



[townhall.virginia.gov](http://townhall.virginia.gov)

**Periodic Review and Small Business Impact Findings  
Where Result is "Retain the Regulation As Is"**

Agency name	State Air Pollution Control Board
<p><b>Virginia Administrative Code (VAC) citation</b></p>	<p>9VAC5 – 40, Existing Stationary Sources:                      Part I, Special Provisions                      Part II, Emission Standards:                      Article 1, Visible Emissions and Fugitive Dust/Emissions                      Article 2, Emission Standards for Odor                      Article 4, Emission Standards for General Process Operations                      Article 5, Emission Standards for Synthesized Pharmaceutical Products Manufacturing Operations                      Article 6, Emission Standards for Rubber Tire Manufacturing Operations                      Article 7, Emission Standards for Incinerators                      Article 8, Emission Standards for Fuel Burning Equipment                      Article 9, Emission Standards for Coke Ovens                      Article 10, Emission Standards for Asphalt Concrete Plants                      Article 11, Emission Standards for Petroleum Refinery Operations                      Article 12, Emission Standards for Chemical Fertilizer Manufacturing Operations                      Article 13, Emission Standards for Pulp and Paper Mills                      Article 14, Emission Standards For Sand and Gravel Processing Operations and Stone Quarrying and Processing Operations                      Article 15, Emission Standards for Coal Preparation Plants                      Article 16, Emission Standards For Portland Cement Plants                      Article 17, Emission Standards for Woodworking Operations                      Article 18, Emission Standards For Primary And Secondary Metal Operations                      Article 19, Emission Standards for Lightweight Aggregate Process Operations                      Article 20, Emission Standards For Feed Manufacturing Operations                      Article 21, Emissions Standards For Sulfuric Acid Production Units                      Article 22, Emission Standards For Sulfur Recovery Operations                      Article 23, Emission Standards For Nitric Acid Production Units</p>

	Article 24, Emission Standards for Solvent Metal Cleaning Operations Article 25, Emission Standards for Volatile Organic Compound Storage and Transfer Operations Article 26, Emission Standards for Large Appliance Coating Application Systems Article 27, Emission Standards for Magnet Wire Coating Application Systems Article 28, Emission Standards for Automobile and Light Duty Truck Coating Application Systems Article 29, Emission Standards for Can Coating Application Systems Article 30, Emission Standards for Metal Coil Coating Application Systems Article 31, Emission Standards for Paper and Fabric Coating Application Systems Article 32, Emission Standards for Vinyl Coating Application Systems Article 33, Emission Standards for Metal Furniture Coating Application Systems Article 35, Emission Standards for Flatwood Paneling Coating Application Systems Article 36, Emission Standards for Graphic Arts Printing Processes Article 46, Emission Standards for Small Municipal Waste Combustors Article 47, Emission Standards for Solvent Cleaning Article 48, Emission Standards for Mobile Equipment Repair and Refinishing Article 52, Emission Standards for Case-by-case BART Determinations Article 54, Emission Standards for Large Municipal Waste Combustors Article 55, Emission Standards for Sewage Sludge Incinerators
<b>Regulation title</b>	Regulations for the Control and Abatement of Air Pollution
<b>Date</b>	May 25, 2018

This information is required pursuant to Executive Order 17 (2014).

**Legal basis**

*Please identify the state and/or federal legal authority for the regulation, including: 1) the most relevant law and/or regulation; and 2) promulgating entity, i.e., agency, board, or person.*

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.

Promulgating Entity

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

Federal Requirements

**For Part I, Special Provisions and Part II, Articles 1, 4 through 33, 35, 36, 47, and 48:**

Section 110(a) of the federal 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 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 of Part 51 (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 of Part 51 (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 of Part 51 (Legal Authority) specifies that the state implementation plan must show that the state has legal authority to implement the plans, including the authority to:

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: (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 of Part 51 (Compliance Schedules) specifies legally enforceable compliance schedules, final compliance schedule dates, and conditions for extensions beyond one year.

**For Part I, Special Provisions:**

Section 51.118 of Subpart G sets out stack height requirements. Section 51.118 requires that the plan submitted by the state must provide that "the degree of emission limitation required of any source for control of any air pollutant must not be affected by so much of any source's stack height that exceeds good engineering practice or by any other dispersion technique." Facilities with stacks in existence after December 31, 1970 must follow good engineering practice.

Appendix M (Recommended Test Methods for State Implementation Plans) of Part 51 provides recommended test methods for measuring air pollutants which a state may choose to meet the requirements of Subpart K. The state may also choose to meet the requirements of Subpart K through any of the relevant methods in Appendix A to 40 CFR Part 60 or any other method that could be approved and adopted into the state implementation plan.

Appendix P (Minimum Emission Monitoring Requirements) of Part 51 specifies the minimum requirements for continuous emission monitoring and recording.

**For Part II, Articles 13, 21, 46, 54, and 55:**

Section 111(d) of the CAA requires that each state submit a plan which will (i) establish standards of performance for any existing source for any air pollutant; (a) for which criteria have not been issued or which is not included on a list published under section 110 [or emitted from a source category which is regulated under section 112 or 112(b)], but (b) to which a standard of performance under this section would apply if such existing source were a new source, and (ii) provides for the implementation and enforcement of such standards of performance. The state may take into consideration the remaining useful life of the existing source to which standards apply.

40 CFR Part 60 subpart B provides the criteria for adoption and submittal of state plans for designated facilities. The issues include (1) publication of guideline documents, emissions guidelines, and final compliance times; (2) adoption and submittal of state plans including public hearings; (3) emission standards and compliance schedules; (4) emission inventories and source surveillance, reports; (5) actions by the EPA Administrator; (6) plan revisions by the state; and (7) plan revisions by the Administrator. 40 CFR Part 60 also provides emission guidelines, compliance times and other requirements, specific to each designated facility.

**For Part II, Article 13:**

EPA issued a guideline entitled Kraft Pulping: Control of TRS emissions from Existing Mills, EPA 450/2-78-003b (March 1979). This guideline provides information related to the health- and welfare-related effects of total reduced sulfur (TRS) compounds, paper industry characteristics, process description, emissions characteristics, guidelines and control techniques, and cost analysis information.

**For Part II, Article 21:**

40 CFR Part 60 subpart Cd provides emission guidelines and compliance times for sulfuric acid production units. Section 60.30b identifies the designated facility as each existing sulfuric acid production unit as defined in section 60.81(a) of subpart H. Section 60.31b establishes that the emission guideline for designated facilities is 0.25 grams of sulfuric acid mist per kilogram of sulfuric acid production (0.5 pounds per ton) for existing sulfuric acid production units. Section 60.32b establishes that all existing units comply within 17 months after the effective date of a state emission standard for sulfuric acid mist.

**For Part II, Articles 46, 54, and 55:**

Emissions from solid waste incineration units are a "designated" pollutant under § 111(d) of the CAA. Designated pollutants are pollutants which are not included on a list published under § 108(a) of the CAA (criteria pollutants), or § 112(b)(1)(A) ("hazardous" pollutants), but for which standards of performance for new sources have been established under § 111(b). When the U.S. Environmental Protection Agency (EPA) establishes a new source performance standard, states are required to develop standards for existing facilities based on EPA emission guidelines.

Section 129 of the CAA requires that EPA establish standards of performance for both new and existing solid waste incineration sources, with new sources covered under § 129(a) and existing sources covered under § 129(b). It also requires states to submit plans for these sources in a process similar to that delineated in § 111(d).

Section 129(a) of the CAA, new source performance standards, requires EPA to develop performance standards pursuant to § 111 for each category of solid waste incineration units. A schedule is given in §§ 129(a)(B) through (E) for promulgating the standards, depending on size and type of unit--large municipal waste combustors (MWCs) to be promulgated first, followed by small MWCs and medical waste incinerators, then commercial/industrial solid waste incinerators, and, finally, remaining types of solid waste incineration units.

Section 129(a)(2) of the CAA, Emissions Standard, provides detail on what the standards are to contain the maximum degree of reduction in emissions of air pollutants, taking into consideration cost and any non-air quality health and environmental impacts and energy requirements. The degree of reduction must be no less stringent than the emissions control that is achieved in practice by the best controlled similar unit. Section 129(a)(3) states that the standards must be based on methods and technologies for removal or destruction of pollutants before, during, and after combustion, and must incorporate siting requirements that will minimize potential risks to public health or the environment.

The performance standards promulgated in §§ 111 and 129 of the CAA must include numerical emissions limitations, as required under § 129(a)(4). The limitations must be determined for particulate matter, opacity, sulfur dioxide, hydrogen chloride, nitrogen oxides, carbon monoxide, lead, cadmium, mercury, and dioxins and furans. EPA is required to review and revise, as needed, the performance standards of §§ 111 and 129 periodically.

Section 129(b) of the CAA addresses existing units. It directs EPA to develop guidelines that are to include emissions limitations and requirements on monitoring, operator training, permits, and residual risk. States are to then develop plans for implementing and enforcing these guidelines. Such plans must be no less stringent than the guidelines, and must be approved by EPA. As provided in § 129(a)(2), emission standards for existing units may be less stringent than standards for new units, but may not be less stringent than the average emissions limitation achieved by the best performing 12 percent of units in a particular category.

Monitoring requirements must be included in each performance standard, as are found in § 129(c) of the CAA, and must require sources to monitor emissions at various points, and to report monitoring results. Operator training and certification is also required, as put forth in § 129(d). Finally, according to § 129(e),

sources must obtain Title V operating permits, whether from EPA or from an EPA-approved state operating permit program.

Section 129(f) of the CAA contains a schedule of effective dates and enforcement for both new and existing units. Section 129(g) contains applicable definitions; § 129(h) discusses state and other authority under the Act.

Subpart B of 40 CFR Part 60 provides the criteria for adoption and submittal of state plans for designated facilities. The issues include: (i) publication of guideline documents, emissions guidelines, and final compliance times; (ii) adoption and submittal of state plans including public hearings; (iii) emission standards and compliance schedules; (iv) emission inventories and source surveillance, reports; (v) actions by the EPA Administrator; (vi) plan revisions by the state; and (vii) plan revisions by the Administrator. The emission guidelines established by EPA under the provisions of § 129(b) of the Act are also contained in 40 CFR Part 60.

**For Part II, Article 46:**

Subpart BBBB of 40 CFR Part 60 was promulgated on December 6, 2000 (65 FR 76378). It provides emission guidelines for small municipal waste combustors. Article 46, Emission Standards for Small Municipal Waste Combustors, 9VAC5-40 (Existing Stationary Sources), was adopted by the State Air Pollution Control Board in order for the federal emissions guidelines to be implemented by the Commonwealth.

**For Part II, Article 54:**

Subpart Cb of 40 CFR Part 60 was promulgated on December 19, 1995 (60 FR 65382). It provides emission guidelines for large municipal solid waste combustors. Article 54, Emission Standards for Large Municipal Waste Combustors, 9VAC5-40 (Existing Stationary Sources), was adopted by the State Air Pollution Control Board in order for the federal emissions guidelines to be implemented by the Commonwealth.

**For Part II, Article 55:**

Subpart MMMM of 40 CFR Part 60 was promulgated on March 21, 2011 (76 FR 15372). It provides emission guidelines for sewage sludge incinerators. Article 55, Emission Standards for Sewage Sludge Incinerators, 9VAC5-40 (Existing Stationary Sources), was adopted by the State Air Pollution Control Board in order for the federal emissions guidelines to be implemented by the Commonwealth.

**For Part I, Special Provisions:**

Section 123 of the CAA establishes the criteria for determining the stack height for stationary sources of air pollution in existence before 1970. Specifically the section requires that "the degree of emission limitation required of any source for control of any air pollutant under an applicable implementation plan...must not be affected in any manner by- 1. so much of any source's stack height that exceeds good engineering practice (as determined under regulations promulgated by the Administrator), or 2. any other dispersion technique." For purposes of this section the term "dispersion technique" includes any intermittent or supplemental control of air pollutants varying with atmospheric conditions. Good engineering practice means, with respect to stack height, the height necessary to insure that emissions from the stack do not result in excessive concentrations of any pollutant in the immediate vicinity of the source as a result of atmospheric downwash, eddies and wakes which may be created by the source itself, nearby structures or nearby terrain obstacles.

**For Part II, Article 52:**

Section 169(A) of the federal CAA addresses visibility protection for federal class I areas. Section 169A(a) provides a timetable for analysis of federal class I areas and subsequent publication of guidelines for states. Section 169A(b) requires EPA to provide regulations and guidelines for state implementation of Best Available Retrofit Technology (BART). Section 169A(c) provides for establishing exemptions for major stationary sources from BART. Section 169A(d) provides for state consultation with federal land managers. Sections 169A(e) and (f) provide additional guidance to the EPA in administering BART. Section 169A(g) provides considerations and terms for making BART determinations.

40 CFR 51.166 requires that state implementation plans (SIPs) contain emission limitations and such other measures as may be necessary to prevent significant deterioration of air quality. Visibility is specifically addressed in 40 CFR 51.166(o) and (p). In 1999, EPA published a final rule to address regional haze (64 FR 35714), including case-by-case determination of Best Available Retrofit Technology (BART). BART is required for any BART-eligible source that emits any air pollutant that may reasonably be anticipated to cause or contribute to visibility impairment in any Class I area. Accordingly, for stationary sources meeting these criteria, states must address the BART requirement when developing regional haze SIPs.

On July 6, 2005 (70 FR 39103), EPA promulgated final amendments to the regional haze regulations (40 CFR 51.302 and 51.308), and to provide BART determination guidance (Appendix Y to 40 CFR Part 51). The purpose of the guidelines is to assist states as they identify which of their BART-eligible sources should undergo a BART analysis, and select controls.

**For Part II, Articles 5, 6, 11, 23 through 36, 47, and 48:**

Part D of the CAA 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 of the CAA defines "reasonable further progress," "nonattainment area," "lowest achievable emission rate," and "modification."

Section 172(a) of the CAA 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) of the CAA 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 of the CAA, §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) of the CAA 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.

Section 182(c) of the CAA requires stationary sources in serious nonattainment areas to comply with the requirements for sources in both marginal and moderate nonattainment areas.

Section 183(e) of the CAA 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. States with moderate ozone nonattainment areas must implement CTG RACTs as part of their attainment SIPs. Once a CTG RACT has been determined, it remains RACT until EPA either revises the CTG upon which it is based or issues a new CTG for that source type.

Applicability thresholds for VOC and NOX RACT are established as follows. Section 184 establishes an Ozone Transport Region (OTR) that includes the Consolidated Metropolitan Statistical Area in which the District of Columbia is located. Section 184(b) describes SIP requirements for areas in the OTR, including, in § 184(b)(2) of the CAA, the requirement that any stationary source that emits or has the potential to emit at least 50 tons per year of VOCs is considered to be a major source and subject to the requirements that would be applicable to major sources as if the area were classified as a moderate nonattainment area. Finally, a major stationary source is defined for general application in § 302 as "any facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant"; hence the major source threshold for NOX is 100 tons per year.

EPA has issued detailed guidance that sets out its preliminary views on the implementation of the air quality planning requirements applicable to nonattainment areas. This guidance is titled the "General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990" (see 57 FR 13498 and 57 FR 18070).

#### State Requirements

Code of Virginia § 10.1-1300 defines 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 of life or property." Excess emissions from existing stationary source operations are harmful to human health and can significantly interfere with the people's enjoyment of life and property.

Code of Virginia § 10.1-1307 A provides that the board may, among other activities, develop a comprehensive program for the study, abatement, and control of all sources of air pollution in the Commonwealth.

Code of Virginia § 10.1-1308 provides that the board shall have the power to promulgate regulations abating, controlling, and prohibiting air pollution throughout or in any part of the Commonwealth in accordance with the provisions of the Administrative Process Act.

**For Part II, Article 2:**

The specific provisions in Article 2 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).

## Alternatives

*Please describe all viable alternatives for achieving the purpose of the existing regulation that have been considered as part of the periodic review process. Include an explanation of why such alternatives were rejected and why this regulation is the least burdensome alternative available for achieving the purpose of the regulation.*

Alternatives to the proposal have been considered by the department. The department has determined that the retention of the regulation (the first alternative) is appropriate, as it is the least burdensome and least intrusive alternative that fully meets statutory requirements and the purpose of the regulation. The alternatives considered by the department, along with the reasoning by which the department has rejected any of the alternatives considered, are discussed below.

1. Retain the regulation without amendment. This option is being selected because the current regulation provides the least onerous means of complying with the minimum requirements of the legal mandates.
2. Make alternative regulatory changes to those required by the provisions of the legally binding state and federal mandates, and associated regulations and policies. This option was not selected because it could result in the imposition of requirements that place unreasonable hardships on the regulated community without justifiable benefits to public health and welfare.
3. Repeal the regulation or amend it to satisfy the provisions of legally binding state and federal mandates. This option was not selected because the regulation is effective in meeting its goals and already satisfies those mandates.

## Public comment

*Please summarize all comments received during the public comment period following the publication of the Notice of Periodic Review, and provide the agency response. Please indicate if an informal advisory group was formed for purposes of assisting in the periodic review.*

No comments were received during the public comment period. No informal advisory group was formed for purposes of this periodic review.

## Effectiveness

*Please indicate whether the regulation meets the criteria set out in Executive Order 17 (2014), e.g., is necessary for the protection of public health, safety, and welfare, and is clearly written and easily understandable.*

---

### For all Articles:

The regulation is necessary for the protection of public health and welfare, as it is needed to meet the primary goals of the federal Clean Air Act: the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS), the prevention of significant deterioration (PSD) of air quality in areas cleaner than the NAAQS, and the prevention visibility impairment in Class I areas.

The NAAQS, developed and promulgated by the U.S. Environmental Protection Agency (EPA), establish the maximum limits of pollutants that are permitted in the ambient air in order to protect public health and welfare. EPA requires that each state submit a State Implementation Plan (SIP), including any laws and regulations necessary to enforce the plan, which 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 CAA 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 its requirements.

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 limit 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 primarily from motor vehicles and include Federal Motor Vehicle Emission Standards, fuel volatility limits, and inspection and maintenance programs. Transportation control measures limit the location and use of motor vehicles and include carpools, special bus lanes, rapid transit systems, commuter park and ride lots, signal system improvements, and many others.

Federal guidance on states' approaches to the inclusion of control measures in the SIP has varied considerably over the years, ranging from very general in the early years of the Clean Air Act to very specific in more recent years. Many regulatory requirements were adopted in the 1970s when no detailed guidance existed. The legally binding federal mandate for these regulations is general, not specific, consisting of the Clean Air Act's broad-based directive to states to attain and maintain the air quality standards. However, in recent years, the Clean Air Act, along with EPA regulations and policy, has become much more specific, thereby removing much of the states' discretion to craft their own air quality control programs.

Generally, a SIP is revised, as needed, based upon changes in air quality or statutory requirements. For the most part the SIP has worked, and the standards have been attained for most pollutants in most areas. Therefore, these specific SIP provisions, including implementation of this regulation, are necessary for the protection of public health and welfare.

**Additionally for Part II, Articles 5, 6, 11, 23 through 36, 39, 47, and 48:**

Generally, a SIP is revised, as needed, based upon changes in air quality or statutory requirements. For the most part the SIP has worked, and the standards have been attained for most pollutants in most areas. However, attainment of NAAQS for one pollutant – ozone – has proven problematic. While ozone is needed at the earth's outer atmospheric layer to shield out harmful rays from the sun, excess concentrations at the surface have an adverse effect on human health and welfare. Ozone is formed by a chemical reaction between volatile organic compounds (VOCs), nitrogen oxides (NOX), and sunlight. When VOC and NOX emissions from mobile sources and stationary sources are reduced, ozone is reduced.

Once a nonattainment area is defined, each state is obligated to submit a SIP demonstrating how it will attain the air quality standards in each nonattainment area. First, the Act required that certain specific control measures and other requirements be adopted and included in the SIP; a list of those requirements that necessitated the adoption of state regulations is provided below. In addition, the state had to demonstrate that it would achieve a VOC emission reduction of 15%. Finally, the SIP had to include an attainment demonstration by photochemical modeling (including annual emission reductions of 3% from 1996 to 1999) in addition to the 15% emission reduction demonstration. In cases where the specific control measures shown below were inadequate to achieve the emission reductions or attain the air quality standard, the state was obligated to adopt other control measures as necessary to achieve this end.

For all areas in Virginia:

1. Correct existing VOC regulatory program (controls on certain sources identified in EPA control technology guidelines).
2. Requirement for annual statements of emissions from industries.
3. Permit program for new industry and expansions (with variable major source definition, variable offset ratio for addition of new pollution, and special requirements for expansions to existing industry in serious areas).
4. Procedures to determine if systems level highway plans and other federally financed projects are in conformity with air quality plans.

For all nonattainment areas classified as "moderate" and above:

1. Requirement for controls for all major (100 tons per year) VOC sources.

2. Requirement for vapor recovery controls for emissions from filling vehicles with gasoline (stage II).
3. Requirement for controls for all major (100 tons per year) NOX sources.
4. Case by case control technology determinations for all major VOC and NOX sources not covered by a EPA control technology guideline.

Therefore, these specific SIP provisions, including implementation of these regulations, are necessary for the protection of public health and welfare.

**For Part II, Articles 21, 46, 54, and 55:**

Section 111(d) of the federal CAA addresses pollutants emitted by specific categories of sources that may reasonably anticipated to endanger public health and welfare. Like a § 110 SIP, a state’s § 111 (d) plan is designed to control emissions from these specific source categories in such a way as to protect public health and welfare.

**Additionally, for Part II, Articles 46, 54, and 55:**

As discussed above, emissions from solid waste incinerators such as small municipal waste combustors, large municipal waste combustors, and sewage sludge incinerators, are considered to be a "designated" pollutants under § 111(d) of the Act. Designated pollutant controls are critical for two reasons. First, only a limited number of air pollutants potentially harmful to human health are regulated at the federal level. Second, health risks from small exposures to designated air pollutants can be high, depending on the substances involved. Solid waste incinerator emissions consist of particulate matter, carbon monoxide, dioxin/furan, and other substances known or suspected of causing cancer, nervous system damage, developmental abnormalities, reproductive impairment, immune suppression, liver dysfunction, hormone imbalance, and other serious health effects. Control of such emissions will reduce and prevent such serious health effects. Therefore, implementation of this regulation is necessary for the protection of public health and welfare.

**For Part II, Article 52:**

BART is required for any BART-eligible source that emits any air pollutant that may reasonably be anticipated to cause or contribute to visibility impairment in any Class I area. Accordingly, for stationary sources meeting these criteria, states must address the BART requirement when developing regional haze SIPs. Therefore, these specific SIP provisions, including implementation of this regulation, are necessary for the protection of public health and welfare.

In summary, the regulations have been effective in protecting public health and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth, ensuring that owners comply with air pollution emission limits and control technology requirements in order to (i) control levels of visibility-impairing regional haze pollutant emissions and other pollutants being emitted into the ambient air, and (ii) prohibit emissions that would contribute to the impairment of visibility in Class I federal areas or otherwise contribute to nonattainment of the national air quality standards or interfere with the maintenance of those standards. The specific pollutants being effectively controlled under this regulation are:

Volatile organic compounds:	Part II, Articles 5, 6, 11, 24 through 36, 47, and 48.
Particulate matter:	Part II, Articles 4, 7 through 20, and 46.
Sulfur dioxide:	Part II, Articles 4, 8, 9, 11, 16, 18, 19, 21, 22, 46, 54 and 55.
Nitrogen oxides:	Part II, Articles 23, 46, 54, and 55.
Hydrogen sulfide	Part II, Articles 4, 9, and 11.
Sulfuric acid:	Part II, Article 21.
Total reduced sulfur:	Part II, Article 13.

Visible emissions:	Part II, All articles except Article 2.
Fugitive dust/emissions	Part II, All articles except Article 2.
Odor-causing emissions	Part II, All articles.

Part II articles effectively controlling designated pollutants:

Articles 46, 54, and 55	§111(d)-designated pollutants (including carbon monoxide, cadmium, lead, mercury, hydrogen chloride, dioxins, and furans in addition to those listed above).
Article 52	Visibility-impairing pollutants (including particulate matter, sulfur dioxides, nitrogen oxides, and possibly volatile organic compounds and ammonia).

The department has determined that these regulations are clearly written and easily understandable by the individuals and entities affected. They are written so as to permit only one reasonable interpretation, are written to adequately identify the affected entity, and, insofar as possible, are written in non-technical language.

**Result**

*Please state that the reason why the agency is recommending that the regulation should stay in effect without change.*

This regulation satisfies the provisions of the law and legally binding state and federal requirements, and is effective in meeting its goals; therefore, the regulation is being retained without amendment.

**Small business impact**

*In order to minimize the economic impact of regulations on small business, please include, pursuant to § 2.2-4007.1 E and F, a discussion of the agency’s consideration of: 1) the continued need for the regulation; 2) the nature of complaints or comments received concerning the regulation from the public; 3) the complexity of the regulation; 4) the extent to which the regulation overlaps, duplicates, or conflicts with federal or state law or regulation; and 5) the length of time since the regulation has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the regulation. Also, include a discussion of the basis for the agency’s determination to retain the regulation as is, consistent with the stated objectives of applicable law, to minimize the economic impact of regulations on small businesses.*

This regulation continues to be needed. It provides sources with the most cost-effective means of fulfilling ongoing state and federal requirements that protect air quality.

No comments were received that indicate a need to repeal or revise the regulation.

The regulation’s level of complexity is appropriate to ensure that the regulated entities are able to meet their legal mandates as efficiently and cost-effectively as possible.

This regulation does not overlap, duplicate, or conflict with any state law or other state regulation.

Specific articles were last reviewed as follows:

In 2011: Part I, Special Provisions, and Part II, Articles 1, 2, 4 through 27, 29 through 33, 35, 36,

47, 48, 52, and 54.  
In 2012: Part II, Article 55.  
In 2013: Part II, Article 28.

Over time, it generally becomes less expensive to characterize, measure, and mitigate the regulated pollutants that contribute to poor air quality. This regulation continues to provide the most efficient and cost-effective means to determine the level and impact of excess emissions and to control those excess emissions.

The department, through examination of the regulation and relevant public comments, has determined that the regulatory requirements currently minimize the economic impact of emission control regulations on small businesses and thereby minimize the impact on existing and potential Virginia employers and their ability to maintain and increase the number of jobs in the Commonwealth.

TEMPLATES\ EXISTING-REVIEW\TH07  
REG\ERRIERR 2018\CH40-07TH