



townhall.virginia.gov

Periodic Review and Small Business Impact Review Report of Findings

Agency name	State Air Pollution Control Board
Virginia Administrative Code (VAC) Chapter citation(s)	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 Article 24, Emission Standards for Solvent Metal Cleaning Operations

	<p>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 34, Emission Standards for Miscellaneous Metal Parts /Products Coating Application Article 35, Emission Standards for Flatwood Paneling Coating Application Systems Article 36, Emission Standards for Graphic Arts Printing Processes Article 37, Emission Standards for Petroleum Liquid Storage and Transfer Operations Article 40, Emission Standards for Open Burning Article 41, Emission Standards for Mobile Sources Article 43, Emission Standards for Municipal Solid Waste Landfills Article 43.1, Emission Standards for Municipal Solid Waste Landfills for which Construction, Reconstruction, or Modification was Commenced On or Before July 17, 2014 Article 45, Emission Standards for Commercial/Industrial Solid Waste Incinerators 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 51, Emission Standards for Stationary Sources Subject to Case-by-Case RACT Determinations Article 52, Emission Standards for Case-by-case BART Determinations Article 53, Emission Standards for Lithographic Printing Processes Article 54, Emission Standards for Large Municipal Waste Combustors Article 55, Emission Standards for Sewage Sludge Incinerators Article 56, Emission Standards for Letterpress Printing Operations Article 56.1, Emission Standards for Lithographic Printing Operations Article 57, Emission Standards for Industrial Solvent Cleaning Operations Article 58, Emission Standards for Miscellaneous Industrial Adhesive Application Processes Article 59, Emission Standards for Miscellaneous Metal Parts and Products Coating Application Systems</p>
<p>VAC Chapter title(s)</p>	<p>Regulations for the Control and Abatement of Air Pollution</p>

Date this document prepared	July 14, 2022
------------------------------------	---------------

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Order 14 (as amended, July 16, 2018), the Regulations for Filing and Publishing Agency Regulations (1VAC7-10), and the **Form and Style Requirements for the Virginia Register of Regulations and Virginia Administrative Code**.

Acronyms and Definitions

Define all acronyms used in this Report, and any technical terms that are not also defined in the “Definitions” section of the regulation.

- BART - Best Available Retrofit Technology
- CAA - Clean Air Act
- CEDS - Comprehensive Environmental Data System
- CFR - Code of Federal Regulations
- CTG - Control Techniques Guidelines
- DEQ - Virginia Department of Environmental Quality
- EPA - U.S. Environmental Protection Agency
- I/M - inspections and maintenance
- NAAQS - National Ambient Air Quality Standards
- NO_x - nitrogen oxides
- OTR - Ozone Transport Region
- RACT - Reasonably Available Control Technology
- SIP - State Implementation Plan
- SO₂ - sulfur dioxide
- VOC - volatile organic compound

Legal Basis

Identify (1) the promulgating agency, and (2) the state and/or federal legal authority for the regulatory change, including the most relevant citations to the Code of Virginia or Acts of Assembly chapter number(s), if applicable. Your citation must include a specific provision, if any, authorizing the promulgating agency to regulate this specific subject or program, as well as a reference to the agency’s overall regulatory 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.

Promulgating Entity

The promulgating entity for these regulations is the State Air Pollution Control Board.

Federal Requirements

For Part I, Special Provisions and Part II, Articles 1, 4 through 37, 40, 41, 43, 47, 48, 51, 53, and 56 through 59:

Section 110(a) of the federal Clean Air Act (CAA) mandates that each state adopt and submit to the U.S. Environmental Protection Agency (EPA) a State Implementation Plan (SIP) that 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, 43, 43.1, 45, 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 § 110 [or emitted from a source category which is regulated under §§ 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 an emissions 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 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 40 CFR 60.81(a). 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 43 and 43.1: Article 43 was originally promulgated as a § 110 SIP revision in order to address non-methane organic compounds (NMOC), which contribute to the formation of ozone in the northern Virginia ozone nonattainment area. Subsequently, EPA issued emissions guidelines for landfills under subparts Cb and Cf of 40 CFR Part 60; these emissions guidelines are applicable statewide, and address methane, a potent greenhouse gas. Article 43.1 was added in order for the designated pollutant requirements to operate separately from the limited criteria pollutant requirements.

For Part II, Articles 45, 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) (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) requires EPA to develop new source 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) 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 must include numerical emissions limitations, as required under § 129(a)(4). The limitations must be determined for particulate matter, opacity, sulfur dioxide (SO₂), 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) 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), 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) 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 CAA.

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) are also contained in 40 CFR Part 60.

Subpart DDDD of 40 CFR Part 60 (April 16, 2019, 84 FR 15884) provides emission guidelines for commercial/industrial solid waste combustors. Subpart BBBB of 40 CFR Part 60 (December 6, 2000, 65 FR 76378) provides emission guidelines for small municipal waste combustors. Subpart Cb of 40 CFR Part 60 (December 19, 1995, 60 FR 65382) provides emission guidelines for large municipal solid waste combustors. Subpart MMMM of 40 CFR Part 60 (March 21, 2011, 76 FR 15372) provides emission guidelines for sewage sludge incinerators. Federal emissions guidelines must be adopted by states as state rules in order that they be implemented by the state.

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 it 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 37, 40, 43, 47, 48, 51, 53, and 56 through 59:

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) 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) 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) requires stationary sources in serious nonattainment areas to comply with the requirements for sources in both marginal and moderate nonattainment areas.

Section 183(e) directs EPA to regulate 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 NO_x 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), 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 NO_x 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:

Article 2 is 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 to Regulation

Describe any viable alternatives for achieving the purpose of the regulation that were considered as part of the periodic review. Include an explanation of why such alternatives were rejected and why this regulation is the least burdensome alternative available for achieving its purpose.

Alternatives to the proposal have been considered by the department. The department has determined that the retention of certain regulations (the first alternative) and the repeal of certain regulations (the third alternative) is appropriate, as they are the least burdensome and least intrusive alternatives that fully meets statutory requirements and the purpose of the regulations. 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 certain regulations without amendment. This option is being selected because the current regulations provide the least onerous means of complying with the minimum requirements of the legal mandates. This includes all of the listed regulations in Chapter 40 with several exceptions discussed in the third and fourth alternatives.
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 or removal of requirements without justifiable benefits to public health and welfare, or failing to meet state and federal legal mandates.
3. Amend certain provisions. This option was selected for 9VAC 5-40-50 and potentially other sections. As discussed in the response to comments, these amendments will improve implementation of the regulations as well as provide a direct environmental benefit.
- 4 Repeal certain regulations. This option was selected because the following regulations no longer apply to any affected facilities or have been supplanted by more stringent regulatory programs, and are therefore no longer needed:
 - Article 11, Emission Standards for Petroleum Refinery Operations
 - Article 26, Emission Standards for Large Appliance Coating Application Systems
 - Article 41, Emission Standards for Mobile Sources

Public Comment

Summarize all comments received during the public comment period following the publication of the Notice of Periodic Review, and provide the agency response. Be sure to include all comments submitted: including those received on Town Hall, in a public hearing, or submitted directly to the agency. Indicate if an informal advisory group was formed for purposes of assisting in the periodic review.

Commenter	Comment	Agency response
Dominion Energy	The reporting requirements pursuant to 9VAC 5-40-50 require all reports and notifications to be submitted to the board through the	DEQ agrees that allowing electronic submittals is consistent with current agency policy and will help the program operate more efficiently; indeed, this will provide a

	<p>U.S. postal service. DEQ should allow for electronic submittal by emailing a copy to the Regional Director or another automated email to be distributed to the appropriate region after the document has been authenticated by using Adobe sign in accordance with DEQ's e-signature guidance. In addition, since Virginia has delegated authority over most of the federal regulations under 40 CFR Part 60 and Part 63 regulations, those delegation documents must also be changed to allow for electronic submission prior to sources initiating such change. Therefore, we request that changes occur as applicable during the delegation rule adoption process to enable sources to submit electronic copies. We believe this process aligns with DEQ's e-Signature guidance and is more efficient for both DEQ and the compliance entities.</p>	<p>direct environmental benefit as well. The regulations should be amended as appropriate.</p>
<p>Virginia Sierra Club</p>	<p>Under 9VAC5-40-20 A 4, opacity standards do not apply to facilities during periods of malfunction. For this reason, facilities that experience malfunction due to improper maintenance or other careless practices are able to emit considerable additional particulate pollution and cause major health impacts to surrounding communities without consequence. Facilities should not be given a pass for the malfunctions they experience in those circumstances. To avoid this, we urge you to adopt changes to the chapter that would place reasonable limits on the number of malfunctions per month, and on the length of any malfunctions, that qualify for exemption from the opacity standards. Facility owners and operators should be required inform DEQ as soon as the number of malfunctions or length of time of malfunction is exceeded so that DEQ can determine appropriate corrective actions.</p>	<p>"Malfunction" is defined in 9VAC5-10-20 as "any sudden failure of air pollution control equipment, of process equipment, or of a process to operate in a normal or usual manner, which failure is not due to intentional misconduct or negligent conduct on the part of the owner or other person. <u>Failures that are caused in part by poor maintenance or careless operation are not malfunctions.</u>" (Emphasis added.) A failure that is the result of "improper maintenance" and results in impermissible emissions of air pollution is, therefore, clearly subject to enforcement action. The specific requirements for addressing malfunctions in 9VAC5-20-180 are approved by EPA, and address the concerns raised by the commenter.</p>

<p>Virginia Sierra Club</p>	<p>DEQ has asked for the public's view on whether 9VAC-40 is "necessary for the protection of public health, safety and welfare, or for the economical performance of important governmental functions." Our answer is a resounding yes. This regulation, and the actions taken under it, have a major impact on the quality of the air we breath and so are critical to the protection of the health, safety and welfare of all Virginians. The regulations also serve an important role in supporting the economy of the Commonwealth.</p>	<p>Support for the program is appreciated. DEQ agrees that the regulations are needed to protect public health and welfare, and also provide an economic benefit; support for the program is appreciated. Periodic reviews such as this are essential in identifying issues that need to be adjusted in order to make the program operate efficiently and effectively.</p>
-----------------------------	--	--

Effectiveness

Pursuant to § 2.2-4017 of the Code of Virginia, indicate whether the regulation meets the criteria set out in Executive Order 14 (as amended, July 16, 2018), including why the regulation is (a) necessary for the protection of public health, safety, and welfare, and (b) is clearly written and easily understandable.

For all Articles:

The regulations in Chapter 40 are necessary for the protection of public health and welfare, as they are needed to meet the primary goals of the federal CAA: 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, the prevention visibility impairment in Class I areas.

The NAAQS 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 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 CAA 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 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 CAA 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 CAA's broad-based directive to states to attain and maintain the air quality standards. However, the CAA Amendments of 1990, along with current EPA regulations and policy and ongoing updates, 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 43, 47, 48, 51, 53 and 56 through 59:

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 (NO_x), and sunlight. When VOC and NO_x 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 CAA 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 techniques 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) NO_x sources.
4. Case by case control technique determinations for all major VOC and NO_x sources not covered by a EPA control technique 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, 43, 43.1, 45, 46, 54, and 55:

Section 111(d) of the federal CAA addresses pollutants emitted by specific categories of sources that may reasonably be 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.

As discussed above, emissions from landfills and solid waste incinerators are considered to be “designated” pollutants under §§ 111(d) and 129. 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. Landfill emissions include non-methane organic compounds (which contributes to the formation of ozone) and methane (which is a powerful greenhouse gas). 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 these regulations 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.

All provisions 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 meet federal health and welfare based standards. The specific pollutants being effectively controlled under these regulations are

VOCs, particulate matter, SO₂, NO_x, hydrogen sulfide, sulfuric acid, total reduced sulfur, visible emissions, fugitive dust/emissions, odor-causing emissions, §111(d) designated pollutants (including carbon monoxide, cadmium, lead, mercury, hydrogen chloride, dioxins, and furans), and visibility-impairing pollutants (including particulate matter, SO₂, NO_x, VOCs 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.

Decision

Explain the basis for the promulgating agency’s decision (retain the regulation as is without making changes, amend the regulation, or repeal the regulation).

Except as otherwise noted, these regulations satisfy the provisions of the law and legally binding state and federal requirements, and are effective in meeting its goals; therefore, the majority of regulations are being retained without amendment.

Based on public comment, it has been determined that 9VAC 5-40-50 and potentially other similar provisions should be amended to allow the use of electronic signature for certain submittals.

In order to determine the ongoing applicability of the regulations, a review of the Comprehensive Environmental Data System (CEDS) was made. CEDS is Virginia's air regulatory registration database. Facilities must register in this database all units to which a regulation of the board applies. This review revealed that two facility types covered by a Chapter 40 regulation no longer operate in the state: petroleum refinery operations and large appliance coating application systems. Therefore, it is recommended that Article 11, Emission Standards for Petroleum Refinery Operations, and Article 26, Emission Standards for Large Appliance Coating Application Systems, be repealed.

Additionally, it is recommended that Article 41, Emission Standards for Mobile Sources be repealed. Since Article 41 was originally adopted, important changes have been made to federal and state law which have resulted in significantly better control of the emissions than this regulation was designed to limit. Federal motor vehicle emission standards have become increasingly stringent over the last 30 years, resulting in large reductions in air pollution. Additionally, most motor vehicles in northern Virginia are subject to the inspection and maintenance (I/M) program, which provides a much higher level of stringency for ozone pollution control than the level provided by the idling provision in Article 41. Idling issues are most effectively addressed by localities, which are better able to implement and enforce that type of local, intermittent problem, via local ordinance as enabled by § 46.2-1224.1. The remainder of the regulation is accomplished through statewide safety inspections carried out by the State Police through § 46.2-1048.

Small Business Impact

As required by § 2.2-4007.1 E and F of the Code of Virginia, discuss the agency’s consideration of: (1) the continued need for the regulation; (2) the nature of complaints or comments received concerning the regulation; (3) the complexity of the regulation; (4) the extent to the 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, discuss why the agency’s decision, consistent with applicable law, will minimize the economic impact of regulations on small businesses.

With the exceptions noted above, these regulations continue to be needed. They provide 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 the regulations; one comment was received that indicates some revisions to address the concept of "postmarking" certain submittals was received.

The regulations' 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.

These regulations do not overlap, duplicate, or conflict with any state law or other state regulation, with the exception of Article 41, which in large part duplicates existing code.

Chapter 40 as a whole last underwent periodic review in 2018.

Over time, technological improvements make it generally less expensive to characterize, measure, and mitigate the regulated pollutants that contribute to poor air quality. These regulations continue 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 regulations and relevant public comments, has determined that the regulatory requirements 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.

Family Impact

Please assess the potential impact of the regulation's impact on the institution of the family and family stability.

No family impacts are anticipated.

REG\ERR\ERR-2022\CH40-TH07