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Periodic Review and Small Business Impact Review Report of Findings

Agency name	Air Pollution Control Board
Virginia Administrative Code (VAC) Chapter citation(s)	9VAC5-30
VAC Chapter title(s)	Ambient Air Quality Standards
Date this document prepared	October 5, 2020

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.

ATS- American Thoracic Society

ALA- American Lung Association

CAA- Clean Air Act

CASAC- Clean Air Scientific Advisory Committee

DEQ- Department of Environmental Quality

EPA- Environmental Protection Agency

IRP- Integrated Review Plan

ISA- Integrated Science Assessment

LPO- Lead planning organization

MWAQC- Metropolitan Washington Air Quality Committee

NAAQS- National Ambient Air Quality Standards

O3- Ozone

PA- Policy Assessment

PM10- Particulate matter particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers)

PM2.5- Particulate matter particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers)

ppm- parts per million

REA- Risk/Exposure Assessment

VCCA- Virginia Clinicians for Climate Action

VTCA- Virginia Transportation Construction Alliance

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.

Promulgating Entity

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

Federal Requirements

Sections 109 (a) and (b) of the Clean Air Act (CAA) require the Environmental Protection Agency (EPA) to prescribe national primary air quality standards (to protect public health) and national secondary air quality standards (to protect public welfare) for each air pollutant for which air quality criteria were issued before the enactment of the 1970 Clean Air Act. The primary and secondary air quality criteria shall include, to the extent practicable, information on the following: (1) variables which may adversely affect the impact of an air pollutant on public health or welfare; (2) pollutants which may interact with other pollutants to produce an adverse effect on public health or welfare; and (3) any known or anticipated adverse effects on public health or welfare.

Section 302 (h) defines effects on public welfare as including, but not limited to, effects on soils, water, vegetation, man-made materials, animals, weather, visibility. Also included are damage to and deterioration of property, hazards to transportation, and adverse effects on economic values, personal comfort, and well-being.

40 CFR Part 50 specifies the national primary and secondary ambient air quality standards for the following criteria air pollutants: sulfur dioxide, particulate matter (PM10), carbon monoxide, ozone, nitrogen dioxide, and lead. In addition, since section 302 (g) of the CAA specifies that the term "air pollutant" includes precursors to the formation of any air pollutant, volatile organic compounds (hydrocarbons) are generically classed as a criteria air pollutant because of their function as a precursor in ozone formation.

Appendices A through J to 40 CFR Part 50 specify reference methods for measuring the following criteria air pollutants in the atmosphere or in the ambient air: sulfur dioxide, suspended particulate matter, carbon monoxide, ozone, hydrocarbons corrected for methane, nitrogen dioxide, lead in suspended particulate matter, and PM10.

Appendices H and K to 40 CFR Part 50 interpret the National Ambient Air Quality Standards for two criteria air pollutants: ozone and particulate matter.

Subparts A through D of 40 CFR Part 53 specify ambient air monitoring reference and equivalent methods, specifically procedures for testing performance characteristics of automated methods for sulfur dioxide, carbon monoxide, ozone, PM10, and nitrogen dioxide; and procedures for determining comparability between candidate methods and reference methods.

40 CFR Part 58 specifies procedures for ambient air quality surveillance, specifically monitoring criteria; state and local air monitoring stations; national air monitoring stations; photochemical assessment monitoring stations; air quality index reporting; and federal monitoring.

State Requirements

Section 10.1-1307 A of the Code of Virginia 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.

Section 10.1-1308 of the Code of Virginia 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.

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 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 does not meet federal mandates, which 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

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.

An informal advisory group was not formed for the purpose of assisting in the periodic review.

Commenter	Comment	Agency response
Nancy Hicks	Virginia's clean air act is a good policy I just wish it was enforced ,as I have reported the quarry several times and it is still running in the same manner .and the dust is still very bad .especially from 5:00 pm until 7:00 am and the local DEQ office is absolutely unwilling or	Support for the current standards is noted. No changes to the regulation are proposed by this comment.

	unable to enforce the law. The laws are in place- enforce them .	
Rob, Lanham, Virginia Transportation Construction Alliance (VTCA)	VTCA Aggregate Producers support the limits the way that they are currently written, the EPA recently declined an opportunity to change them, and air quality continues to improve under the current regulations. If the State Air Pollution Control Board elects to open this permit up for review or amendment VTCA would like to be part of an advisory group that is formed.	Support for the current standards is noted. No changes to the regulation are proposed by this comment.
Samantha Ahdoot, MD, Chair of Virginia Clinicians for Climate Action	Virginia Clinicians for Climate Action (VCCA) encourages the Virginia Department of Environmental Quality to update the Ambient Air Quality Standards (9VAC5-30) to protect the future health of Virginia residents. VCCA recommends that Virginia adopt primary and secondary annual standards of 11 µg/m3 and 24-hour standards of 25 µg/m3 for particulate matter (PM2.5) as well as primary and secondary 8-hour standards of 0.060 ppm for ozone (O3), in accordance with American Thoracic Society (ATS) and American Lung Association (ALA) recommendations. Information on studies related to the impacts of air pollution on public health was also provided by the commenter to support the requested revised standards for PM2.5 and O3.	See response below.

Response to comments from Samanntha Ahdoot, MD, chair of the Clinicians for Climate Action-

Virginia's PM2.5 levels are well below the NAAQS statewide and trends continue downward. Most of the state attains the 2015 ozone NAAQS with the exception of northern Virginia, which is classified as a marginal nonattainment area. Given the ongoing downward trend in ozone pollution, DEQ expects that northern Virginia will soon attain the standard even though population and development in the area continue to expand.

While Virginia may impose air pollution controls that are more restrictive than federal requirements, and does so when warranted, the commenters' suggested approach is not appropriate for this area of the regulations.

Setting the NAAQS: Process

Sections 108 and 109 of the federal Clean Air Act require establishment of the NAAQS to protect public health and welfare with an adequate margin of safety, and without regard to cost. The Act requires periodic review of the science upon which the standards are based and the standards themselves. Reviewing the NAAQS is a lengthy, complex undertaking that draws on EPA's extensive technical and scientific resources.

The planning phase of the NAAQS review process begins with a science policy workshop, which gathers input from the scientific community and the public regarding policy issues and questions that frame the review. EPA then prepares an Integrated Review Plan (IRP) that presents the schedule, process, and key policy scientific issues that will guide the review. The Integrated Science Assessment (ISA) is a

comprehensive review, synthesis, and evaluation of the most policy-relevant science, including judgments that are important to inform the development of the risk and exposure assessments.

A Risk/Exposure Assessment (REA) draws upon information and conclusions presented in the ISA to develop quantitative characterizations of exposures and associated risks to human health or the environment associated with air quality conditions and with air quality estimated to meet the current or alternative standard under consideration. This assessment includes a characterization of uncertainties associated with such estimates.

The Policy Assessment (PA) provides a staff analysis of the scientific basis for alternative policy options for consideration by senior EPA management prior to rulemaking. This evaluation of policy implications links EPA's scientific assessments, presented in the ISA and REA, and the judgments required of the EPA Administrator in determining whether it is appropriate to retain or revise the NAAQS. As required by the Clean Air Act, the PA also considers advice from the Clean Air Scientific Advisory Committee (CASAC) and recommendations on the adequacy of the existing standards or revisions that may be appropriate to consider. The PA focuses on the information that is most pertinent to evaluating the basic elements of the NAAQS: indicator, averaging time, form, and level.

Scientific review during the development of these documents is thorough and extensive. Drafts of all documents are subject to public comment and reviewed by CASAC.

CASAC provides independent advice to EPA on the technical bases for the NAAQS. CASAC also addresses research related to air quality, sources of air pollution, and the strategies to attain and maintain air quality standards. To fulfill its Clean Air Act mandate, CASAC reviews criteria documents, science assessments, and policy-related assessments. It also provides advice on a range of other scientific issues related to pollutants where members' expertise can strengthen the scientific bases of the agency's programs.

DEQ lacks the staff or resources to conduct these types of intensive scientific evaluations. Nor does DEQ have the resources to evaluate the qualifications of any third-party organization other than EPA to conduct such studies on its behalf.

Interstate obligations

In addition to baseline planning activities required statewide, nonattainment areas are obligated to meet additional requirements for interstate plans and programs.

Section 174 of the Clean Air Act requires that areas of the state that do not comply with ozone or PM_{2.5} NAAQS form lead planning organizations (LPOs). LPO members are elected officials from the localities in the nonattainment area and representatives of the Virginia Department of Transportation, the Virginia Department of Rail and Public Transport, and the metropolitan planning organizations within the nonattainment area. Private citizens, industry representatives, military installations, and environmental groups may participate in the LPOs in an advisory capacity.

The purpose of the LPO is to assist in carrying out nonattainment planning requirements for that area. Planning activities include examining baseline emissions levels to determine necessary control strategies, examining transportation needs for future growth, and creating plans for EPA review and approval to bring the area into attainment. The extent of the planning requirements depends on the classification of the nonattainment area and the severity of the air pollution problem.

For the lone nonattainment area in the Commonwealth, an LPO known as the Metropolitan Washington Air Quality Committee (MWAQC) has been established. It consists of representatives from northern Virginia, Washington, D.C., and southern Maryland. MWAQC is the Clean Air Act-mandated organization that develops and approves plans for the region. The commenters have not explained how the LPO process would work in northern Virginia--or elsewhere in the state--if a different standard were imposed. Air pollution does not respect jurisdictional boundaries, which is why the Clean Air Act requires interstate cooperation and planning. How a Virginia-only standard would improve air quality in Virginia without the participation of neighboring states or even non-neighboring upwind states that have an impact on Virginia is problematic.

Regulatory process

The standards recommended by the commenters would be subject to a full rulemaking process required by state law as well as executive order of the Governor, a process that would take three years to complete. The Clean Air Act requires that the NAAQS be developed to protect public health and welfare with an adequate margin of safety and without regard to cost. Virginia law requires that cost must be considered, and as part of this rulemaking process, a detailed economic analysis would be required. This analysis would necessitate obtaining statewide information on impacts to localities, business, including small business, and government. It is unclear if, as a result of this exercise, the anticipated benefits would outweigh the costs. In any case, DEQ lacks the staff or resources to conduct these types of intensive economic evaluations.

Outcomes

Even if more restrictive standards were set by the state, the ability to realistically meet those standards would be problematic. For example, the ability of the northern Virginia area to meet a standard well below the established NAAQS is questionable. Essentially, every tool available to the state has already been imposed, from limiting emissions from the few large industrial facilities, to controlling the formulation of hair gel and air fresheners. The vast majority of ozone- and PM2.5-causing emissions in the area come from mobile sources, primarily automobiles and trucks. Other than the current inspection and maintenance program implemented by the state, most pollution controls on motor vehicles are federal standards that control vehicle mileage and fuels. Whether an individual state has the legal authority to supplement, override or alter those federal mandates is doubtful.

As described above, implementing the NAAQS is an extremely complex process. It is unclear how the commenters envision how different state standards would operate--particularly in the context of interstate consultation obligations and the science of interstate pollution transport--even if the state were to somehow obtain the resources to do so.

The commenters' concerns are recognized, and there will always be room for improvement in protecting the air quality of the Commonwealth. The commenters' recommendations, however, cannot be met without considerable expense yet absent certainty as to public health and welfare benefits. In contrast, the federal NAAQS in the context of the overall Clean Air Act have an established track record in reducing pollution. DEQ therefore recommends focusing state resources on this stable, well-established and effective program.

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.

The regulation has been effective in achieving its specific and measurable goals, which are as follows:

1. To protect public health and welfare with the least possible cost and intrusiveness to the citizens and businesses of the Commonwealth.
2. To define levels of air quality which, allowing an adequate margin of safety, are necessary to protect the public health and safety.
3. To define more stringent levels of air quality which are necessary to protect the public welfare from any known or anticipated adverse effects associated with the presence of air pollutants in the ambient air.

The regulation is clearly written and easily understandable by the individuals and entities affected.

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).

This regulation is effective in meeting its goals; therefore, the regulation is being retained without amendment.

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 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.

This regulation continues to be needed. It provides the necessary requirements to ensure that Virginia standards for air quality are the most cost-effective means of fulfilling ongoing state and federal requirements for air quality.

One comment was received requesting the regulation be revised to include standards that are more stringent than current state and federal standards. The agency believes the standards established by regulation are protective of human health and the environment.

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.

This regulation was last amended in November 2016.

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.

Family Impact

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

It is not anticipated that this regulation will have a direct impact on families.