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**VIA E-MAIL ([doris.mcleod@deq.virginia.gov](mailto:doris.mcleod@deq.virginia.gov))**

Doris A. McLeod, Air Quality Planner  
Air and Renewable Energy Division  
Office of Data Analysis and Planning  
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Richmond, Virginia 23218

**RE: Sierra Club Comments Concerning Virginia's Redesignation Request and Maintenance Plan for the 2008 Ozone National Ambient Air Quality Standard in the Northern Virginia Ozone Nonattainment Area**

Dear Ms. McLeod:

On behalf of the Sierra Club and its over 1,700 members living in the Washington DC-Maryland-Virginia 2008 ozone nonattainment area and others who are adversely impacted by the area's ozone pollution, I submit the following comments on Virginia's proposed revision to its State Implementation Plan ("SIP") that includes Virginia's request under the Clean Air Act ("CAA") that the Washington DC-MD-VA ozone nonattainment area be redesignated to attainment with respect to the 2008 ozone National Ambient Air Quality Standard ("NAAQS") as well as Virginia's plan to maintain attainment of the 2008 8-hour ozone standard in the Washington-MD-VA area. *See* Virginia's Redesignation Request for the Washington DC-MD-VA 2008 Ozone NAAQS Marginal Nonattainment Area (Sep. 18, 2017) (hereinafter "Redesignation Request"); *see also* Virginia's Maintenance Plan for the Washington DC-MD-VA 2008 Ozone NAAQS Nonattainment Area (Sep. 18, 2017) (hereinafter "Maintenance Plan"). According to the Virginia Department of Environmental Quality's ("DEQ") air quality plan public notice, DEQ is seeking comments on the overall plans, and on the issue of whether the plans

enables the Northern Virginia Ozone Nonattainment Area to maintain compliance with the 2008 ozone NAAQS until at least 2030; the public comment period ends November 15, 2017, making this submission timely.

As discussed in detail below, Virginia's request that the Washington DC-MD-VA 8-hour ozone nonattainment area be redesignated to attainment with respect to the 2008 ozone NAAQS fails to satisfy the essential requirements of CAA section 107(d)(3)(E) and fails to ensure maintenance of the NAAQS through 2030.

## **I. BACKGROUND**

### **A. National Ambient Air Quality Standards**

The Clean Air Act is, at its core, a directive to protect the public from harmful air pollution and enhance the public health and public welfare of the nation. *See* 42 U.S.C. § 7401(b)(1). To this end, the Act requires the United States Environmental Protection Agency ("EPA") to promulgate NAAQS for all criteria pollutants. 42 U.S.C. § 7409(a)(1). Criteria pollutants are those pollutants that "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare" and are emitted by "numerous or diverse mobile or stationary sources." 42 U.S.C. §§ 7408(a)(1)(A)-(B). Primary standards are health-based standards set at a level adequate to protect the public from the harmful effects of exposure to the criteria pollutants with an adequate margin of safety. *See* 42 U.S.C. § 7409(b). Secondary standards define the air quality level required to protect the public welfare by preventing adverse impacts on other elements of the environment, such as vegetation. *See id.* Together, these standards represent a ceiling of air pollution concentrations that apply throughout the country to protect public health and welfare. Within three years after promulgation of a new or revised NAAQS, each state must submit a plan "which provides for implementation, maintenance, and enforcement of [the NAAQS] in each air quality control region (or portion thereof) within such State." 42 U.S.C. § 7410(a)(1). By law, these "infrastructure SIPs" must contain certain specifically enumerated requirements set forth under CAA section 110. *See* 42 U.S.C. § 7410(a)(2).

Following promulgation of any new or revised NAAQS, EPA must promulgate designations for all areas of every state as either nonattainment, attainment, or unclassifiable for that NAAQS. 42 U.S.C. §§ 7407(d)(1)(B), (d)(2)(A). A nonattainment area is "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the [NAAQS] for the pollutant." 42 U.S.C. § 7407(d)(1)(A)(i). An attainment area is "any area . . . that meets the [NAAQS] for the pollutant." *Id.* at § 7407(d)(1)(A)(ii). An unclassifiable area is "any area that cannot be classified on the basis of available information as meeting or not meeting the [NAAQS] for the pollutant." *Id.* at § 7407(d)(1)(A)(iii).

The CAA outlines requirements for achieving clean air in designated nonattainment areas. *See* 42 U.S.C. § 7501, *et seq.* "These requirements include timelines for when designated nonattainment areas must attain the standards, deadlines for developing SIPs that demonstrate how

the State will ensure attainment of the standards, and specific emissions control requirements.” Final Rule, National Ambient Air Quality Standards for Ozone, 73 Fed. Reg. 16,436, 16,503 (March 27, 2008). Under the CAA, the EPA Administrator may not promulgate a redesignation of a nonattainment area (or portion thereof) to attainment unless specific enumerated requirements have first been met—these being that:

- (i) the Administrator determines that the area has attained the national ambient air quality standard;
- (ii) the Administrator has fully approved the applicable implementation plan for the area under section 7410(k) of this title;
- (iii) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollutant control regulations and other permanent and enforceable reductions;
- (iv) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 7505a of this title; and
- (v) the State containing such area has met all requirements applicable to the area under section 7410 of this title and part D of this subchapter.

42 U.S.C. § 7407(d)(3)(E).

## **B. The 2008 Ozone NAAQS**

Ozone is classified as a criteria air pollutant under the CAA. Exposure to ozone in the air we breathe has the potential to cause severe health problems, including chest pain, coughing, throat irritation, and congestion. Ground level ozone reduces lung function and inflames the linings of the lungs, and repeated exposure may permanently scar lung tissue. *See* 73 Fed. Reg. at 16,440. In addition, exposure to unsafe levels of ozone further impacts the health of those who already suffer from respiratory illness, for instance, by worsening bronchitis, emphysema, and asthma. *See id.* These effects lead to increased school absences in children, absences from work by adults, increased reliance on medication, visits to doctors and emergency rooms, and hospital admissions across the District of Columbia, Maryland, Virginia, and the rest of the country. *See id.* Research also indicates that ozone exposure may increase the risk of premature death from heart or lung disease. *See id.* In addition to direct impacts to the public health, ground-level ozone also damages our environment, vegetation, and trees, and impacts forests, parks, and crops. *See id.* at 16,405.

On March 12, 2008, EPA revised both the primary and secondary NAAQS for ozone to a level of 0.075 parts per million (“ppm”) to provide increased protection of public health and the environment. *See* 73 Fed. Reg. 16,436; *see also* 40 C.F.R. 50.15. The air quality design value for

the 8-hour ozone NAAQS is the three-year average of the annual fourth highest daily maximum 8-hour average ozone concentration. *See* 40 CFR part 50.15, appendix P. In revising the ozone standard, EPA recognized it was providing increased protection for public health, especially for children, the elderly, and asthmatics. Under the CAA, following promulgation of the 2008 ozone NAAQS, states were required to submit implementation plans no later than March 12, 2011. 73 Fed. Reg. 16,503 (March 27, 2008).

EPA's area designations for the 2008 ozone NAAQS became effective on July 20, 2012. Final Rule, Air Quality Designations for the 2008 Ozone National Ambient Air Quality Standards, 77 Fed. Reg. 30,088 (May 21, 2012). In accordance with the CAA, areas designated as nonattainment were also classified according to the severity of their air quality problems, as Marginal, Moderate, Serious, Severe, or Extreme nonattainment. *See* 42 U.S.C. § 7511(a)(1). Depending on the classification of an area, states were required to submit nonattainment area SIPs providing for attainment of the standard "within 3 years (for areas classified marginal) to 20 years (for areas classified extreme) after final designations." 73 Fed. Reg. 16,503 (March 27, 2008). In addition, as required by the CAA, any area not attaining the standard by the applicable attainment date must be reclassified to the higher of either (1) the next higher classification for the area, or (2) the classification applicable to the area's design value as determined at the time of the notice. 42 U.S.C. § 7511(b)(2)(A).

### **C. The Washington DC-MD-VA Nonattainment Area**

Effective July 20, 2012, EPA designated the Washington DC-MD-VA area—consisting of Virginia's Arlington, Fairfax, Loudoun, and Prince William counties and Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park cities—as a marginal nonattainment area for the 2008 ozone NAAQS. 77 Fed. Reg. 30,152. In addition, the Maryland portion of this area includes: Calvert, Charles, Frederick, Montgomery, and Prince George's counties, 77 Fed. Reg. at 30127, and the Washington, DC portion of this area includes the entire District of Columbia. 77 Fed. Reg. at 30111. The area's marginal nonattainment designation was based on monitored data showing a violation of the 2008 8-hour ozone NAAQS for the 2008-2010 period. *See* 77 Fed. Reg. 30,091.

As a marginal nonattainment area, the Washington DC-MD-VA nonattainment area was required to attain the 2008 8-hour ozone NAAQS no later than July 20, 2016. Final Rule, Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Several Areas for the 2008 Ozone National Ambient Air Quality Standards, 81 Fed. Reg. 26,697, 26,701 (May 4, 2016). Attainment of the ozone NAAQS is achieved when the design value at each ambient air quality monitoring site within the area is less than or equal to 0.075 ppm. *See* 73 Fed. Reg. 16,439. On April 25, 2017, EPA issued a proposed determination of attainment for the Washington DC-MD-VA area based on 2013-2015 monitor data. Proposed Rule, Determination of Attainment by the Attainment Date for the 2008 Ozone Standard; District of Columbia, Maryland, and Virginia; Washington DC-MD-VA Area, 82 Fed. Reg. 19011(Apr.

25, 2017). Virginia now seeks redesignation of the Washington DC-MD-VA nonattainment area to attainment. *See* Redesignation Request and Maintenance Plan (September 18, 2017).

## II. SUBSTANTIVE COMMENTS

For the reasons set forth below, Virginia's Redesignation Request fails to meet the requirements of section 107(d)(3)(E) of the Clean Air Act and, therefore, should not be granted.

### A. Virginia has failed to meet all requirements applicable to the area under CAA Part D, as required by 42 U.S.C. § 7407(d)(3)(E)(v)

Under the CAA, a nonattainment area may not be redesignated attainment unless the State has met all requirements applicable to the area under CAA section 110—setting forth infrastructure SIP requirements, and Part D—Plan Requirements for Nonattainment Areas, 42 U.S.C. § 7407(d)(3)(E)(v)—e.g. for requirements that pertain to a SIP, those requirements are not “met” until EPA approves the changes into the SIP. As part of the Ozone Transport Region, § 184 of the CAA requires the Washington DC-MD-VA 2008 ozone NAAQS nonattainment area to implement Reasonably Available Control Technology (“RACT”) requirements in support of the 2008 ozone NAAQS. Virginia currently has proposed a SIP to support RACT in the Ozone Transport Region of Virginia (hereinafter “RACT SIP”), which the state intends to submit to EPA as a SIP revision to meet the requirements of § 110(a) of the Clean Air Act. *See* Public Notice – Air Quality Plan - Northern Virginia RACT, available at <http://www.deq.virginia.gov/Portals/0/DEQ/Air/PublicNotices/Drafts/nvanot.pdf>. According to the proposed RACT SIP, Virginia has determined that six facilities are subject to RACT requirements that necessitate the submittal of source-specific SIP revisions. RACT SIP at 23. Virginia says it will submit as necessary source-specific requirements addressing RACT for the 2008 ozone NAAQS for each of these facilities in subsequent SIP revisions. *Id.* However, these SIP revisions must be approved into Virginia's plan *before* EPA may redesignate the area as an attainment area. Consequently, Virginia has not all requirements applicable to the area under CAA section 110.

### B. The Proposed Maintenance Plan Must Be Revised to Ensure Prompt Implementation of and Compliance with its Contingency Measures

The proposed Maintenance Plan's implementation schedules for the contingency measures' triggers are unacceptably long and fail to satisfy the prompt response timing required by CAA Section 175A. *See* 42 U.S.C. § 7505a(d). Section 175A of the CAA requires that Virginia's proposed Maintenance Plan specify contingency measures necessary to assure that Virginia will *promptly* correct any violation of the standard which occurs after the redesignation of the area as an attainment area. *See id.* However, the contingency measures proposed in Virginia's proposed Maintenance Plan do not provide for prompt implementation and compliance of those measures following the identified triggers—i.e. notification from EPA that a contingency measure must be implemented or a determination that an exceedance or violation occurred within

the previous year. *See* Maintenance Plan at 27. As proposed, implementation and compliance with necessary rules for ensuring attainment and maintenance of the 2008 8-hour ozone NAAQS would not become effective for up to 21 months. *See id.* This in no way constitutes a timeline consistent with “prompt” correction, in violation of the law. Thus, the plan must be revised. Virginia should commit to implementing the proposed Maintenance Plan’s contingency measures within, at most, 12 months of any given trigger.

C. **The Proposed Maintenance Plan Should Be Revised to Account for the Predicted Effects of Climate Change on the Area’s Ability to Maintain the Ozone NAAQS**

“Because ozone formation is greatest when the sunlight is most intense, the peak ozone levels typically occur during hot, dry, stagnant summertime conditions.” Maintenance Plan at 7. Well-established science indicates that higher temperatures experienced in recent years will soon become typical, particularly those occurring during the ozone season. Indeed, scientific data of climate change has projected that if greenhouse emissions are not rapidly and substantially reduced, the hottest summer of the last 20 years is expected to occur every other year, or even more frequently than that. *See, e.g.,* “Changes in Ecologically Critical Terrestrial Climate Conditions,” *Science*, 2 Aug. 2013, Vol. 341, no. 6145, 486-492. Therefore, the analyses underlying the 2008 ozone NAAQS and the assumptions upon which Virginia has based its claim that the NAAQS will be maintained in the present Washington DC-MD-VA 2008 Ozone NAAQS Nonattainment Area likely underestimate the level of ozone reductions actually required in light of increasingly warming temperatures to come. As a result, Virginia’s proposed Maintenance Plan for the Washington DC-MD-VA ozone nonattainment area is likely inadequate to maintain the standard over the next ten years, as required by law. *See* 42. U.S.C. § 7505a(a). Accordingly, given the projected increase in summer temperatures the area will experience during the ten-year maintenance period and beyond, Virginia should revise the proposed Maintenance Plan to specifically include consideration and a discussion of climate change impacts to ensure the Plan is indeed adequate.

### III. CONCLUSION

For the reasons set forth above, Virginia’s proposed Redesignation Request and Maintenance Plan fail to meet the CAA’s statutorily mandated requirements for granting a redesignation request for an area under the 2008 ozone NAAQS from nonattainment to attainment. *See* 42 U.S.C. § 7407(d)(3)(E). Therefore, Virginia should not submit the plan to EPA as a revision to the Commonwealth of Virginia SIP unless appropriate and necessary changes are first made to protect public health and comply with requirements of the Clean Air Act.

Respectfully submitted,

*/s Kathryn Amirpashaie*

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