



THE ADMINISTRATOR

WASHINGTON, D.C. 20460

December 7, 2023

Elizabeth A. Sheppard, Ph.D.
Chair, Clean Air Scientific Advisory Committee
U.S. Environmental Protection Agency
William Jefferson Clinton Federal Building
Washington, D.C. 20460

Dear Dr. Sheppard:

I would like to thank you and the other members of the Clean Air Scientific Advisory Committee and the Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter Secondary National Ambient Air Quality Standards Panel for your September 27, 2023, letter conveying your review of the U.S. Environmental Protection Agency's *Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter (External Review Draft – May 2023)*. I greatly appreciate the review and advice provided by the CASAC as well as the work done by the Oxides of Nitrogen, Oxides of Sulfur, and Particulate Matter Secondary NAAQS Panel during the preceding June and September 2023 public meetings.

As you know, this review is being developed under a very tight schedule governed by a judicial consent decree. After reviewing the report from the CASAC, including the recommendation for CASAC review of a second draft of the policy assessment, we considered options for a revised schedule for the review and conferred with the plaintiffs in the consent decree litigation. Considering the substantial CASAC advice on the draft policy assessment, the plaintiffs agreed to stipulate to a modification of the consent decree schedule to allow the EPA additional time to prepare the policy assessment and notice of proposed rulemaking, without modifying the consent decree deadline for final action.

Although this small amount of additional time does not allow for preparation and CASAC review of a second draft policy assessment, please know that with additional time, staff will be able to address your advice and comments more fully in the final policy assessment, which will inform my decisions for the notice of proposed rulemaking for this review.

Should you have any questions, Erika Sasser, Office of Air Quality Planning and Standards Health and Environmental Impacts Division director, is ready to assist and is available at sasser.erika@epa.gov or (919) 541-3889.

In the meantime, I offer you my warmest regards.

Sincerely yours,

A handwritten signature in black ink that reads "Michael S. Regan". The signature is written in a cursive style with a large, stylized 'M' and 'R'.

Michael S. Regan



January 16, 2024

MEMORANDUM

SUBJECT: Transmittal of *Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter* and Response to CASAC Comments on the External Review Draft of this Document

FROM: Erika N. Sasser, Director
Health and Environmental Impacts Division
Office of Air Quality Planning and Standards

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

Attached is the final document, *Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter* (henceforth referred to as the PA). The PA has been prepared by the Environmental Protection Agency's (EPA) Office of Air Quality Planning and Standards (OAQPS) staff as part of EPA's review of the NO₂, SO₂, and PM secondary national ambient air quality standards (NAAQS). The PA contains a staff evaluation of the policy implications of the key scientific and technical information available in this review for EPA's consideration.

The PA incorporates a number of changes from the draft document. Many of these changes are in response to comments offered by the Clean Air Scientific Advisory Committee (CASAC) in a letter to the Administrator dated September 27, 2023, following peer review of the draft document by the CASAC. We are appreciative of the CASAC review, which contributed to improvements in the final PA. Some of the more significant changes made in consideration of CASAC comments on the draft PA are summarized below.

- Chapter 1: A new section has been added that describes the 1990 CAA Amendments (section 1.3.3), and text has been revised or added to clarify a number of aspects including the PM effects considered in this review.
- Chapter 2: A number of revisions have been made to Chapter 2 in consideration of CASAC comments. These include an expanded overview of the acid deposition process and chemical complexity of sulfur and nitrogen oxides; more specific source categorization of NH₃; and affirming the relevance of the Clean Air Status and Trends Network (CASTNET) for this review. Some information has been moved into or repeated in Chapter 6 for improved cohesion in that chapter.

- Chapter 3: Clarification has been added regarding the effects considered in prior reviews of the PM standards and regarding some aspects of the aquatic acidification index developed in the 2012 review.
- Chapter 4: The discussion of N enrichment effects has been elevated, and the discussion of the evidence for effects in estuarine and coastal waters, particularly, has been appreciably expanded in light of CASAC comments.
- Chapter 5: The discussion of quantitative information pertaining to N enrichment effects in aquatic systems has been appreciably expanded, particularly as related to the evidence in estuarine and coastal areas, for which a new section has been added (section 5.2.3). Many revisions have been made to the description of the aquatic acidification REA and its results, both in this chapter and in the accompanying detailed appendix (5A) to provide clarification on a number of aspects, including those raised by the CASAC. Among these are the inclusion of a systematic uncertainty characterization of the aquatic acidification Risk and Exposure Assessment (REA) in Appendix 5A, section 5A.3.
- Chapter 6: This chapter and the accompanying appendix (6A) have been substantially expanded in light of CASAC advice and comments. For example, a new systematic uncertainty characterization of the full array of air quality analyses has been included (section 6.3), with additional sensitivity analyses to address several CASAC comments on the trajectory-based analyses (e.g., stress test the selection of the sites of influence). Further, the presentation of trajectory-based analyses has been augmented to more completely describe the methodology and the basis for methodological choices in the approach employed. The analysis itself has incorporated longer trajectories to better account for the long depositional lifetimes of some pollutants. A new discussion of co-occurring trends in emissions, ambient air concentrations and estimated deposition, which were noted in several aspects of CASAC comments, has been included in section 6.2.1.
- Chapter 7: In addition to appreciable revisions to accommodate consideration of the expanded and improved aspects of Chapters 4, 5 and 6, a new section has been added that summarizes the CASAC advice on the standards in this review. The conclusions section has also been revised to take into account the changes across the PA and advice from the CASAC.

I am requesting that you forward this memorandum and the attached electronic file containing the final PA to the CASAC members. This document is also available on the EPA website: <https://www.epa.gov/naaqs/nitrogen-dioxide-no2-and-sulfur-dioxide-so2-secondary-air-quality-standards>.

Should you have any questions regarding this memorandum or the final PA, please contact Ginger Tennant (919-541-4072; email tennant.ginger@epa.gov).

cc: Tom Brennan, SAB, OA
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