification criteria and nonattainment dates for 8-hour ozone nonattainment areas once they are designated as such under 40 CFR Part 81. The remainder of the planning requirements (phase 2) were published on November 29, 2005 (70 FR 71612).

In order to implement the control measures needed to attain and maintain ozone air quality standard, Virginia has established VOC and NO_x emissions control areas. These areas were created to provide a legal mechanism for defining geographic areas in which to implement certain control measures in the nonattainment areas. The emissions control areas may or may not coincide with the nonattainment areas, depending on regional planning requirements.

Section 172(c)(1) of the Act provides that SIPs for nonattainment areas must include "reasonably available control measures" (RACM), including "reasonably available control techniques" (RACT), for sources of emissions. Section 182(b)(2) provides that for certain nonattainment areas, states must revise their SIPs to include RACT for sources of VOC emissions covered by a control techniques guidelines document (CTG) issued after November 15, 1990 and prior to the area's date of attainment.

Section 183(e) directs EPA to list for regulation those categories of products that account for at least 80 percent of the VOC emissions from commercial products in ozone nonattainment areas. EPA issued such a list on March 23, 1995, and has revised the list periodically. RACT controls for listed source categories controlled by a CTG are known as CTG RACTs. CTG RACTs have been issued for industrial solvent cleaning operations (October 5, 2006, 71 FR 58745) and miscellaneous industrial adhesive application processes (July 14, 2008, 73 FR 40230). Therefore, states with moderate ozone nonattainment areas must implement these CTG RACTs as part of their attainment SIPs.

General Federal Requirements

Sections 109 (a) and (b) of the federal Clean Air Act require EPA to prescribe primary and secondary air quality standards to protect public health and welfare. These standards are known as the National Ambient Air Quality Standards (NAAQS). Section 109 (c) requires EPA to prescribe such standards

simultaneously with the issuance of new air quality criteria for any additional air pollutant. The primary and secondary air quality criteria are authorized for promulgation under § 108.

Once the NAAQS are promulgated pursuant to § 109, § 107(d) sets out a process for designating those areas that are in compliance with the standards (attainment or unclassifiable) and those that are not (nonattainment). Governors make the initial recommendations but EPA makes the final decision. Section 107(d) also sets forth the process for redesignations once the nonattainment areas are in compliance with the applicable NAAQS.

Section 110(a) of the Act 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 (SIP) must include provisions to accomplish, among other tasks, the following:

1. establish enforceable emission limitations and other control measures as necessary to comply with the Act;
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 50 specifies the NAAQS for sulfur dioxide, particulate matter, carbon monoxide, ozone, nitrogen dioxide, and lead.

40 CFR Part 51 sets out requirements for the preparation, adoption, and submittal of SIPs. These requirements mandate that any such plan must include certain 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 recordkeeping, 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 SIP 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 comply with applicable laws, regulations, and standards, including authority to require recordkeeping 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: (i) 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 (ii) 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 describes how nonattainment areas are established, classified, and required to meet attainment. Subpart 1 provides the overall framework of what nonattainment plans are to contain, while Subpart 2 provides more detail on what is required of areas designated nonattainment for ozone.

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. implementation of all reasonably available control measures as expeditiously as practicable and provide for the attainment of the national ambient air quality standards;
2. reasonable further progress;
3. a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutants in the nonattainment area;
4. identification and quantification of allowable emissions from the construction and modification of new and modified major stationary sources in the nonattainment area;
5. a requirement for permits for the construction and operations of new and modified major stationary sources in the nonattainment area;
6. 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. 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 must provide for controls which are not less stringent than the controls applicable to these same areas before such relaxation.

Section 107(d)(3)(D) provides that a state may petition EPA to redesignate a nonattainment area as attainment and EPA may approve the redesignation subject to certain criteria being met. Section 107(d)(3)(E) stipulates one of these criteria, that EPA must fully approve a maintenance plan that meets the requirements of § 175A. According to § 175A(a), the maintenance plan must be part of a SIP submission, and must provide for maintenance of the NAAQS for at least 10 years after the redesignation. The plan must contain any additional measures needed to ensure maintenance. Section 175A(b) further requires that 8 years after redesignation, a maintenance plan for the next 10 years must then be submitted. As stated in § 175A(c), nonattainment requirements continue to apply until the SIP submittal is approved. Finally, § 175A(d) requires that the maintenance plan contain contingency provisions which will be implemented should the area fail to maintain the NAAQS as provided for in the original plan.

Under Part D, Subpart 2, § 181 sets forth the classifications and nonattainment dates for 1-hour ozone nonattainment areas once they are designated as such under § 107(d).

Section 182(a)(2)(A) requires that the existing regulatory program requiring reasonably available control technology (RACT) for stationary sources of 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. EPA has published control techniques 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 § 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.

40 CFR Part 81 specifies the designations of areas made under § 107(d) of the Act and the associated nonattainment classification (if any) under § 181 of the Act or 40 CFR 51.903(a), as applicable. Subpart X to 40 CFR Part 51 contains the provisions for the implementation of the 8-hour ozone NAAQS, along with associated planning requirements. Specifically, 40 CFR 51.903(a) sets forth the classification criteria and nonattainment dates for 8-hour ozone nonattainment areas once they are designated.

State Requirements

These specific amendments are not required by state mandate. Rather, Virginia's Air Pollution Control Law gives the State Air Pollution Control Board the discretionary authority to promulgate regulations "abating, controlling and prohibiting air pollution throughout or in any part of the Commonwealth" (§ 10.1-1308 A). The law defines such air pollution as "the presence in the outdoor atmosphere of one or more substances which are or may be harmful or injurious to human health, welfare or safety, to animal or plant life, or to property, or which unreasonably interfere with the enjoyment by the people or life or property" (§ 10.1-1300).

Need

Please detail the specific reasons why the agency has determined that the proposed regulatory action is essential to protect the health, safety, or welfare of citizens. In addition, delineate any potential issues that may need to be addressed as the proposal is developed.

Specific Planning Requirements

Virginia's nonattainment areas for the 0.08 ppm 8-hour ozone standard were established by EPA on April 15, 2004. At that time, EPA also promulgated Phase 1 of the associated planning requirements. Phase 2 planning requirements were promulgated by EPA on November 19, 2005.

In order to implement control measures in ozone nonattainment areas, Virginia has established VOC control areas. Originally, these control areas were established to support control measures under the 0.12 ppm 1-hour ozone standard. When these areas were designated nonattainment under the 0.08 ppm 8-hour ozone standard, they remained VOC emissions control areas in order to implement control measures needed to attain the new standard. The current Northern Virginia VOC Emissions Control Area consists of the counties of Arlington, Fairfax, Loudoun, Prince William, and Stafford, and the cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park.

As discussed elsewhere, § 172(c)(1) of the Act provides that SIPs for nonattainment areas must include "reasonably available control measures" (RACM), including "reasonably available control techniques" (RACT), for sources of emissions. Section 182(b)(2) provides that for certain nonattainment areas, states must revise their SIPs to include RACT for sources of VOC emissions covered by a control techniques guideline (CTG) issued after November 15, 1990 and prior to the area's date of attainment. Section 183(e) directs EPA to list the categories of products that account for at least 80 percent of the VOC emissions from commercial products in ozone nonattainment areas. Industrial solvent cleaning operations and miscellaneous industrial adhesive application processes are included on the current § 183(e) list, and CTG RACTs have been issued for these source types.

A CTG is intended to provide state and local air pollution control authorities with information to assist them in determining RACT for such sources. In developing a CTG, EPA evaluates the sources of VOC emissions and the available control approaches, including costs. States can use the recommendations in a CTG to inform their own determination as to what constitutes RACT. States must submit their RACT rules to EPA for review and approval as part of the SIP process. EPA will evaluate the rules and determine, through notice and comment rulemaking in the SIP process, whether they meet the RACT requirements of the Act and EPA's regulations.

Because the Northern Virginia VOC Emissions Control Area is not in attainment with the 0.08 ppm 8-hour ozone standard, this area must implement new controls in order to reduce ozone-causing emissions and attain the ozone standard. Because this area meets the criteria in § 182(b)(2) of the Act for implementing CTG RACT, new regulations must be developed in order for the state to have a legally enforceable mechanism for implementing RACT for certain source categories. The CTGs for industrial solvent cleaning operations and miscellaneous industrial adhesive application processes have been identified as applicable control measures for these areas. Implementing these CTGs will contribute to the reduction of ozone, which will in turn contribute to the improved health and welfare of Virginia's citizens.

General Planning Requirements

Among the primary goals of the federal Clean Air Act are the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) and the prevention of significant deterioration (PSD) of air quality in areas cleaner than the NAAQS. The NAAQS, developed and promulgated by the U.S. Environmental Protection Agency (EPA), establish the maximum limits of pollutants that are permitted in the outside ambient air.

EPA requires that each state submit a state implementation plan (SIP), including any laws and regulations necessary to enforce the SIP, that shows how the air pollution concentrations will be reduced

to levels at or below these standards (attainment). Once the pollution levels are within the standards, the SIP must also demonstrate how the state will maintain the air pollution concentrations at the reduced levels (maintenance).

A SIP is the key to the state's air quality programs. The Clean Air Act is specific concerning the elements required for an acceptable SIP. If a state does not prepare such a plan, or EPA does not approve a submitted plan, then EPA itself is empowered to take the necessary actions to attain and maintain the air quality standards--that is, it would have to promulgate and implement an air quality plan for that state. EPA is also, by law, required to impose sanctions in cases where there is no approved plan or the plan is not being implemented, the sanctions consisting of loss of federal funds for highways and other projects and/or more restrictive requirements for new industry. Generally, the plan is revised, as needed, based upon changes in the federal Clean Air Act and associated EPA regulations and policies.

The basic approach to developing a SIP is to examine air quality across the state, delineate areas where air quality needs improvement, determine the degree of improvement necessary, inventory the sources contributing to the problem, develop a control strategy to reduce emissions from contributing sources enough to bring about attainment of the air quality standards, implement the strategy, and take the steps necessary to ensure that the air quality standards are not violated in the future.

The heart of the SIP is the control strategy. The control strategy describes the emission reduction measures to be used by the state to attain and maintain the air quality standards. There are three basic types of measures: stationary source control measures, mobile source control measures, and transportation source control measures. Stationary source control measures are directed at limiting emissions primarily from commercial/industrial facilities and operations and include emission limits, control technology requirements, preconstruction permit programs for new industry and expansions, and source-specific control requirements. Stationary source control measures also include area source control measures which are directed at small businesses and consumer activities. Mobile source control measures are directed at tailpipe and other emissions from motor vehicles, and transportation control measures limit the location and use of motor vehicles, such as rapid transit systems. Generally, a SIP is revised, as needed, based upon changes in air quality or statutory requirements.

The Clean Air Act establishes a process for evaluating the air quality in each region and identifying and classifying each ozone 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 their class. In addition to the general SIP-related sanctions, nonattainment areas have their own unique sanctions. 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.

Once the nonattainment areas are defined, each state is then obligated to submit a SIP demonstrating how it will attain the air quality standards in each nonattainment area. The Act requires that certain specific control measures and other requirements be adopted and included in the SIP. Among other requirements for nonattainment areas classified as moderate is a requirement for controls for all VOC sources identified in EPA's CTG RACTs. In addition, the state has to demonstrate that it would achieve a VOC emission reduction of 15% within 6 years of the base year. In cases where the specific control measures are inadequate to achieve the emission reductions or attain the air quality standard, the state is obligated to adopt other control measures as necessary to achieve this end.

Please detail any changes that will be proposed. For new regulations, include a summary of the proposed regulatory action. Where provisions of an existing regulation are being amended, explain how the existing regulation will be changed.

The primary change will be to add the following new rules to Chapter 40 (Existing Stationary Sources): Article 57, Industrial Solvent Cleaning Operations, and Article 58, Miscellaneous Industrial Adhesive Application Processes. These regulations will be developed based on the corresponding control techniques guidelines (CTGs) issued by EPA for these source categories. The geographic applicability of these articles is defined by the Northern Virginia VOC Emissions Control Area listed in 9VAC5-20-206 1 a.

Alternatives

Please describe all viable alternatives to the proposed regulatory action that have been or will be considered to meet the essential purpose of the action. Also, please describe the process by which the agency has considered or will consider other alternatives for achieving the need in the most cost-effective manner.

Alternatives to the proposal 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 allow Virginia to meet its obligation to implement control measures in areas designated as nonattainment under the 0.08 ppm 8-hour ozone standard and as necessary to attain and maintain compliance with the standard within maintenance areas, thus protecting public health and welfare.
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 be contrary to the requirements of the Clean Air Act.
3. Take no action to amend the regulations and continue to operate under the existing regulatory program. This option is not being selected because it would allow the current emissions levels to be maintained and possibly increase, to the detriment of public health and welfare. It would also subject the state to a federal plan to attain and maintain the air quality standards. EPA is also, by law, required to impose sanctions in cases where there is no approved SIP or the SIP is not being implemented, including loss of federal funds for highways, and more restrictive requirements for new industry.

Public participation

Please indicate the agency is seeking comments on the intended regulatory action, to include ideas to assist in the development of the proposal and the costs and benefits of the alternatives stated in this notice or other alternatives. Also, indicate whether a public hearing is to be held to receive comments on this notice.

The department is seeking comments on the intended regulatory action, including but not limited to (1) ideas to assist in the development of the proposal, (2) the costs and benefits of the alternatives stated in this background document or other alternatives, (3) potential impacts of the regulation, and (4) impacts of

the regulation on farm and forest land preservation. The department is also seeking information on impacts on small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include (1) projected reporting, recordkeeping and other administrative costs, (2) probable effect of the proposal on affected small businesses, and (3) description of less intrusive or costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments may do so by mail, email, or fax to the staff contact listed below. Comments may also be submitted through the Public Forum feature of the Virginia Regulatory Town Hall web site at: www.townhall.virginia.gov. All comments must include the full name, address and telephone number of the person commenting and be received by the department by 5:00 p.m. on the last day of the comment period. Commenters submitting faxes are encouraged to provide the signed original within one week. All testimony, exhibits and documents received are part of the public record.

All comments requested by this document must be submitted to the agency contact: Karen G. Sabasteanski, Policy Analyst, Office of Regulatory Affairs, Department of Environmental Quality, P.O. Box 1105, Richmond, Virginia, 23218 (email karen.sabasteanski@deq.virginia.gov, phone 804-698-4426, fax 804-698-4510).

Public hearing at proposed stage

A public hearing will not be held after publication of the proposed stage of the regulatory action unless requests for a public hearing are received during the NOIRA public comment period from at least 25 persons.

Regulatory panel

Please indicate, to the extent known, if advisers (e.g., regulatory advisory panel or negotiated rulemaking panel) will be involved in the development of the proposed regulation. Indicate that (1) the agency does not intend to use a panel in the development of the proposal, but is inviting comment on whether to use a panel to assist the agency in the development of a proposal; or (2) the agency is using a panel in the development of the proposal.

The board does not intend to establish a panel to assist in the development of the proposal. However, in response to requests received during the NOIRA public comment period the board will consider establishing a panel. Persons requesting that the agency use a panel and interested in assisting in the development of a proposal should inform the department contact (i) whether a panel be formed, and if so, (ii) whether they wish to participate in any panel, by the end of the comment period and provide their name, address, phone number, email address and their organization (if any). Multi-applications from a single company, organization, group or other entity count as one for purposes of making the decision specified in the preceding sentence. Notification of the composition of the panel will be sent to all applicants.

Family impact

Assess 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; and (4) increase or decrease disposable family income.

It is not anticipated that the proposal will have a direct impact on families. However, there will be positive indirect impacts in that the proposal 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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