



September 26, 2016

**MEMORANDUM**

**SUBJECT:** CASAC Review of the document titled *Policy Assessment for Review of the Primary National Ambient Air Quality Standards for Nitrogen Dioxide – External Review Draft*

**FROM:** Erika N. Sasser, Director  
Health and Environmental Impacts Division  
Office of Air Quality Planning and Standards  
United States Environmental Protection Agency

**TO:** Aaron Yeow, Designated Federal Officer  
Clean Air Scientific Advisory Committee  
EPA Science Advisory Board Staff Office

Attached is the document titled *Policy Assessment for the Review of the National Ambient Air Quality Standards for Nitrogen Dioxide – External Review Draft* (draft PA) 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 primary (health-based) national ambient air quality standards (NAAQS) for NO<sub>2</sub>. The draft PA will be reviewed by the Clean Air Scientific Advisory Committee (CASAC) Oxides of Nitrogen Primary NAAQS Review Panel (the Panel) at a public meeting to be held in Washington D.C. on November 9-10, 2016. I am requesting that you forward this document to the Panel to prepare for the November meeting.

The draft PA is being made available to the Panel in the form of the attached electronic file. The document is also available from the EPA website at [http://www.epa.gov/ttn/naaqs/standards/nox/s\\_nox\\_index.html](http://www.epa.gov/ttn/naaqs/standards/nox/s_nox_index.html). Printed copies of this document can be sent to the Panel members via US mail upon request. Suggested focus areas for the Panel's review of the draft PA are identified in the attachment.

We look forward to discussing the draft PA with the CASAC Panel at our upcoming meeting. Should you have any questions regarding the planning document, please contact me (919-541-3889; email [sasser.erika@epa.gov](mailto:sasser.erika@epa.gov)) or Dr. Jennifer Nichols on my staff (919-541-0708; email [nichols.jennifer@epa.gov](mailto:nichols.jennifer@epa.gov)).

## Attachments

Cc: Chris Zarba, SAB, OA  
John Vandenberg, ORD/NCEA-RTP  
Steve Dutton, ORD/NCEA-RTP  
Richard Wayland, OAQPS/AQAD  
James Hemby, OAQPS/AQAD  
Karen Wesson, OAQPS/HEID  
Bob Hetes, OAQPS/HEID  
Jennifer Nichols, OAQPS/HEID

## **Attachment**

### **Charge to the CASAC Oxides of Nitrogen Primary NAAQS Review Panel**

**Chapter 1 – Introduction:** Chapter 1 provides introductory information including a summary of the legislative requirements for the NAAQS, an overview of the history of the NO<sub>2</sub> NAAQS and the decisions made in the last review, and a summary of the scope and approach for the current review.

1. To what extent does the Panel find this information to provide useful context for the review and to be clearly presented?

**Chapter 2 – NO<sub>2</sub> Air Quality:** Chapter 2 describes the major NO<sub>x</sub> emissions sources, the atmospheric chemistry of NO<sub>2</sub> formation, the NO<sub>2</sub> ambient monitoring network, and NO<sub>2</sub> ambient air quality trends and relationships.

1. To what extent does the Panel find this information to provide useful context for the review and to be clearly presented?

**Chapter 3 – Consideration of the Evidence for NO<sub>2</sub>-Related Health Effects:** Chapter 3 summarizes key aspects of the health effects evidence that are particularly relevant to considering the adequacy of the current primary standards and describes staff's consideration of this evidence to inform preliminary conclusions regarding the adequacy of the current standards.

1. To what extent does Chapter 3 capture and appropriately characterize the key aspects of the evidence assessed and integrated in the ISA?
2. To what extent is staff's consideration of the evidence from epidemiologic and controlled human exposure studies, including important uncertainties, technically sound and clearly communicated? What are the Panel's views on staff's interpretation of the health evidence for short-term (section 3.2) and long-term (section 3.3) NO<sub>2</sub> exposures for the purpose of evaluating the adequacy of the current standards?

**Chapter 4 – Consideration of NO<sub>2</sub> Exposures and Health Risks:** Chapter 4 builds on the considerations described in the REA Planning Document and presents staff's conclusions regarding support for new or updated quantitative analyses in this review. In addition, Chapter 4 characterizes updated analyses comparing NO<sub>2</sub> air quality to health-based benchmarks and describes staff's considerations and conclusions of this information.

1. What are the Panel's views on staff's conclusions regarding support for new or updated quantitative analyses?
2. What are the Panel's views on the technical approach taken to conduct updated analyses comparing NO<sub>2</sub> air quality to health-based benchmarks?

3. To what extent does the draft PA accurately and clearly communicate the results of these analyses? What are the Panel's views on staff's interpretation of these results for the purpose of evaluating the adequacy of the current standards?

### **Chapter 5 – Preliminary Conclusions on Adequacy of the Current Primary NO<sub>2</sub>**

**Standards:** Chapter 5 presents staff's preliminary conclusions that the available evidence and information does not call into question the adequacy of the public health protection provided by the current primary NO<sub>2</sub> standards and that it is appropriate in this review to consider retaining those standards. Chapter 5 also identifies key areas for additional research and data collection, in order to inform future reviews.

1. What are the Panel's views on staff's preliminary conclusions regarding adequacy of the current standards and on the public health policy judgments that support those preliminary conclusions? Does the discussion provide an appropriate and sufficient rationale to support staff's preliminary conclusion that it is appropriate to consider retaining the current standards, without revision, in this review?
2. What are the Panel's views on the areas for additional research that are identified in Chapter 5? Are there additional areas that should be highlighted?