



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

March 17, 2015

Attention: Docket ID No. EPA-HQ-OAR-2008-0699
U.S. Environmental Protection Agency
Submitted via email to A-and-R-docket@epa.gov

RE: “*National Ambient Air Quality Standards for Ozone; Proposed Rule*,” 79 *Federal Register* 75234, et. seq. (December 17, 2014).

Dear Docket Manager:

The West Virginia Department of Environmental Protection (WVDEP) appreciates this opportunity to comment on the proposal to revise the *National Ambient Air Quality Standards for Ozone*, which was published in the *Federal Register* on December 17, 2014. WVDEP has reviewed the proposed rule and offers the following comments.

Executive Summary

The WVDEP strongly opposes lowering of the National Ambient Air Quality Standard (NAAQS) for ozone and supports retention of the current primary standard of 75 parts per billion (ppb). Little has changed in the body of science connecting ozone with health impacts since the Environmental Protection Agency (EPA) established the current ozone NAAQS in 2008 and rejected a lower standard of 70 ppb, as it was not sufficiently supported by scientific study. The studies upon which EPA would now rely to reduce the standard are subject to substantial uncertainties in the ways that monitored ozone levels reflect actual human exposure, the practical reality that controlled exposure studies do not reflect actual human exposure, the presence of many confounding factors and the influence of co-pollutants. As one considers the science in relation to ozone concentration, the lower the concentration being considered, the more uncertain and tenuous any evidence supporting a reduction becomes.

While the bare statutory criteria for establishing a NAAQS generally do not include costs as a part of EPA’s consideration, it is inescapable that, as the Clean Air Science Advisory Committee (CASAC) has pointed out, EPA’s task in so doing comes down to a *policy judgment*.

Promoting a healthy environment.

One cannot make a policy judgment that ignores the exorbitant costs of achieving increasingly uncertain health benefits, for which the available science provides little or no support. The press has reported the observations of some that this proposed rule would be the most expensive regulation the federal government has ever promulgated. These viewpoints may well be correct. Previous efforts to control ozone and fine particulate matter, which shares nitrogen oxides (NO_x) as a precursor, have already eliminated most “low hanging fruit.” Such efforts include: the NO_x SIP Call, the 1997 Ozone NAAQS, Regional Haze, Clean Air Interstate Rule (CAIR), Cross State Air Pollution Rule (CSAPR) and the 2008 Ozone NAAQS. As EPA admits, 30 percent of the controls necessary to achieve a NAAQS of 70 ppb and 45 percent of the controls necessary to achieve a NAAQS of 65 ppb *are unknown*. EPA’s own estimates of the *annual* costs¹ of attaining the NAAQS under consideration in this proposal put the cost of reductions of ozone from 75 ppb down to 70 ppb at \$780 million per ppb, the cost of reductions down to 65 ppb at \$3 billion per ppb, and the cost of reductions down to 60 ppb at \$7.8 billion per ppb. There is significant scientific uncertainty that any real health benefits will be derived from lowering the NAAQS to 70 ppb, and this uncertainty only increases as lower ozone concentrations are considered. While at the same time, the costs of achieving lower ozone concentrations increase exponentially as the standard is lowered, a policy decision as to the level at which the NAAQS should be set should not require the expenditure of billions of dollars to achieve health benefits that are not real, or at least extremely dubious under the science. EPA’s proposed standard fails to adequately analyze and account for uncertainties in the science. Additional study to account for any uncertainty associated with the health impacts of ozone at lower concentrations is necessary before a lowering of the NAAQS is warranted.

Another consideration in EPA’s policy judgment should be the attainability of the standard. Ozone forms naturally in the absence of the anthropogenic influences over which EPA and states have any control. As lower ozone concentrations are considered as NAAQS, these background levels of ozone are approached. This is especially an issue at the lower end of the range that EPA is considering. A NAAQS should not be set at background levels at which there are no realistic compliance options available. Areas should not be designated as non-attainment and subjected to the economic constraints that come from such a designation where there is no readily available way to attain the standard.

EPA’s proposed ozone standard, as well as some of the science upon which it relies, also fails to adequately consider reductions in ozone that are projected to result from other regulatory efforts that are already ongoing. Indeed, the whole of the regulatory effort that affects future ozone concentrations is one of so many moving parts that isolating the impacts or benefits

¹ While EPA admits that a large percentage of the control measures necessary to attain the NAAQS it is considering are unknown, somehow it is able to put a cost on these unknown measures. Having eliminated all of the known, “low hanging fruit” for ozone control, the real costs of unknown controls cannot be predicted. EPA is not engaging in the kind of reasoned decision-making that should receive deference by the courts or the American public.

attributable to any one of them may be impossible. Due to litigation, the final interstate regulation for the 1997 ozone NAAQS has been in effect only since the first of this year. EPA's implementation rule for the 2008 ozone NAAQS was published just eleven (11) days ago. Since the first of the year, EPA has announced an intent to develop an interstate rule for the 2008 ozone NAAQS. Tier III fuel standards loom on the horizon. Ozone levels will also be further affected by other recently promulgated or proposed EPA rules, such as the Mercury and Air Toxics rule (MATS) and EPA's proposed 111(d) performance standards for existing electric generating units. If all of these "moving parts" are put into place, the picture of ozone air quality and the impacts therefrom will be significantly different than that of today. Any new ozone NAAQS should take into account the demonstrated effects on health from implementation of these other developments.

Many of EPA's recent air quality regulations and proposals will have a disproportionate impact on coal-fired power generation, which is a significant source of high-paying jobs for middle class families. This proposal is just the latest in a long series of such rules. The harm from this to our state's economy and job market cannot be overstated. As these jobs disappear, many citizens may have to accept a lower standard of living and the lower quality of life and health that go with it. One cannot help but wonder whether whatever health benefits may be claimed to arise from this proposal are not offset by greater harm to the public health and welfare as a result of the economic dislocation of our citizens through the jobs they will lose.

WVDEP's principal position is that the proposed lowering of the ozone NAAQS is unsupported by the current body of science, is exorbitantly expensive and should be abandoned. However, the agency realizes that EPA may nonetheless go forward with some aspects of the proposed rule and, therefore, also offers the comments summarized immediately below and expressed in more detail in this document.

WVDEP supports the following:

- Retention of the current primary ozone standard of 75 ppb.
- Setting the level of the standard at the upper level of the proposed range, if EPA determines that it should revise the primary standard.
- Setting the secondary standard equal to the primary standard, since the W126 index can be related to a secondary standard using the same units (ppb) as the primary standard.
- Revising the AQI to be consistent with any revision of the NAAQS.
- The proposed PSD grandfathering provision based on the date a permit application is formally determined to be complete.
- Retaining the current ozone season and monitoring requirements in West Virginia.
- Timely issuance of implementation guidance.

WVDEP offers the following comments in support of the points it has made in this Executive Summary.

Primary Standard

EPA requested comment on retaining the current primary ozone standard of 0.075 parts per million (ppm) or 75 ppb. WVDEP strongly supports retention of the current primary standard of 75 ppb for the following reasons:

- Uncertainty in the current body of science.
- Background ozone concentrations approach, or exceed, the level of the standard.
- Allows sufficient time for the implementation of the current standard and existing rules.
- Unknown controls and unattainable standards.
- Exorbitant implementation costs, without commensurate benefits.

As with all proposed NAAQS revisions, a great deal of analysis and documentation on the benefits of a new standard are provided as justification for the proposed action. However, the proposal relies heavily on recommendations of the Clean Air Science Advisory Committee (CASAC), in which CASAC itself acknowledged that, “the choice of a level within the range recommended based on scientific evidence (i.e., 70 to 60 ppb) is a *policy judgment* under the statutory mandate of the Clean Air Act.” 79 Fed. Reg. 75300 (emphasis added). Air quality is improving nationally, as well as in West Virginia. The national trend is toward decreasing ozone concentrations (<http://www.epa.gov/airtrends/aqtrends.html#airquality>). In this light, it seems unlikely that less ozone is causing more health impacts than during EPA’s last NAAQS review in 2008. The CAA does not require EPA to establish a primary NAAQS at a zero risk level or at background concentrations, but rather at a level that protects public health with an adequate margin of safety. West Virginia and many other states have made significant progress in controlling emissions that affect ozone formation in recent years and air quality has greatly improved due to these efforts. The availability and impact of additional controls are quickly diminishing. Ultimately, a balance must be struck between clean air goals and the practical ability to meet them.

WVDEP appreciates that the CAA directs EPA to focus on the health impacts with an adequate margin of safety in establishing NAAQS. However, where the costs associated with attainment of a NAAQS are very high, this should necessarily require a high level of certainty in the underlying scientific data and analyses underpinning such a standard. The latest scientific knowledge must be used in establishing NAAQS, however, this data must be accurately interpreted within the context of actual populations. In the proposed rule, it appears EPA is primarily relying on a re-casting of its analysis of previous ozone statistics to justify a more stringent ozone NAAQS. The proposed rule fails to acknowledge the gains in human health and air quality that is certain to come from regulatory actions already in play. EPA’s policy analysis

improperly gives greater weight to controlled clinical exposure studies than to epidemiological studies. The extrapolation and level of uncertainty introduced by attempting to expand the controlled clinical exposure studies lead to fundamental deficiencies in EPA's rationale for changing the standard.

Uncertainty in the Current Body of Science

The Administrator has solicited comment on retaining the current primary standard, as well as comment on her proposal to revise the primary standard at a lower level within the range of 0.065 to 0.070 ppm, and on alternate standard levels below 0.065 ppm to as low as 0.060 ppm. EPA recognized that CASAC recommended a range of levels from 0.060 ppm to 0.070 ppm could potentially be supported. However, the Administrator noted that setting the standard below 0.065 ppm would inappropriately place very little weight on the uncertainties in the health effects evidence and exposure/risk information. 79 Fed. Reg. 75236. The lower one goes in the range of ozone concentrations being considered, the greater the uncertainty about the existence of health effects. In other words, the lower the standard, the less certain the body of science is with respect to potential health impacts.

It is important to balance concerns about potential health effects with the increasing uncertainty associated with our understanding of the likelihood of such effects at lower ozone levels. However, any tightening of the standard must be clearly warranted and based upon thorough, compelling, and certain scientific health data. Substantial uncertainties exist in the body of scientific evidence which EPA has relied upon in its proposed rule. The studies cited by EPA to support lowering the standard do not adequately demonstrate that the adverse health effects are solely due to ozone.

In its supporting Policy Assessment (PA) document, EPA highlighted many uncertainties associated with establishing standards for ozone during and after completion of the NAAQS review, and noted additional research is needed to fully understand health effects, population exposures, and risks of exposure for purposes of setting standards. Specifically, the PA noted that with respect to an ozone standard below 80 ppb, additional research is needed to evaluate health risks in the range of 40 to 70 ppb. The PA concluded that ozone health research needs and priorities have not changed substantially since the 2007 ozone staff paper which supported the current 8-hour ozone standard². The key uncertainties, limitations and need for further research that existed at that time as to concentrations lower than the current standard have not changed.

Most of the recent studies and analyses EPA considered continue to show no evidence for a clear threshold in the relationships between ozone concentrations commonly observed in the United States (U.S.). during the ozone season and health endpoints. Evidence indicates less

² US EPA, August 2014. Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards, page 4-70. [EPA-HQ-OAR-2008-0699-0404.]

certainty in the shape of the concentration-response curve at the lower end of the distribution of ozone concentrations. EPA also notes that there continues to be heterogeneity in study data across cities or regions, including effect modifiers that vary regionally, which are additional sources of uncertainty.

It is unknown whether study errors, misclassifications, multiplicity of confounding factors or potential impacts of other co-pollutants may be obscuring potential thresholds. A broad mix of photochemical oxidants and, more generally, other co-pollutants in the ambient air (e.g., particulate matter (PM), NO_x, sulfur dioxide (SO₂), etc.) may play a role in modifying or contributing to the uncertainty in study results. A better understanding of sources of the broader pollutant mix, of human exposures, and of how other pollutants may modify or contribute to the health effects of ozone in the ambient air is needed to provide better information for EPA to justify a more stringent ozone NAAQS. There remains a need to further examine and to better understand the role of co-pollutants in the ambient air. Additionally, there remains uncertainty around the role of temperature as a potential confounder or effect modifier in study models.

EPA's studies of short-term exposure effects have employed time-series or case-crossover study designs and have been conducted in large populations. These study designs are subject to uncertainty due to the use of ambient fixed-site data serving as a surrogate for ambient exposures, and to the difficulty of determining the impact of any single pollutant among the mix of pollutants in the ambient air. Measurements made at stationary outdoor monitors have been used as independent variables for air pollution, but the accuracy with which these measurements actually reflect subjects' exposure is not yet fully understood and remains subject to substantial doubt. Also, additional research is needed to improve the characterization of the degree to which discrepancy between stationary monitor measurements and actual pollutant exposures introduces error into statistical estimates of pollutant effects in epidemiologic studies.

EPA also noted that improved understanding of human exposures to ambient ozone and to related co-pollutants is an important research need. Such population-based information is needed to better evaluate current and future ozone exposure models, and is also needed for sufficient periods to facilitate evaluation of exposure models throughout the ozone season. Thus, further information is needed to improve inputs to current and future population-based ozone exposure and health risk assessment models. Collection of time-activity data over longer time periods is needed to reduce uncertainty in the modeled results that form an important part of the basis for decisions regarding NAAQS for ozone and other air pollutants.

The final decision to revise or retain the current primary ozone standard is a public health policy judgment to be made by the Administrator. 79 Fed. Reg. 75243. It is apparent that manifold uncertainties, limitations and the need for further research to improve the current body of scientific evidence should cause EPA to sustain the adequacy of the current 8-hour primary ozone standard in the final rule, and allow implementation of the 2008 ozone standard to unfold.

Although WVDEP opposes lowering the existing standard, if EPA elects to strengthen the primary ozone standard, WVDEP encourages EPA to set the level of the primary standard at the upper end of the proposed range so as to maximize the confidence in the body of supporting science and minimize uncertainty in the purported health benefits.

Background Ozone Concentrations

An important consideration in the ozone NAAQS review is the characterization of background levels. Background ozone concentrations are of legitimate concern when considering revising the standard, especially since ozone occurs naturally and can be transported into the U.S. from other countries.

The CAA is clear that the NAAQS should be set at achievable levels. CAA Section 107(a) requires states to submit implementation plans which specify the manner in which the NAAQS “will be achieved and maintained.” CAA Section 110(a)(2)(c) requires state implementation plans to include a program which provides for the enforcement and regulation of stationary sources “as necessary to assure that national ambient air quality standards are achieved.” Furthermore, the legislative history of the CAA clearly shows that Congress did not intend the NAAQS be set at unachievable background levels³.

WVDEP has concerns about an individual state’s ability to attain the new standards when a significant portion of the proposed range is attributable to natural background levels. Substantial uncertainties remain in the characterization of 8-hour daily maximum ozone background concentrations. Further research to improve the evaluation of the global and regional models which have been used to characterize estimates of background levels would improve understanding of the role of both natural ozone formation and non-U.S. anthropogenic emissions on ozone levels over the country. EPA should not ignore natural background levels of ozone, which approach or exceed levels that are within the agency’s proposed range. For example, Emery et al. conclude that policy relevant background levels of ozone in the U.S. modeled with the Comprehensive Air Quality Model with Extensions (CAMx) ranged from 25-50 ppb and reached well over 60 ppb in the west⁴.

Ozone is not a pollutant which is directly emitted from sources, rather it is a pollutant which is formed during complex chemical reactions in the atmosphere, and this formation may be limited by controlling the emissions of the precursors NO_x and volatile organic compounds

³ “Some have suggested that since the standards are to protect against all known or anticipated effects and since no safe thresholds can be established, the ambient standards should be set at zero or background levels. Obviously, this no-risk philosophy ignores all economic and social consequences and is impractical.” H.R. Rep. No. 294, 95th Cong., 1st Sess. 127 (1977)

⁴ *Atmospheric Environment*, November 2011: *Regional and global modeling estimates of policy relevant background ozone over the United States* by Christopher Emery, Jaegun Jung, Nicole Downey, Jeremiah Johnson, Michele Jimenez, Greg Yarwood, and Ralph Morris.

(VOCs). EPA's proposal indicates that in 2011, approximately 60 percent of annual NO_x emissions were attributable to onroad and nonroad mobile sources, while the electric power industry accounted for 15 percent. With respect to VOC emissions, anthropogenic or manmade emissions account for only 30 percent of total VOC emissions, industrial processes and mobile sources accounted for about 57 and 39 percent, respectively. However, VOC emissions from natural sources "comprise around 70 percent of total VOC emissions nationally, with a higher proportion during the O₃ season and in areas with more vegetative cover." 79 Fed. Reg. 75370.

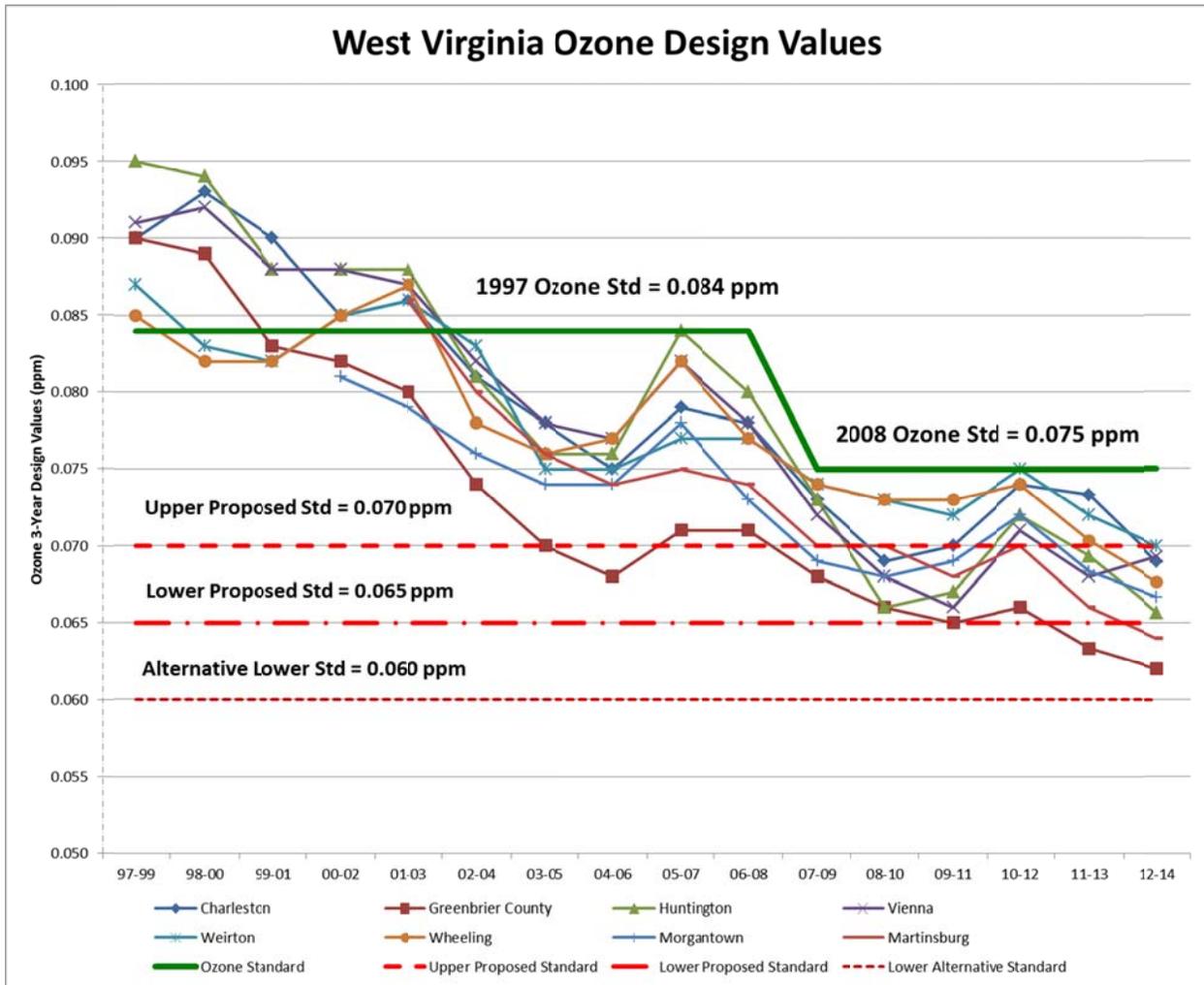
To establish a standard lower than 75 ppb when states have little or no control over greater than 50 percent of VOC and NO_x emissions, would make compliance with the standard using the regulatory mechanisms available to the states practically impossible.

Allow Implementation of Current Ozone Standard and Existing Rules

EPA should allow the current standard to be implemented and then evaluate the effect of existing rules on ozone concentrations. The *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule*, 80 Fed. Reg. 12264, was only published in the *Federal Register* on March 6, 2015. Additional NO_x reductions will be realized as states develop and adopt state implementation plans to meet these requirements. EPA must recognize that setting a new standard does not in itself result in improved air quality. Emission reductions are required to achieve improvements in air quality and emission reductions require time to be implemented. Two significant problems arise for West Virginia if a more stringent or unachievable standard is set. Many areas of the State have large sources of NO_x which are already heavily controlled, thereby making further reductions difficult and very costly. Conversely, many rural areas do not have significant sources of NO_x and therefore, could not reduce emissions. Allowing the current standard to be implemented while evaluating the effect of existing rules will avoid both of these situations, which are inherent to a NAAQS set lower than may be achievable.

West Virginia has achieved significant reductions in NO_x, a key precursor to ozone formation, via heavily controlled sources such as electric generating units (EGUs) and large industrial boilers. Consequently, when EPA published the attainment designations for the 2008 Ozone NAAQS (0.075 ppm), all counties in West Virginia were designated attainment/unclassifiable. 77 Fed. Reg. 30155. This milestone is due to the fact that over the past fifteen years, and through great effort and expense, West Virginia's largest sources of NO_x emissions have demonstrated excellent performance as participants in the NO_x Budget Trading Program, CAIR and CSAPR. To this end, West Virginia sources have spent billions of dollars to install SCR NO_x controls. Under the NO_x SIP Call, sources in West Virginia were required to reduce NO_x emissions by 77 percent, a percent reduction requirement that was the greatest of the 28 NO_x SIP Call states. Under CAIR, West Virginia's NO_x emissions continued to decrease, as annual NO_x reductions were required in addition to ozone season reductions. As a result, West

Virginia's air quality has dramatically improved. West Virginia's ozone NAAQS performance is evidenced by the 8-hour ozone design values in the following chart.



As the chart illustrates, West Virginia currently does not have any ozone nonattainment areas. However, if a more stringent ozone standard is adopted, a large number of new areas may be brought into nonattainment, especially at the mid to lower end of the proposed range. If the primary ozone standard is lowered to 0.065 ppm, six areas would exceed the standard based on 2012-2014 data. If the standard is lowered to 0.060 ppm, all eight ozone monitors in West Virginia would exceed the standard. Most of these new nonattainment areas will be small urban and even rural areas that have little influence or control over their local air quality, and will be particularly burdened by the regulatory and administrative requirements that come with a nonattainment designation. This burden is even more pronounced in that many of these requirements provide little in the way of air quality benefits in West Virginia.

As EPA acknowledged in its fact sheet, *By the Numbers*, released with the proposal to update the ozone NAAQS, existing and other proposed federal rules will continue to help reduce ozone pollution. Rules that reduce toxic air pollution, like the MATS rules for power plants, reduce NO_x and VOCs, both ozone precursors, as a co-benefit of reducing air toxics. Other rules, including those which limit interstate transport, such as CSAPR, emission standards for stationary sources, and Tier III vehicle emissions and fuel standards, also reduce NO_x and VOCs. At this time CSAPR and MATS are just being implemented with associated NO_x reductions soon to be realized. The proposed Clean Power Plan is expected to bring about additional reductions from electric utilities. EPA indicates that with current and proposed federal rules in place, a total of nine counties with monitors (excluding California) are projected to violate a 0.070 ppm proposed standard in 2025, down from 358 counties with monitors that measured ozone above 0.070 ppm based on 2011-2013 air quality data. A total of 68 counties (again, excluding California) with monitors are projected to violate a 0.065 ppm standard in 2025, down from the 558 counties with monitors that measured ozone above the proposed level of 0.065 ppm based on 2011-2013 air quality data.

West Virginia's largest sources have significantly reduced NO_x emissions at substantial cost. Because of these reductions and the consequent improvement in air quality, all areas in West Virginia have attained the current ozone NAAQS. While some additional NO_x reductions at other stationary source facilities may be possible, they are smaller facilities and reductions from them will not have a significant impact on our ambient concentrations. As a result, West Virginia and other states will be forced to rely on regional and national emission reduction initiatives and federal regulations on vehicle emissions to attain a more stringent NAAQS. EPA should recognize that the imposition of a more stringent ozone standard will require additional NO_x control measures, which may or may not be achievable and will cause further economic hardship to the state. Under the CAA, the Administrator retains policy judgment with respect to setting a particular NAAQS. For these added reasons, the Administrator should exercise policy judgment and not revise the ozone NAAQS at this time.

Implementation Costs

WVDEP acknowledges the responsibility of EPA to protect public health by establishing NAAQS based on health considerations, however, the following comments focus not just on the level of the standards, but also raise important implementation and cost issues. EPA has estimated the total *annual* cost of \$3.9 billion to meet a proposed standard of 70 ppb, \$15 billion to meet a standard of 65 ppb, and \$39 billion to meet a standard of 60 ppb⁵. These projected costs rise almost exponentially as the standard is lowered: from \$0.78 billion/ppb to meet a

⁵ Regulatory Impact Analysis of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone 9EO12866_O3-NAAQS-RIN2060-AP38-NPR-RIA-20141024.docx, Page ES-3. [EPA-HQ-OAR-2013-0169-0020]

standard of 70 ppb, \$3 billion/ppb to meet a standard of 65 ppb, and \$7.8 billion/ppb to meet a standard of 60 ppb.

Costs of Known and Unknown Controls

EPA's Regulatory Impact Analysis (RIA) preliminary results for 70 ppb indicate that the percent of emissions reductions from known controls is approximately 70 percent, and for 65 ppb is approximately 55 percent.⁶ In the RIA the known control cost estimates were based on improved data in the known control technology/cost tool, the application of maximum end-of-pipe controls to industrial and area sources, the application of available controls for nonroad mobile sources beyond those required by Tier III, and the application of additional SCRs to uncontrolled coal-fired EGUs, beyond the controls required under the proposed Clean Power Plan. Additional reductions will be required beyond those achievable through the application of known control measures. In fact 30-45 percent of the emission reductions required to achieve the proposed levels of the standard will have to be from unknown control measures.

EPA estimated the costs of emission reductions for unknown controls, which accounts for approximately 30 percent of the control required to meet 70 ppb, and 45 percent to meet 65 ppb, using an average-cost methodology. EPA assumed a \$15,000/ton cost for all unknown controls. EPA made this assumption, while acknowledging that uncontrolled units in source sectors that have been heavily controlled for NO_x (such as EGUs) would require controls that are more expensive per ton than the typical controls that have been applied in the past. Further, EPA has already applied known levels of NO_x control to industrial, area, mobile and nonroad source sectors, including source sectors such as residential furnaces, residential water heaters and space heaters. Very few control options remain after controls have been applied to all source sectors, even residential water heaters. EPA acknowledged there is limited value in assigning costs to unidentified control measures, however the agency did exactly that.

In its RIA, EPA made the following key observations:

- Tightening the ozone standards can incur significant, but uncertain costs.
- EPA's air quality modeling approach can introduce uncertainty.
- There may not be available technologies sufficient to attain a more stringent NAAQS.
- Some existing mobile source programs may help areas reach attainment.
- The economic impacts (i.e., social costs) of the costs of these modeled controls were not included in the analysis.
- Costs and benefits will depend on implementation timeframes.

⁶ U.S. Environmental Protection Agency, October 27, 2014. PowerPoint "Ozone NAAQS Proposal – Regulatory Impact Analysis, slide 9. [EPA-HQ-OAR-2013-0169-0021]

Costs and Attainment Dates

The ozone NAAQS is expected to be finalized in late 2015, with nonattainment area designations expected in late 2017. CAA Part D, Subpart 2, Section 181 requires areas to attain the ozone standard as expeditiously as practicable, but no later than three years after designation (2020) for marginal areas, six years after designation (2023) for moderate areas, nine years after designation (2026) for serious areas, fifteen years (2032) for severe areas, and twenty years (2037) for extreme areas. In the RIA, EPA acknowledged that several factors contributed to lower cost estimates, including shifting the baseline year from 2020 to 2025 to allow for more time to attain and for federal measures to work.⁷ Advancing the attainment date from 2025 to 2020 or even 2023 would increase costs, yet EPA made no attempt to quantify the actual costs of compliance on the timeline required by the CAA. In fact EPA stated, “For capital investment, in order to attain standards by 2025 we assume capital investment to occur at the beginning of 2025. We make this simplifying assumption because we do not know what all firms making capital investments for control measures will do and when they will do it.”⁸ This appears to be deliberately misleading.

In order for a moderate area to demonstrate attainment with a three-year design value in 2023, controls must be installed and operating prior to 2023, controls for a marginal area would have to be installed and operating prior to 2020. Many of EPA’s anticipated air quality improvements will not have been realized by then, and the agency has significantly downplayed the number of areas which will remain in nonattainment by 2023. Likewise, the agency has virtually ignored the additional control measures that would be needed to attain by the earlier year.

Cost-Benefit Analysis

WVDEP has concerns with how EPA determined the benefits of a revised ozone standard. In the RIA, the cost-benefit analysis quantifies and monetizes the benefits of reducing PM. For primary benefits estimates in 2025, PM_{2.5} co-benefits account for 70-75 percent of the co-benefits. It appears that the benefits of PM reductions have also been counted in the RIAs for the PM_{2.5} NAAQS, CSAPR, SO₂ NAAQS, MATS, Boiler Maximum Achievable Control Technology rule, Clean Power Plan, Reciprocating Internal Combustion MACT, and the Tier III vehicle and fuel standards. It is unclear whether these benefits are being double or triple counted as the same reductions across multiple rules. Multiple counting of the benefits would be disingenuous – significantly overstating the benefits of the proposed rule. Therefore, WVDEP urges EPA to be forthright and count only the benefits of ozone reductions associated with a revised standard, not the coincidental benefits of reductions in other pollutants, such as PM, or the reductions that have already been accounted for in other recent EPA proposed or final rules.

⁷ RIA, page 8-6.

⁸ RIA, page 7-3.

A large part of EPA's task is making policy judgments as to the strength of the scientific evidence supporting any conclusion of health benefits. When costs are great and a large percentage of the necessary compliance measures are unknown, EPA, in making such a policy judgment, should require clear and convincing evidence that health benefits will be achieved. There should be no doubt that lowering the standard will result in health benefits. That is not the case for this consideration of the ozone NAAQS, therefore, EPA should retain the current primary standard.

In its NAAQS analysis and consequent policy decision, EPA must be certain of benefits and costs, considering well-established science which supports the decision. Because of the proposed rule's high cost and uncertain benefits, if EPA makes a policy decision to tighten the ozone NAAQS, the agency should set the NAAQS at the highest level of the proposed range.

Secondary Standard

EPA is proposing to revise the secondary ozone standard to within the range of 0.065 to 0.070 ppm, which air quality analyses indicate would provide air quality, in terms of three-year average W126 index values, at or below a range of 13-17 ppm-hours (hrs). EPA solicited comment on the alternative approach of revising the secondary standard to a W126-based form, averaged over three years, with a level within the range of 13 ppm-hrs to 17 ppm-hrs, and setting such a distinct secondary standard with a level within the range extending below 13 ppm-hrs down to 7 ppm-hrs. The agency also solicited comment on retaining the current secondary standard without revision, along with the alternative views of the evidence that would support retaining the current standard. 79 Fed. Reg. 75237.

The secondary standard should be kept equal to the primary standard. WVDEP does not support the use of the W126 index. The W126 index would be much more difficult to effectively implement, and the added complexity of using the index has not been adequately shown to be necessary. The proposed rule advises that the W126 index can be related to a secondary standard using the same units (ppb) as the primary standard. In that case, leaving the primary and secondary standard equal will result in less confusion for stakeholders, including the general public, and will allow for more effective implementation of the standard.

Air Quality Index

The Air Quality Index (AQI) establishes a nationally uniform system of indexing pollutant concentrations for ozone, carbon monoxide, nitrogen dioxide, particulate matter and sulfur dioxide. The AQI converts pollutant concentrations in a community's air to a number on a scale from 0 to 500. 79 Fed. Reg. 75310. EPA has proposed changing the AQI to conform to any revised standard by setting the AQI value of 100 equal to the level of the 8-hour primary ozone

standard, and proposing adjustments to the AQI values of 50, 150, 200 and 300. With respect to reporting requirements (40 CFR §58.50), EPA has proposed to revise 40 CFR §58.50 (c) to require the AQI reporting requirements be based on the latest available census figures, rather than the most recent decennial U.S. census. This change is consistent with their current practice of using the latest population figures to make monitoring requirements more responsive to changes in population. 79 Fed. Reg. 75311.

WVDEP recognizes the importance of revising the AQI to be consistent with any revisions of the NAAQS and supports EPA's proposal to set the AQI value of 100 equal to the level of the primary NAAQS, and making adjustments to the AQI values of 50, 150, 200 and 300. WVDEP does not oppose the proposed changes to the AQI reporting requirements. In order to prevent confusion, WVDEP suggests that the Administrator make the new AQI effective at the start of the first ozone season after any change to the primary ozone NAAQS is finalized. This would allow for a smoother transition, and eliminate public confusion regarding air quality levels that may result from switching to a new AQI scale mid-season.

Prevention of Significant Deterioration (PSD)

Grandfathering Provision

WVDEP supports the proposed prevention of significant deterioration (PSD) grandfathering provision based on the date a permit application is formally determined to be complete. This provision, as outlined under Section VII(D)(1)(a), would allow a PSD permit application issued after the effective date of the revised ozone NAAQS (but before the final designation date of non-attainment for the area where the proposed or modified facility is located) to have to show compliance with NAAQS in effect at the time of application completeness, as opposed to the revised NAAQS effective at the time of permit issuance. For West Virginia, as a SIP-approved state with a formal completeness requirement under 45CSR14-§7.4, this option is much preferred over a grandfathering provision with only a public notice option. One requirement of application completeness is submission of a complete air impact analysis performed according to an approved protocol. If, after this point in the review process, the applicant was required to show compliance with a revised set of NAAQS, it could result in an unreasonable delay in permit processing.

Request for Additional PSD Grandfathering Provision

For similar reasons, WVDEP encourages EPA to provide an additional PSD grandfathering provision to allow PSD permit applications that have been formally determined to be complete prior to the final designation date (if an area is being designated as non-attainment) to continue to be reviewed and issued under PSD and not be required to be issued as a nonattainment new source review (NANSR) permit. It would be an unreasonable burden on an applicant who, after

receiving a determination of completeness for a PSD application and proceeding potentially as far as the end of the public comment period (but not yet been issued a permit), to be required to submit a new NANSR application for the facility or modification in question. The lead time in knowing generally the date of final designations does not mitigate this burden. Many reasonable scenarios exist where an applicant would in good faith believe that a permit would be issued prior to the final designation date but, for reasons beyond their control (or even the regulatory agency's control) or without their foreknowledge, the permit would not be issued prior to this date.

Air Monitoring

EPA is proposing to extend the length of the ozone monitoring season in West Virginia to include March. EPA estimates that the nationally adjusted incremental costs for states to expand their ozone season are \$230,000 per year. While this may seem to be a nominal sum to a federal agency, state governments must balance their budgets. EPA's lack of sensitivity to this reality is a significant problem, not only in this proposed rule, but in other areas of regulatory endeavor as well. There are no unobligated financial resources available to absorb any cost increase to the air monitoring operations, including adding one month of ozone monitoring. The month of additional monitoring results in more in-service hours on the monitors, less time to service the monitors in the off-season, and less time to devote to working on other site/instrument issues in the off-season. Ozone monitors will have to be deployed during the inclement weather month of February which presents logistical and safety problems. WVDEP does not support an extended ozone season, as existing monies will need to be utilized to support an expansion which in turn could mean making difficult decisions on funding allocations across the monitoring network. Further, WVDEP does not support implementing the revised State and Local Air Monitoring Site (SLAMS) ozone season prior to January 1, 2017, as states will need an opportunity to prepare for the extended season and provide for changes in funding allocations. Starting the season earlier would place an undue burden on already strained resources.

If current resources remain stable, it is possible that WVDEP could commence year-round ozone monitoring at *only* the National Core (NCore) site beginning on January 1, 2017, but not earlier. NCore has required the addition of new monitoring activities and technologies but there has been no new funding identified for continued operation of NCore. Defined, predictable funding streams should be established for NCore outside the Section 105 grant program, which would then allow the co-benefit of supporting year-round ozone monitoring at that site.

To date, WVDEP has never been required to operate or fund a Photochemical Assessment Monitoring Station (PAMS) site. WVDEP has historically viewed its primary mission to be to conduct monitoring to assess compliance with the health-based NAAQS. In the proposed rule, EPA appears to be requiring states to conduct what would be considered research grade ambient air monitoring with existing levels of funding. Adding new monitoring such as PAMS to the

NCore site will further burden the resources WVDEP has available to operate its network, as the PAM monitors would compete for the same resources used to operate the NAAQS network and NCore site. Expanded monitoring requirements during a time of reduced funding present potentially insurmountable resource challenges for WVDEP, possibly jeopardizing the operation of the established NAAQS network.

WVDEP is also concerned that EPA is proposing PAMS-level carbonyl sampling at NCore sites in ozone nonattainment areas prior to incorporating sampling and analytical improvements into Method TO-11A. Additionally, we are concerned that to our knowledge, there is not a commercial instrument capable of running consecutive 3 hour samples for a 24 hour sampling period, or capable of running samples over weekends. We cannot overemphasize that PAMS (and enhanced ozone monitoring) will compete for the same limited resources allocated to NAAQS and NCore monitoring. EPA does state that it believes there is national funding available to support capital equipment funding (hopefully this would be available through a Section 103 grant since there are no additional state funds available to match a Section 105 grant). However, without a dedicated funding stream outside the Section 105 grant process to support the ongoing operation of PAMS, there will simply not be enough money to operate PAMS at NCore sites. EPA needs to fully fund the cost of implementing any new ozone monitoring requirements. These funds need to be in the form of Section 103 grant monies, rather than Section 105 grant monies. If the monitoring is funded with the Section 105 grant, many states may not be able to meet the applicable matching funds requirements. It is patently unfair to burden state air control agencies via unfunded mandates.

WVDEP believes that any PAMS expansion at NCore sites should be based upon population. The entire state of West Virginia only has a total population of 1,850,326 people. West Virginia's NCore site is located in Charleston, the state's largest city. Charleston has a population of 50,821 people (2013 census estimates) representing a one percent decrease since the 2010 census.⁹ The addition of a PAMS monitoring system to the Charleston NCore site would provide limited value relative to the installation and operating cost and acquisition of the technical skills necessary to operate PAMS. That value would be further diminished by the inefficiency of establishing research grade monitoring that would compete with the limited resources available for NAAQS and NCore monitoring. EPA used population as one of the metrics in determining monitoring for carbon monoxide and nitrogen. We believe that the same type of assessment regarding population should be applied in establishing PAMS monitoring at NCore sites in ozone nonattainment areas. WVDEP recommends that EPA consider repurposing

⁹ As of 2013, the population in the Charleston MSA (the largest MSA within state boundaries) was estimated at 224,742 which represent a decrease of 1 percent since the 2000 census. The Charleston MSA includes Boone County (population 24,224), Clay County (population 9,244), and Kanawha County (population 191,275). The area of the Charleston, WV MSA is 1,261 square miles with a population density of approximately 178 residents per square mile.

the extensive federal funding necessary to expand PAMS by reallocating those funds to states to replace and upgrade their aging NAAQS monitoring systems.

Acquiring the resources and expertise necessary to operate and maintain a continuous automatic gas chromatograph (Auto-GC), NO₂ monitoring, intensive carbonyl sampling and expanding existing meteorological parameters would be a new significant monitoring burden to WVDEP and other state agencies. Regardless of funding, few, if any state/local air agencies would have adequate resources available to adequately operate and maintain NAAQS, NCore, PAMS and enhanced ozone monitoring simultaneously.

The addition of a ceilometer to the NCore sites constitutes another requirement to conduct research grade monitoring using resources that will directly compete with the NAAQS monitoring program at the state level. Therefore, we encourage EPA to instead continue to work with NOAA to establish and enhance a network of usable ceilometers.

WVDEP believes that the requirement to develop an Enhanced Monitoring Plan (EMP) in ozone nonattainment areas that do not have an NCore site places a significant undue burden on the state and its resources. The EMP would significantly expand workload, and may include additional PAMS monitoring sites, additional ozone and NO_x monitoring, ozone sondes or other aloft measurements, additional meteorological measurements and episodic or intensive studies. The EMP may also include collecting speciated VOCs, and radar profilers. Development of an EMP would be a new requirement for WVDEP to meet for ozone nonattainment areas that do not have an NCore site. Implementation of any new monitoring or development of new monitoring sites as a result of the EMP would place a significant undue burden upon the state. WVDEP does not have the resources necessary to assume any additional new monitoring or development of new sites required by the EMP, regardless of the date that such a plan should be implemented.

As previously stated, WVDEP's monitoring objective has been primarily to determine compliance of an area with EPA's health-based NAAQS. Resources provided by both the state and EPA have traditionally been utilized to support that objective. Those resources have been diminishing over the past several years while monitoring requirements have continued to expand. Establishment of new monitoring sites (potentially required sites under the EMP) take several years to complete, assuming adequate resources and personnel are available. Under the EMP, WVDEP's limited air monitoring resources will be required to compete with its NAAQS monitoring such that funds and personnel are either allocated to the operation of an EMP site or a NAAQS compliance site. There are no resources available to conduct both adequately.

The NCore site is located in Charleston in Kanawha County (population 191,275). In addition to the ozone monitor in Charleston, WVDEP operates seven other ozone monitors across the state. The population of the counties where the monitors are located range from 108,706 people (Berkeley County) to 30,291 (Greenbrier County). The addition of an EMP to an

ozone nonattainment area would provide limited value relative to the installation and operating cost and acquisition of the technical skills necessary to expand monitoring under an EMP. In fact, requiring an EMP in West Virginia would only take away from those very limited resources allocated to the existing program. WVDEP recommends that EPA use an assessment that considers a population cutoff in requiring and implementing an EMP in potential ozone nonattainment areas that do not have an NCore site.

Because the proposed revisions to ambient monitoring provisions result in additional unfunded mandates, WVDEP does not support extending the ozone season, or the proposed revisions to state air monitoring requirements. However, if proposed revisions to ambient monitoring provisions are implemented, any expansion of PAMS or submittal of an EMP should be based upon population, as well as be properly funded.

Timely Guidance

EPA Administrator Gina McCarthy signed the *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements* on February 13, 2015, and it was published in the March 6, 2015 Federal Register, 80 Fed. Reg. 12264, almost a full eight years after the 2008 Ozone NAAQS final rule, 73 Fed. Reg. 16436, and almost three years after attainment designations were finalized. 77 Fed. Reg. 30088. In fact, the Administrator signed the proposal to revise the 2008 ozone NAAQS, almost three months before EPA provided implementation guidance for the 2008 standard. For states required to submit a plan, untimely guidance potentially results in significant wasted efforts developing a plan that may or may not comport with the eventual guidance.

With respect to any future NAAQS, EPA must be prepared to assist in the standard implementation process by providing necessary guidance, procedures, and tools well in advance of planning deadlines. Doing so will provide states and localities time to develop the best and most appropriate local control strategies for improving air quality. Many of the analyses needed to develop NAAQS attainment plans require significant time and resources to complete, and often control plans are developed by large regional, and oftentimes, interstate planning organizations that require significant lead time to complete the air quality planning process. Due to these and other ever-increasing complexities within the planning process, EPA must make every effort to provide timely federal guidance, tools, and input into the planning process. WVDEP strongly encourages EPA to issue proposed implementation guidance concurrently with any final NAAQS, but certainly not more than six months after promulgation of a final rule.

Summary

The final decision to revise or retain the current primary ozone standard is a public health policy judgment to be made by the Administrator. 79 Fed. Reg. 75243. It is apparent that manifold uncertainties, limitations and the need for further research to improve the current body

of scientific evidence should cause EPA to sustain the adequacy of the current 8-hour primary ozone standard of 75 ppb in a final rule, and allows implementation of the 2008 ozone standard to unfold. If, however, the Administrator feels compelled to revise the primary ozone standard, she should do so only at the upper end of the proposed range.

The Administrator should also set the secondary standard equal to primary standard and update the AQI based upon any revision of the primary standard. Since the W126 index can be related to a secondary standard using the same units (ppb) as the primary standard, WVDEP recommends that the current level and form of the secondary standard be retained, along with adequate supporting documentation.

The proposed revisions to the ambient monitoring provisions result in additional unfunded mandates, therefore WVDEP does not support extending the ozone season, or the proposed revisions to state air monitoring requirements. However, if proposed revisions to ambient monitoring provisions are implemented, any expansion of PAMS should be adequately funded and based upon a population metric comparable to other criteria pollutants.

WVDEP supports the proposed grandfathering provisions under PSD, as well as additional PSD grandfathering to allow complete PSD permit applications to continue to be reviewed and issued under PSD prior to the final designation date of an area that is to be designated as non-attainment. WVDEP strongly encourages EPA to issue implementation guidance as soon as possible and certainly not more than six months after promulgation of a final rule.

WVDEP appreciates this opportunity to provide comments on the proposed rule and associated documents. If you have any questions or concerns regarding this submittal or require additional information, please contact me at (304) 926-0462.

Sincerely,



William F. Durham
Director, Division of Air Quality

cc: Randy Huffman, Cabinet Secretary