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March 17, 2015

Ms. Gina McCarthy
Administrator
U.S. Environmental Protection Agency
Mail Code 28221T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Proposed National Ambient Air Quality Standards for Ozone – 79 Fed. Reg. 75234 (December 17, 2015), Docket ID No. EPA-HQ-OAR-2008-0699

Dear Administrator McCarthy:

The Colorado Petroleum Association (CPA) respectfully submits these comments in response to the U.S. Environmental Protection Agency's (EPA) proposed National Ambient Air Quality Standards (NAAQS) for Ozone, 79 Fed. Reg. 75234 (Dec. 17, 2014) (Proposed Rule). The purpose of these comments is to assist EPA in understanding, among other points, the potentially devastating effects that a lowered ozone NAAQS would have on the rural areas in Colorado where many of CPA members' oil and natural gas production operations are located.

For the reasons explained in these comments, CPA is concerned that EPA has not meaningfully considered western background issues and other unique circumstances in proposing to lower the ozone NAAQS from 75 parts per billion (ppb) to a range of between 65 ppb and 70 ppb, has not received the statutorily required range of critical information from the Clean Air Act Science Advisory Committee (CASAC), and has not assembled adequate and objectively transparent science to support lowering the ozone NAAQS. As such, CPA believes that EPA does not have an adequate foundation to support a lowered ozone NAAQS, and CPA therefore supports the option in the Proposed Rule for EPA to maintain the current ozone NAAQS of 75 ppb.

I. CPA MEMBERS' OPERATIONS AND INTERESTS IN THE PROPOSED RULE

The CPA is a non-profit trade association organized to do business in Colorado. The CPA members are involved in all aspects of oil and gas exploration, production, refining, marketing, and transportation. In Colorado, CPA represents its members before local, state, and federal government entities on policy, factual, and legal issues. Oil and natural gas development in Colorado drives Colorado's economy, with 111,000 Colorado jobs supported by energy and mineral development, generating \$29.5 billion in economic activity. See Oil and Natural Gas by the Numbers, Colorado's Oil and Natural Gas Producers, <http://www.oilandnaturalgasincolorado.com/ColoradoOilAndGas.html>.

CPA members' business and operations provide significant contributions to the economic well-being of the communities in which they operate, including many rural economies, as well as the economic health of Colorado and other States. Furthermore, CPA members are active in their local communities and partner with organizations across the state.

EPA's proposed regulations will have a significant impact on CPA members' operations, both in Colorado and beyond. Any further reduction in the ozone NAAQS will significantly impact CPA members' operations where background ozone levels in Colorado are approaching the current standard after a decade of hard work to achieve such progress. CPA members therefore have an interest in ensuring that EPA and other federal and state public policy decision-makers are fully apprised of the impacts that the proposed changes to the NAAQS will have on Colorado and industry. The regulations being proposed by the EPA threaten regulatory consistency and the continued viability of CPA members' operations, which are critical to the economic well-being of Colorado and its citizens, especially in rural portions of the state.

Until such time as EPA addresses CPA's concerns, EPA should maintain the current primary and secondary NAAQS for ozone of 75 ppb. Indeed, States like Colorado are still reviewing EPA's proposed State Implementation Plan (SIP) requirements for the current standard that EPA published on March 6, 2015. If EPA finalizes the Proposed Rule under the existing schedule, the States will be required to initiate implementation of the existing standard under the shadow of a substantially more stringent standard that, in many areas, is simply not attainable, and will dilute and confound state and industry efforts to make further progress on reducing ozone levels in Colorado.

II. INTRODUCTION

Ozone levels have been decreasing across the country as a result of ongoing actions by EPA and the States. This result demonstrates that the cooperative federalism inherent in the process – a pillar of the Clean Air Act (CAA) – has been extremely effective and should continue in this Proposed Rule. CPA is concerned, however, that EPA's Proposed Rule undermines this structure by setting a NAAQS that is unattainable for a significant portion of the Intermountain West, including Colorado. EPA should consider the impact of background emissions, including emissions from non-domestic sources, as well as other unique circumstances such as altitude and wildfire impacts, on the Intermountain West when setting the NAAQS. Further, EPA should not act on a revision of the ozone NAAQS until the Clean Air Science Advisory Committee (CASAC) provides the full suite of critical advice as required under the CAA.

As a starting point, the NAAQS must be requisite to protect the public health. The Supreme Court of the United States has explained, however, that "requisite to protect" means "not lower or higher than is necessary."¹ Therefore, in assuring that the NAAQS is neither higher nor lower than the "necessary" levels to protect the public health, EPA must assure that the NAAQS is based on sound and transparent science. In addition, CAA § 109 broadens the concept of "requisite to protect" to include various contextual factors such as unique regional conditions and socioeconomic impacts and the health impacts associated with diminished economic opportunity. This includes taking into account that the Proposed Rule directly raises the very significant issue of potential widespread unattainability of the proposed revised NAAQS due to background levels that are not subject to control by either the States or the Federal government through their statutory and regulatory authority.

¹ *Whitman v. American Trucking Ass'ns*, 531 U.S. 457, 476 (2001).

² See *Mississippi v. EPA*, 744 F.3d 1334 (D.C. Cir. 2013), cert. denied sub nom. *Util. Air Regulatory Grp. v. EPA.*, 135 S. Ct. 53, 190

As further background, EPA very recently tightened the ozone NAAQS, from 80 ppb to 75 ppb, a determination that the D.C. Circuit upheld in 2013.² In response to challenges arguing both that the standard was too high and not high enough, the D.C. Circuit held that EPA reasonably determined that the previous standard of 80 ppb needed to be reduced.³ At the same time, the Court held that EPA had reasonably determined that reducing the standard below 75 ppb was not “requisite” to protect the public health.⁴ Notably, EPA did this in reliance on the very same health effects data that it now says, through CASAC, warrant a significant lowering of the standard by another 5 to 10 ppbv, or even 15 ppbv. Moreover, the 2008 ozone standard is only in the initial stages of implementation; indeed, the States are still reviewing EPA’s proposed State Implementation Plan (SIP) requirements for the current standard that EPA published on March 6, 2015.

III. EPA DOES NOT HAVE ADEQUATE HEALTH DATA TO SUPPORT A CHANGE TO THE NAAQS

There is limited new evidence on whether ozone exposures below the current standard would have meaningful health impacts. The majority of the health studies relied on by EPA were available at the time of the 2008 ozone standard review. For example, the lung function impacts decrements identified by the 2009 Schelegle study and the 2011 Kim study were below the 10% clinical significance threshold and did not generate information suggestive of ozone health concerns below the current, 75 ppb ozone standard.

Furthermore, the 75 ppb ozone standard has been upheld in court.⁵ EPA is not obligated to make the ozone standard lower in the absence of significant new scientific developments.

Most impactful, is a characterization supported by recent independent research by toxicologists at the Texas Commission on Environmental Quality, which noted that “It is especially problematic to use mortality supposedly related to long-term exposure to ozone as this was categorized as merely ‘Suggestive’ in the Integrated Science Assessment and lacks adequate evidence from scientific literature to be utilized in setting a standard.”⁶ The same toxicologists independently concluded that “changes in historical ozone levels did not predict changes in mortality rates.”⁷ Furthermore, even EPA’s ISA did not identify a causal relationship between ozone exposures and mortality.⁸

IV. EPA HAS NOT ADDRESSED HOW ELEVATION AND THE REDUCTION IN MASS EXPOSURE CHANGES OZONE HEALTH RISKS

There is a potential inconsistency in the level of ozone exposure at sea level versus elevated terrain because of the manner in which the concentration levels of the proposed ozone standard are expressed. Air quality standards can be expressed as either a volume/volume (ppm) concentration or a mass/volume concentration (ug/m³). For a concentration expressed as ppm, the level of the standard does not vary with elevation. Thus, a concentration is equivalent at sea level or at an elevation of

² See *Mississippi v. EPA*, 744 F.3d 1334 (D.C. Cir. 2013), cert. denied sub nom. *Util. Air Regulatory Grp. v. EPA.*, 135 S. Ct. 53, 190 L. Ed. 2d 30 (2014)

³ *Id.* at 1345.

⁴ *Id.*

⁵ *State of Mississippi v. EPA*, 744 F.3d 1334 (D.C. Cir. 2013) .

⁶ Michael Honeycutt and Stephanie Shirley, TCEQ, *A Toxicological Review of the Ozone NAAQS* (2014 Texas Environmental Superconference), at 2.

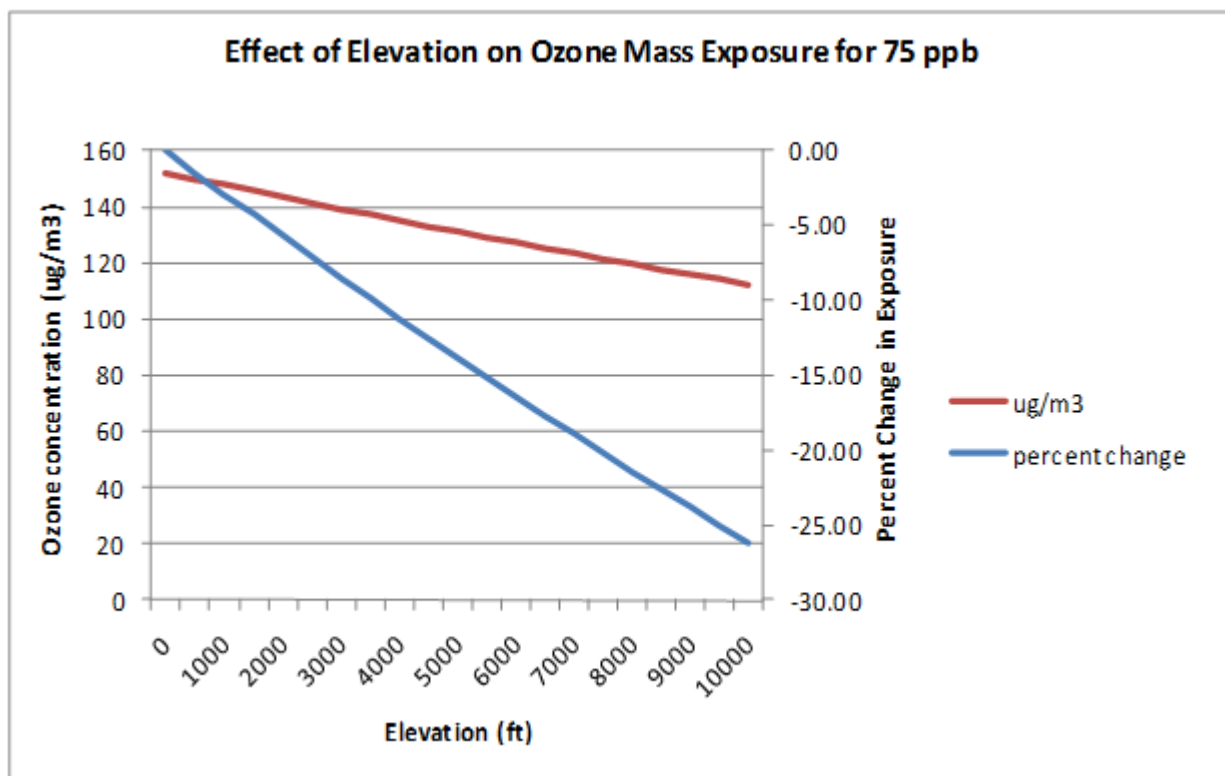
⁷ Honeycutt and Shirley at 11.

⁸ EPA, *Integrated Science Assessment for Ozone and Related Photochemical Oxidants*, EPA 600/R-10/076F (Feb. 2013), at 1-5.

10,000 feet. In the case of a concentration expressed as $\mu\text{g}/\text{m}^3$ the concentration changes with altitude because the volume of air containing a given mass of pollutant expands, resulting in lower $\mu\text{g}/\text{m}^3$ concentrations at altitude.

At any given temperature and pressure, these expressions of concentration are directly related. However, they are sensitive to changes in the ratio of pressure to temperature and this ratio varies with elevation. For example, with temperature fixed at 25°C , 0.075 ppm ozone is equivalent to $147.2 \mu\text{g}/\text{m}^3$ at sea level or $123.6 \mu\text{g}/\text{m}^3$ at an elevation of 5000 ft, a 16% difference (Stoeckenius, 2009) (Attachment A). The mass exposure of the ozone that a person is exposed to in this example is decreased by 16 % simply by changing the elevation. Figure 17 displays the ozone concentration ($\mu\text{g}/\text{m}^3$) versus elevation as well as the percent change in exposure.

Figure 17: Graph of the Effects of Elevation on Ozone Mass Exposure for 75 ppb



EPA has not addressed how elevation and the reduction in mass exposure changes ozone health risks and this should be a primary focus of ozone exposure research. In fact, some studies have shown a reduction in the health effects of ozone at lower pressures which correspond to higher elevations. The study “Comparative Toxicity Studies at Reduced and Ambient Pressures I. Acute Response” by McNerney and MacEwen in 1965 stated that “the experimental results show a definite reduction in the toxic response to the pulmonary irritants NO_2 and O_3 at reduced pressure when compared with

ambient pressure exposures.” Also, according to the study “The Effect of Mixed Gas Atmospheres at 5 PSIA on the Inhalation Toxicity of O₃ and NO₂” by MacEwen et al from 1967 “there was a reduction in the toxicity of O₃ in the 5 psia mixed-gas environment which was even further reduced in a 5 psia-100% O₂ environment. This reduction in toxicity was indicated to be a result of the increased partial pressure of O₂, because experiments conducted at ambient pressure with a pO₂ of 260 mm Hg and at the same O₃ chamber concentration resulted in an even greater reduction in toxic response.” Chamber studies at high elevations should be conducted in order to show justification for a stricter standard at higher elevations.

Furthermore, during the revision of the PM NAAQS in 1997, a commenter questioned the “appropriateness of the current practice of adjusting measured PM₁₀ concentrations to reflect standard conditions of temperature and pressure (25° C and 760 mm Hg, respectively)” (US EPA, 1997, p. 38696). During that rule making, EPA concluded “that a continuation of the practice of adjusting PM₁₀ concentrations to standard conditions of temperature and pressure is not warranted or appropriate” (US EPA, 1997, p. 38697). EPA further stated “The issue is whether the available scientific evidence on the health and welfare effects of PM provides a basis for continuing with the traditional adjustments” (US EPA, 1997, p. 38697) EPA decided that the health and welfare effects of PM did not justify the adjustment of PM concentrations to standard conditions. We believe that the same approach should apply for ozone and PM₁₀ and that EPA should take the same position.

Continuing to express the O₃ NAAQS as a volume/volume concentration results in a more stringent standard for areas at high altitude and this increased stringency is unjustified without the requisite health effects study to underpin it. EPA states the following in the Health Risk and Exposure Assessment for Ozone (US EPA, 2014, p. 6-8):

The controlled human exposure studies drawn upon for this lung function risk assessment were conducted at low altitudes (< 600 feet). It is not known whether it is more appropriate to use a mass concentration ($\mu\text{g}/\text{m}^3$) or a mixing ratio concentration (ppm) at higher altitudes where the barometric pressure is lower. The E-R relationships used in the HREA are based on mixing ratio concentrations. If in fact mass concentrations are the appropriate exposure metric, then the lung function responses in a high-altitude city such as Denver (5300 feet asl 1) could be overestimated by about 15%.

Current O₃ monitoring expressed as a volume/volume concentration can continue to be used. However, the concentration should be converted to a mass/volume basis under actual conditions before comparison to the equivalent mass/volume concentration of the O₃ NAAQS value at standard conditions. Since converting to actual ambient temperature and pressure would require additional equipment and computational complexity, we recommend that the altitude correction be based on isothermal conditions, such as those assumed in Table 2 of Attachment A.

V. EPA SHOULD NOT ADD AN ADDITIONAL LAYER TO EXISTING OZONE NAAQS REQUIREMENTS

The promulgation of a new ozone standard is unlikely to improve Colorado's performance in reducing ozone and will add additional sip development tasks to an already challenging 2008 ozone SIP process. The SIP process significantly reduces the flexibility and innovation that Colorado can bring to bear on ozone reduction/prevention. Additionally, the data indicate that Colorado is reducing the ozone levels at all of the monitors that show ozone levels above the 75 ppb standard. While 3 years does not provide a robust record, all the monitored levels exhibit a downward trend, and additional regulations very recently adopted under Colorado's AQCC Regulation No. 7 promise still further progress will be realized. The EPA should allow Colorado's substantial progress toward the 2008 standard to continue without the additional costs required to address a new ozone standard quite simply because that will generate better results for air quality and public health in Colorado.

The promulgation of a new ozone standard will require Colorado to instigate additional rulemaking actions to address not only the continued challenge of the 2008 ozone standard, but the additional burden of a new ozone standard or standards layered on top. On February 13, 2015 EPA determined that states would have 2 years from the effective date of a nonattainment designation to submit emissions inventories and 3 years to submit plans for moderate area attainment demonstrations. Based on the monitoring data presented by Colorado to the Air Quality Control Commission on October 5, 2014, Colorado will be amending the current 2008 ozone SIP to address continued noncompliance. By requiring that states address the 2008 SIP and the new ozone SIP within a shortened time frame, EPA is imposing a significant burden on states and participants. In some cases, states will need to prepare modeling analyses and conduct public hearing/comment processes for each SIP submittal. Both of these activities are time and resource intensive and are unlikely to increase the speed at which Colorado comes into attainment with the standard while imposing a significant burden on the state and all likely participants.

Additionally, the SIP process driven by a lowered ozone NAAQS will impose an inflexible regulatory framework that does not allow for innovative approaches to emissions reduction or address future control options that may become available. Colorado has implemented controls that go beyond the requirements in the 2008 State Implementation Plan (SIP), with the stated goal of testing out the new requirements to ensure that they work with industry needs and are implementable and enforceable. Allowing these regulations to become fully implemented and operate to ensure that they are workable will provide Colorado with elements that are better suited for inclusion in a future SIP. This is a very important element of crafting a workable SIP, which is the very essence of a state's authority under the Clean Air Act, as it is exceedingly difficult to remove or modify SIP elements once they are approved. EPA requires that states show that any modification to an existing SIP will not cause or contribute to a NAAQS violation, for the ozone SIP this would likely require a costly modeling exercise.

VI. EPA SHOULD FIRST OBSERVE ENVIRONMENTAL BENEFITS FROM RECENTLY PROMULGATED STATE AND FEDERAL RULES

The oil and gas industry in Colorado is one of the most highly regulated industries in the Nation. Colorado's revised AQCC Regulation No. 7 has set the national bar on VOC regulation for this sector. These rules have been implemented State-wide, and the effectiveness of these rules will be closely monitored by the CDPHE and its Air Quality Control Commission. As some of these regulations are new to the industry, there may be a need for modifications which would very be difficult to make through a

SIP process. These rules were implemented independent of a SIP process and have not been fully implemented to date. As such, their benefits in ozone reduction have not been fully realized or quantified. Colorado should not be penalized for such leadership and foresight by unnecessarily lowering the ozone standards at this time. Indeed, the next NAAQS review period of five years will allow Colorado to make more progress state-wide and fully evaluate the benefits of its recent regulatory innovations in ozone controls for this industry.

Colorado has been a leader in air quality regulation among the states, and its innovative efforts should not now be penalized with a significant lowering of the ozone NAAQS on the basis of debatable health effects data. Passage of the Clean Air, Clean Jobs Act in 2010, [cite], addressed the immediate concern of completing a Regional Haze SIP, and also delivered significant NOx reduction benefits that will not be fully realized and measurable at Colorado's regulatory air quality monitors until 2018. This is a very significant measure for reducing ozone formation from anthropogenic sources within the Denver Metro and North Front Range Nonattainment Area, where emissions of NOx are attributed a greater role in the formation of ozone than VOCs by source apportionment modeling. Allowing Colorado to realize and measure the benefits of its innovation in air quality regulation is a far more appropriate and productive choice than to saddle it with a sharply lower standard that is not compelled by any new health effects data beyond those found adequate to support the existing standard.

Colorado has also been a leader in regulating new, modified and even existing sources of VOCs in the oil and gas sector, so much so that EPA's latest NSPS revisions for the industry at 40 CFR Part 60, Subpart OOOO (Quad O) borrow much from Colorado's AQCC Regulation No. 7 and COGCC Rules adopted in 2008. EPA pays Colorado regulators and its affected industry the backhanded compliment of copying the state's regulatory innovations on a national scale in Quad O, but does so without any apparent consideration for how that makes compliance in Colorado potentially more difficult than if the state had done nothing. The issue of green completion requirements, adopted by EPA as "reduced emission completion" (REC) requirements in 2012, is a good example, because it failed to create an exception for low pressure wells that don't benefit from REC practices, and also departs from green completion requirements in other ways that make compliance more difficult for Colorado's industry, not less. Regardless of this apparent disincentive to innovate, the proposed lowering of the ozone NAAQS does not adequately consider how significant the VOC reduction benefits of Quad O implementation may be, or give the states and industry a chance to implement those rules and realize/measure their benefits before ratcheting the standard down again. Such a rush to regulate even more stringently is not appropriate on this record in Colorado, if anywhere in the Country.

VII. THE PROPER TIME TO CONSIDER WILDFIRES AND TRANSPORT IS NOT AFTER THE NAAQS SETTING PROCESS

Colorado also has the challenge of significant seasonal wildfires that greatly confound the state's ability to make progress toward attainment of the 2008 ozone standards, as well as stratospheric intrusion of ozone in high altitude regions of Colorado and the intermountain west. Despite its diligence and innovation, Colorado struggles now to overcome these unique challenges, but still has managed to make good progress. Lowering the standard another 5 to 15 ppbv will only make Colorado's job impossible in the near term, especially if EPA is not inclined to be more reasonable in its consideration of exceptional event exclusions sought by the states to eliminate certain anomalous days of high ozone from consideration in making attainment determinations. Simply casting two-thirds of Colorado and the nation into ozone nonattainment without compelling new health effects data, and denying Colorado

and other CAA lead agencies the ability to continue along the paths they have mapped out is not a productive or welcome outcome, and should be rejected as highly inappropriate and ill-advised on the record of this proposed rulemaking.

Finally, with respect to Colorado’s ozone exceedances at the Rangely monitor in far western Colorado, it is readily apparent that such conditions are largely the result of transport and unique winter ozone formation potential in the Uinta Basin of northwest Utah. Addressing such transport concerns under the existing standards is far more likely to result in air quality improvement at the Rangely monitor than simply lowering the ozone NAAQS, so neither Colorado nor Utah have any air quality planning resources left to address transport concerns. Also, as current study of winter ozone formation progresses, both states will be in a much better position to propose and consider ozone control measures that are reasonably expected to produce measurable air quality benefits, rather than guessing at what will work and having to stick it in a deadline-driven SIP. Notably, such conditions are not even capable of modelling in a manner required for making the requisite attainment demonstration at the present time. Deferring any lowering of the ozone NAAQS for another five years will allow our understanding of winterozone formation to inform the SIP process much more meaningfully than at the current time, in CPA’s view.

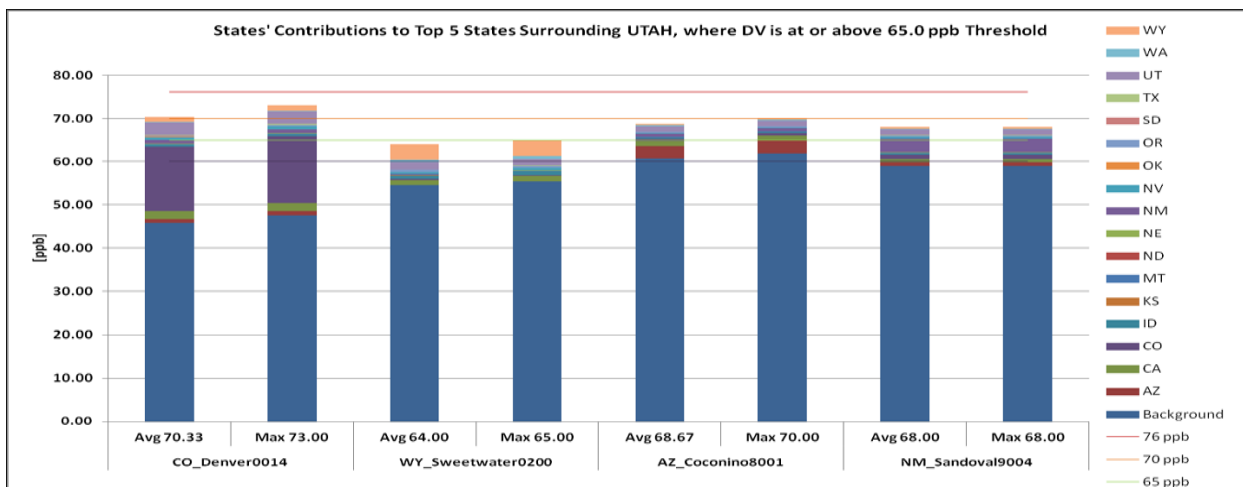
VIII. EPA CANNOT IGNORE ELEVATED LEVELS OF BACKGROUND OZONE IN THE WESTERN STATES WHEN ASSESSING WHETHER THE NAAQS IS REQUISITE TO PROTECT PUBLIC HEALTH

Background ozone levels in the U.S. are especially high in the Intermountain West and will have a significant impact on those States’ abilities to meet the proposed ozone NAAQS:

If the NAAQS is lowered in the 60-70 ppbv range, areas of the intermountain West will have little or no ability to reach compliance through North American regulatory controls.⁹

The background ozone levels in the Intermountain West have exceeded even the current standard, as EPA acknowledges in the Proposed Rule.¹⁰ Colorado is one of the States most strongly influenced by international transport of ozone.¹¹

Because of background ozone levels, many areas in the Intermountain West will be unable to comply with the reduced ozone scenarios contained in the proposed NAAQS as the vast majority of the ambient ozone comes from sources that cannot be controlled through the CAA. Modeling studies show that background accounts for 80% and more of ozone levels in several rural areas in the west.¹² As illustrated by the chart below, background (the large blue bar) accounts for the vast majority of ozone levels in many areas in the west.¹³



Due to the dramatic increase in non-U.S. anthropogenic emissions, mostly from Asia, background ozone levels in the Intermountain West are increasing at the same time that anthropogenic emissions in the region are decreasing.¹⁴ In addition, the percentage of contribution from background is higher on the days with peak ambient ozone readings in the west.¹⁵ High altitude areas in the Intermountain West are the most heavily impacted by increasing non-U.S. anthropogenic emissions.¹⁶ Independent studies have found that background ozone is higher, more consistent, and represents a greater proportion of total ozone in high elevation and rural areas in the Intermountain West.¹⁷ This results in an ever-decreasing margin between background levels and the NAAQS for many areas in the Intermountain West.

Many rural areas in the western U.S. are already struggling to preserve economic development and employment opportunities. Development restrictions and delays imposed on oil and gas operations in these areas by a nonattainment designation for emissions that are plainly beyond their control will place severe strain on economic development in these areas.¹⁸

Against this backdrop, CPA is concerned that the EPA has not adequately considered background ozone levels in the Western States when setting the NAAQS. Standards under the CAA, including the NAAQS, must be achievable by States (and regulated emission sources that bear the brunt of required emission reductions). Indeed, one of the governing principles of the CAA is the *attainability* of the NAAQS. For example, the CAA requires that SIPs “specify the manner in which the [NAAQS] will be *achieved and maintained*,”¹⁹ and SIP submittals must “assure that national ambient air quality standards are *achieved*.”²⁰ A standard that is set at a level that could not physically be attained even if all emissions of a particular pollutant in a State were to cease, and all domestic transported emissions contributing to nonattainment had been addressed, would hardly be “requisite” to protect public health. Indeed, if the NAAQS is set below background levels, it loses all rational meaning.

While Congress viewed the NAAQS as technology-forcing, there is no indication that Congress believed States should be forced to attain the unattainable by regulating to levels below background. In fact, the legislative history indicates quite the opposite:

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 [b]e set at zero or background levels. Obviously, this no-risk philosophy ignores all economic and social consequences and is impractical.²¹

EPA, however, is considering setting an ozone NAAQS in the range of 65 ppbv to 70 ppbv, and even as low as 60 ppbv, all of which are below the peak natural background levels that exist in many parts of the

¹⁴ Cooper *et al.*, 2012.

¹⁵ *Id.*

¹⁶ Brown-Steiner and Hess, 2011; Cooper *et al.*, 2011; Zhang *et al.*, 2008; Lin *et al.*, 2012a, 2012b; Cooper *et al.* 2012 at 11.

¹⁷ Lefohn *et al.* 2014 at 275.

¹⁸ See Brown *et al.*, 2013, finding natural gas development associated with a 12-percent increase in total employment over 8 years; Rural America at a Glance, 2014 Edition (contrasting positive employment growth in rural areas with oil and gas development against general rural trends of decreasing or stagnant employment).

¹⁹ CAA § 107(a)

²⁰ CAA § 110(a)(2)(C).

²¹ H.R. Rep. No. 294, 95th Cong., 1st Sess. 127 (1977).

United States, particularly the Intermountain West.²² EPA considers this even though it recognizes that ozone and ozone precursors “from natural [biogenic] and international sources could prevent ambient levels from reaching attainment levels . . . especially in locations with few remaining untapped opportunities for local emission reductions.”²³ Unfortunately, EPA then minimizes the significance of background by averaging background ozone contributions across the entire country and asserting that high background levels result from natural events that “are relatively infrequent” and can be addressed by existing CAA mechanisms when the standard is being implemented.²⁴ This tyranny of the statistical mean prejudices Colorado greatly, and deprives it of meaningful authority to select control measures for attaining the NAAQS under the CAA’s so-called “experiment in federalism.”

EPA also acknowledges that it can account for background concentrations when setting NAAQS.²⁵ Rather than consideration of background ozone levels on the front end, however, EPA points to provisions that it says will relieve the burden of background ozone on the States in the implementation phase.²⁶ Specifically, EPA discusses use of (a) exceptional event exclusions, (b) treatment as rural transport areas, and (c) international transport provisions.²⁷ Only one of these provisions—section 319(b) addressing exceptional events—could theoretically allow a State to avoid a nonattainment designation. This provision, however, is of little use in addressing background ozone, and over the last eight years EPA has approved only a handful of State applications to exclude ozone monitoring exceedances resulting from exceptional events. It should also be noted that stratospheric intrusions are not “exceptional” as they occur often. The remaining two provisions are rarely used and would provide relief in name only because States could not avoid a nonattainment designation with its attendant costs and regulatory restrictions for both States and regulated industry. EPA cannot avoid the difficult task of addressing background ozone during the standard-setting process by kicking the proverbial can down the road and shifting to the States the burden of managing what is an insurmountable barrier to attainment. Because of the limited relief that these provisions provide and the significant widespread impact of background ozone, such delay in consideration is a serious error.

IX. EPA SHOULD NOT PROCEED UNTIL CASAC FULFILLS ITS STATUTORY DUTIES

Part of EPA’s failure to adequately consider background rests on CASAC’s incomplete fulfillment of its CAA duties. Under the CAA, the CASAC “shall” “advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity” and “shall” also “advise the Administrator of any adverse public health, welfare, **social, economic, or energy effects** which may result from various strategies for attainment and maintenance of such national ambient air quality standards.”²⁸ CASAC did not provide a complete range of statutorily required information for EPA to consider in setting the NAAQS and its recent offer to fulfill its duties after the NAAQS is set is

²² EPA should not set NAAQS at background levels on the mistaken belief that the decision in *API v. Costle*, 665 F.2d 1176, 1184-86 (D.C. Cir. 1981), allows that result. To the contrary, *API* simply did not address the issue of whether a NAAQS that was unattainable not just in a single locale such as Houston, but throughout much of the nation due to factors beyond the control of the States or any U.S. regulated entities would be consistent with the CAA.

²³ 79 Fed. Reg. at 75382. *See also id.* (noting that background ozone can be “significant in some areas on some days” and “may present a challenge to air agencies” preparing SIPs).

²⁴ *Id.*

²⁵ 79 Fed. Reg. at 75238, citing *American Trucking Associations, Inc. v. EPA*, 283 F.3d 355, 378 (D.C. Cir., 2002).

²⁶ *See* 79 Fed. Reg. at 75382.

²⁷ 79 Fed. Reg. at 75383-85.

²⁸ CAA § 109(d)(2)(C) (emphasis added).

woefully insufficient.²⁹ In addition, EPA and CASAC did not assemble adequate and objectively transparent science to support lowering the ozone NAAQS. The result of these short-comings is that the Proposed Rule, predicted to be one of the most costly in history, is largely based on EPA policy choices and selective interpretation of internal studies. EPA attempts to justify its decisions using incomplete CASAC advice and scientific studies that do not meet the high standards required for a major rulemaking such as the proposed NAAQS simply fall short.

This unattainable standard is at a great cost to the country. The NERA Economic Consulting 2015 report³⁰ showed that the GDP reduction would be \$140 billion per year to achieve the necessary NO_x emissions reductions, with an average annual loss of employment income equivalent to 1.4 million jobs. The average annual household consumption over 2017-2040 would be reduced by an average of about \$830 per household per year. Understanding potential adverse impacts from the ozone NAAQS is extremely important in light of determining a standard requisite to protect human health. This will be the most expensive regulation in US history. It is well established in epidemiology that income is an inverse predictor of illness and early mortality³¹. Also, unemployment is also an established risk factor to elevated illness and mortality rates³². These adverse impacts to the economy will also impact human health. No analysis has been done to-date by CASAC or EPA on the health effects from the cost to the economy and loss of jobs.

Colorado, like many other States, has already taken cost-effective steps that resulted in large reductions of ozone. For example, Colorado has been a pioneer in addressing emissions from the oil and gas industry through adoption of widespread regulations that seek to considerably reduce VOC

²⁹ See CASAC Review of the EPA's *Second Draft Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards*, Letter to Gina McCarthy, June 26, 2014, at v.

³⁰ http://www.nera.com/content/dam/nera/publications/2015/NERA_NAM_Ozone%20Report_Final_0215.pdf

³¹ Anderson I., Gamborg M., Osler M., Prescott E., Diderichsen F. 2005. Income as mediator of the effect of occupation on the risk of myocardial infarction: does the income measurement matter. *Journal of Epidemiology and Community Health*. 59:1080-1085

Ecob R., Davey Smith G. 1999, Income and Health: What is the nature of the relationship? *Social Science and Medicine* 48:693-705

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Lynch JW, Smith GD, Kaplan GA, House JS. 2000. Income inequality and mortality: importance to health of individual income, psychosocial environment, or material conditions. *BMJ*. 320:1200-1204 (29 April).

³² Bambra C, Elkem T. 2008. Welfare state regimes, unemployment, and health: a comparative study of the relationship
Catalano R. 1991. The health effects of economic insecurity. *Am J Public Health*. Sept. 81(9):1148-52.

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emissions from oil and gas production facilities through Colorado's Regulation 7.³³ As a result, CPA members have undertaken considerable efforts to comply with these regulations. As the ozone standard moves steadily closer to background levels, the strategies for obtaining meaningful reductions become costlier and less effective at obtaining large reductions. These are the types of considerations CASAC must expressly consider and report to EPA on. EPA should not act without receiving and considering such information.

X. APPLYING METROPOLITAN SET OF STANDARDS TO RURAL AREAS CREATES ISSUES

With the lowering of the ozone standard, the non-attainment areas will be expanded to small rural communities with few or no existing sources not otherwise controlled or regulated that could be used for emission reduction credits or offsets. In non-attainment areas, offsets must be at a ratio of 1.1:1 to 1.5:1, depending on the classification of the non-attainment area. Finding such emissions offsets will be nearly impossible in many non-attainment areas, especially areas that have been non-attainment for some time and after RACT controls are applied to existing sources. Lack of emissions offsets can result in the inability for new projects to be started across the country, potentially hampering economic development. Furthermore, Colorado's Air Quality Regulation 7 will take from the oil and gas industry the ability to create offsets needed for non-attainment permitting. For new and modified oil and gas facilities to be authorized, they will have to try to purchase offsets from other industries, if they are available, further adding to the potential financial impact of this rule on the oil and gas industry. It will put the oil and gas industry at a severe disadvantage in obtaining offsets for development which could be further exacerbated by the pending oil and gas Control Technology Guidelines (CTGs).

XI. SOUND SCIENCE AND EFFICIENT ADMINISTRATION SUPPORT USE OF THE SAME MEASUREMENT STANDARD FOR THE PRIMARY AND SECONDARY NAAQS

The secondary ozone NAAQS currently in place is protective of public welfare. In addition, the 8-hour averaging time to measure the secondary standard is both adequate to obtain the requisite welfare protection and the most efficient use of EPA and state resources. EPA has requested comments on whether it should use the W126 metric to determine compliance with the secondary standard based on the W126 cumulative, seasonal index value. Requiring use of the W126 measurement would entail considerable research and investment in new monitoring methods and locations, technical expertise and training, development of quality control standards, and extensive validation of measurement practices. EPA has neither proposed nor considered whether such a system is possible or what the effects of a likely delay in implementation would be for public welfare. Efficient use of federal and state resources is a valid consideration as EPA determines the correct measurement method for the secondary standard. The Administrator has broad discretion to set the standard using the method that makes the most efficient use of existing resources when that method achieves the purposes of the Act.³⁴ EPA's comparison of the W126 values against equivalent 8-hour values demonstrates a high correlation

³³ See 5 Colorado Code of Regulations 1001-9, Regulation Number 7, Section XVII.

³⁴ See *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 490 (2001) (Breyer, concurring) (identifying allocation of resources to produce a cleaner environment as a regulatory goal of the CAA); *Nat'l Ass'n of Home Builders v. EPA*, 682 F.3d 1032, 1035 (D.C. Cir. 2012) (upholding EPA provision based on EPA's determination that an alternative not selected "would not be an effective use of society's resources") (internal quotations omitted).

between the two measurement methods.³⁵ Thus, use of the current ozone monitoring measurement requirements is adequate to ensure an equivalent level of protection to that of the W126 value.³⁶

XII. CONCLUSION

For the reasons outlined above, CPA respectfully requests that EPA maintain the current ozone NAAQS.

Sincerely,

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³⁵ 79 Fed. Reg. at 75346.

³⁶ EPA, Comparison of Ozone Metrics Considered in the Current NAAQS Review, EPA-HQ-OAR-2008-0699, Nov. 20, 2014.