



February 3, 2014

**MEMORANDUM**

**SUBJECT:** CASAC Review of the *Second Draft Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards*

**FROM:** Erika Sasser, Acting Director /s/  
Health and Environmental Impacts Division  
Office of Air Quality Planning and Standards

**TO:** Holly Stallworth  
Designated Federal Officer  
Clean Air Scientific Advisory Committee  
EPA Science Advisory Board Staff Office

The draft document, *Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards, Second External Review Draft*, prepared by the Environmental Protection Agency's (EPA) Office of Air Quality Planning and Standards (OAQPS) staff as part of EPA's ongoing review of the national ambient air quality standards (NAAQS) for ozone (O<sub>3</sub>), is being made available on EPA's website for review by the Clean Air Scientific Advisory Committee (CASAC) Ozone Review Panel (the Panel) at a public meeting to be held in Chapel Hill, NC on March 25-27, 2014. The document can be found at [http://www.epa.gov/ttn/naaqs/standards/ozone/s\\_o3\\_index.html](http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_index.html). Charge questions for the Panel to consider in its review of this second draft Policy Assessment (PA) are attached to this memorandum. I am requesting that you forward this memorandum and the attached charge questions to the Panel members to prepare for the March meeting.

This second draft PA presents analyses and preliminary staff conclusions regarding the policy implications of the key scientific and technical information that informs this review of the current primary (health-based) and secondary (welfare-based) O<sub>3</sub> standards. When final, the PA is intended to help "bridge the gap" between the relevant scientific and technical information presented in the Integrated Science Assessment (ISA) and Risk/Exposure Assessments (REAs) and the judgments required of the EPA Administrator in determining whether it is appropriate to retain or revise the O<sub>3</sub> NAAQS.

This draft document draws upon information presented in the *Integrated Science Assessment for Ozone* (U.S. EPA, 2013). It also draws upon information from the second draft health and welfare risk and exposure assessments (REAs) (U.S. EPA, 2014a; U.S. EPA, 2014b).<sup>1</sup> Based on analysis of this information in the second draft PA, the preliminary staff conclusions are that it is

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<sup>1</sup> These documents are also available at [http://www.epa.gov/ttn/naaqs/standards/ozone/s\\_o3\\_index.html](http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_index.html).

appropriate to consider revising the current primary and secondary standards. Preliminary staff conclusions on potential alternative standards that may be appropriate to consider are also presented in the draft document.

The second draft PA incorporates a number of changes from the first draft document, including the presentation of updated additional quantitative analyses from the second draft health and welfare REAs. Many of these changes are in response to comments offered by the Clean Air Scientific Advisory Committee Ozone Review Panel (the Panel) following their peer review of the first draft documents. The Panel presented its comments on the first draft PA in a letter to the Administrator dated November 26, 2012. We are appreciative of the Panel's review, which contributed to improvements in the second draft PA. Some of the most significant changes made in consideration of CASAC comments on the first draft PA, as well as CASAC comments on the first draft REAs, are summarized below.

- In consideration of CASAC comments on the need for a more streamlined and focused presentation of the policy-relevant information, we have revised the organization of the document.
  - There are now two, rather than three, chapters pertaining to each standard, the first of which (chapter 3 for primary standard and chapter 5 for the secondary standard) describes the currently available evidence and exposure/risk information most relevant to consideration of the adequacy of the current standard. In describing the currently available evidence, we give particular attention to evidence newly available in this review and evidence considered key in ISA characterizations. The second of the two chapters on each standard (chapter 4 for the primary and chapter 6 for the secondary) considers the information pertaining to consideration of potential alternative standards.
  - Chapter 1 now includes expanded presentations of the approaches for reviewing the standards (section 1.3), following description of prior reviews (section 1.2).
- Additionally, we have expanded the discussion of O<sub>3</sub> concentrations derived from non-anthropogenic (background) sources (section 2.4 and associated appendix). Chapter 2 describes the currently available information, including modeling analyses and chapter 1 describes considerations of background in prior reviews, including key court decisions which affect our considerations in the current review.
- With regard to consideration of welfare effects in chapters 5 and 6, we have augmented our discussion of evidence and exposure/risk information on O<sub>3</sub> impacts to crop species, and also included additional discussion of O<sub>3</sub> effects on trees outside of Class I areas. Consideration of ecosystem services is expanded, drawing on the more extensive analyses presented in the second draft welfare REA. Chapter 6 further discusses considerations pertaining to judging the level of protection provided by potential alternative standards to help inform the Administrator's judgments with regard to the requisite level of protection.

Our current schedule anticipates completion of a final PA this summer. Subsequent to that, the EPA's review of the O<sub>3</sub> NAAQS will conclude with Agency rulemaking that will include a notice of proposed rulemaking, followed by a public comment period prior to final rulemaking.

We request that you forward to the Panel this memo and the attached charge questions. The draft PA is being made available to the Panel in the form of electronic files, available from the EPA website at: [http://www.epa.gov/ttn/naaqs/standards/ozone/s\\_o3\\_2008\\_pa.html](http://www.epa.gov/ttn/naaqs/standards/ozone/s_o3_2008_pa.html).

We look forward to discussing this draft PA with the Panel at our upcoming meeting. Should you have any questions regarding this draft document, please contact me (919-541-3889; email [sasser.erika@epa.gov](mailto:sasser.erika@epa.gov)) or Ms. Susan Stone (919-541-1146; email [stone.susan@epa.gov](mailto:stone.susan@epa.gov)).

cc: Chris Zarba, SAB, OA  
Holly Stallworth, SAB, OA  
John Vandenberg, ORD/NCEA-RTP  
Steve Dutton, ORD/NCEA-RTP  
James Brown, ORD/NCEA-RTP  
Karen Wesson, OAQPS/HEID  
Deirdre Murphy, OAQPS/HEID  
Susan Stone, OAQPS/HEID

**Attachment:**

Charge to the CASAC Ozone Review Panel for Review of the Second Draft Ozone Policy Assessment

## Attachment

### **Charge to the CASAC Ozone Review Panel for Review of the Second Draft Policy Assessment for the Review of the National Ambient Air Quality Standards for Ozone**

The second draft Policy Assessment (PA) includes six chapters following an executive summary. Charge questions for the Panel's consideration are presented below for each of these chapters. Chapters 1 and 2 provide general information relevant to review of both the primary and secondary standards. Chapters 3 and 4 provide information specific to review of the primary standard. Chapters 5 and 6 provide information specific to review of the secondary standard.

***Introduction (Chapter 1):*** This chapter provides context for the review, including the background of past reviews, as well as the scope and approach for the current review. This includes discussion of the basis for the current standard.

1. Does the Panel find the introductory and background material (sections 1.1 and 1.2) to be appropriately characterized and clearly communicated?
2. In section 1.3, we describe the general approach for the review. This includes the key aspects of the approach employed in the last review in judging the adequacy of the then-existing standards and in selecting revised standards. Does the Panel find this description of the approach in the previous review adequate and clear? Does the summary of the approach in the current review appropriately describe important considerations in this review?

***O<sub>3</sub> Monitoring and Air Quality (Chapter 2):*** This chapter provides a description of the current O<sub>3</sub> monitoring network and recent concentrations, information on emissions and atmospheric chemistry, common patterns and variability in O<sub>3</sub> concentrations, as well as, discussion of current information on estimating O<sub>3</sub> concentrations associated with non-anthropogenic sources.

1. To what extent does the Panel agree that the most relevant information on monitoring (section 2.1), emissions and atmospheric chemistry (section 2.2), and common patterns of O<sub>3</sub> concentrations (section 2.3) is presented, and to what extent is the information presented appropriately characterized and clearly communicated?
2. With regard to information on estimating O<sub>3</sub> concentrations associated with non-anthropogenic sources or "background O<sub>3</sub>" (section 2.4), to what extent is this information appropriately characterized and clearly communicated?

***Adequacy of the Primary Standard (Chapter 3):*** This chapter discusses key aspects of the health effects evidence and exposure/risk information, particularly relevant to consideration of adequacy of the current primary standard and specifically describes staff's consideration of this information in reaching preliminary conclusions about the adequacy of the current standard.

1. To what extent does section 3.1 (Evidence-based Considerations) capture and appropriately characterize the key aspects of the evidence assessed and integrated in the ISA? To what extent is staff's consideration of the health effects evidence, including the adversity of reported respiratory effects and public health implications technically sound and clearly communicated

at an appropriate level of detail? In the Panel's view has the information been appropriately interpreted for the purpose of assessing the adequacy of the current standard?

2. With regard to the presentation of the exposure and risk information for the purpose of assessing the adequacy of the current standard, to what extent is the information, including associated limitations and uncertainties, sufficiently characterized, appropriately interpreted and clearly communicated?
3. In the Panel's view, does the discussion in section 3.4 provide an appropriate and sufficient rationale to support staff's preliminary conclusion that the current evidence and exposure/risk information call into question the adequacy of the current standard and that it is appropriate to consider revising the standard to achieve additional public health protection?

***Consideration of Potential Alternative Primary Standards (Chapter 4):*** This chapter discusses key aspects of the health effects evidence and exposure/risk information particularly relevant to consideration of potential alternative primary standards and specifically describes staff's consideration of this information in reaching preliminary conclusions on alternative standards appropriate to consider.

1. In the the Panel's view, has the evidence and exposure/risk information, including associated limitations and uncertainties, been appropriately characterized and interpreted for the purpose of considering potential alternative standards?
2. In the Panel's view, does the discussion in section 4.6 provide an appropriate and sufficient rationale, supported by the discussions in sections 4.1 through 4.4, to support staff's preliminary conclusions regarding alternative primary standards (including the indicator, level, averaging time and form) that it is appropriate to consider?
3. Does the Panel have any recommendations regarding additional interpretations and conclusions based on the available information that would be appropriate for consideration beyond those discussed in this chapter?

***Adequacy of the Secondary Standard (Chapter 5):*** This chapter discusses key aspects of the welfare effects evidence and exposure/risk information, particularly relevant to consideration of adequacy of the current secondary standard and specifically describes staff's consideration of this information in reaching preliminary conclusions about the adequacy of the current standard.

1. To what extent does the information in sections 5.1 through 5.5 capture and appropriately characterize the key aspects of the evidence for ozone welfare effects assessed and integrated in the ISA? To what extent does the information in section 5.1 (Nature of Effects and Biologically Relevant Exposure Metric) appropriately summarize the nature of ozone welfare effects and to what extent does it appropriately characterize the evidence with regard to biologically relevant exposures?
2. To what extent is staff's consideration of the welfare effects evidence, including the implications of reported vegetation effects with regard to adversity to public welfare technically sound and clearly communicated at an appropriate level of detail? In the Panel's view has the information been appropriately interpreted for the purpose of assessing the adequacy of the current standard?

3. With regard to the presentation of the exposure and risk information for the purpose of assessing the adequacy of the current standard, to what extent is the information, including associated limitations and uncertainties, sufficiently characterized, appropriately interpreted and clearly communicated?
4. In the Panel's view, does the discussion in section 5.7 provide an appropriate and sufficient rationale to support staff's preliminary conclusion that the current evidence and exposure/risk information call into question the adequacy of the current standard and that it is appropriate to consider revising the standard to achieve additional public welfare protection?

***Consideration of Potential Alternative Secondary Standards (Chapter 6):*** This chapter discusses key aspects of the welfare effects evidence and exposure/risk information particularly relevant to consideration of potential alternative secondary standards and specifically describes staff's consideration of this information in reaching preliminary conclusions on alternative standards appropriate to consider.

1. In the Panel's view, has the evidence and exposure/risk information, including associated limitations and uncertainties, been appropriately characterized and interpreted for the purpose of considering levels of protection and potential alternative standards?
2. In the Panel's view, does the discussion in section 6.5 provide an appropriate and sufficient rationale, supported by the discussions in sections 6.1 through 6.4, to support staff's preliminary conclusions regarding alternative secondary standards (including the indicator, level, averaging time and form) that it is appropriate to consider?
3. Does the Panel have any recommendations regarding additional interpretations and conclusions based on the available information that would be appropriate for consideration beyond those discussed in this chapter?