

**Summary Minutes of the United States Environmental Protection Agency (U.S. EPA)
Clean Air Scientific Advisory Committee (CASAC) Oxides of Nitrogen (NO_x) and Sulfur
Oxides (SO_x) Secondary Review Panel Public Teleconference**

November 10, 2010

Oxides of Nitrogen (NO_x) and Sulfur Oxides (SO_x) Secondary Review Panel¹

Date and Time: November 10, 2010, 10:00 p.m. - 4:00 p.m. Eastern Time

Location: By Teleconference

Purpose: to continue peer review EPA's *Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards (NAAQS) for NO_x and SO_x: Second External Review Draft* (September 2010).

CASAC Panel Participants:

Dr. Armistead (Ted) Russell, Chair
Dr. Praveen Amar
Dr. Andrzej Bytnerowicz
Ms. Lauraine Chestnut
Dr. Ellis B. Cowling
Dr. H. Christopher Frey
Dr. Rudolf Husar
Dr. Naresh Kumar,
Mr. Richard L. Poirot
Dr. Kathleen Weathers

SAB Staff Office Participants

Dr. Angela Nugent, Designated Federal Officer (DFO)

Other Attendees – See Attachment A

Teleconference summary:

The meeting was announced in the Federal Register² and discussion at the meeting generally followed the issues and timing as presented in the agenda³.

Convene the meeting

Dr. Angela Nugent, SAB DFO, convened the advisory teleconference and called roll.

Agenda review and approach for the teleconference

Dr. Armistead Russell thanked members for progress made reviewing the draft panel letter⁴ during the November 9th teleconference. He asked members to begin their discussions by focusing on the text of enclosure A, which the Panel had decided would be included in the body of the letter to the Administrator, rather than appear as a separate enclosure. He asked the panel to then begin discussing the response to charge question 24 and work through the charge questions in reverse order.

Discussion of draft enclosure A and additional points for the letter to the Administrator

Members discussed the need to be succinct in including language from enclosure A in the letter to the Administrator. Members agreed to drop the fourth point, but include model uncertainty issues as part of a larger point on uncertainty. Members agreed to mention both CMAQ and the ecological model, MAGIC, as examples of model uncertainty that deserves additional attention.

A member spoke of the need to affirm the value of EPA's analysis supporting the secondary NAAQS for oxides of nitrogen (NO_x) and sulfur oxides (SO_x). Members agreed to include language at the close of the letter recognizing the unique and valuable aspects of this analysis. They agreed that three points should be made:

- 1) The current NAAQS review for welfare-based effects was conducted separately from the review of the health-based standard and has allowed focus on ecological impacts.
- 2) The review was designed to consider two criteria pollutants at the same time, and set the stage for a "multi-pollutant/multi-media/multi-effect" approach as recommended in the 2004 National Research Council report, and
- 3) The Atmospheric Acid Precipitation Index (AAPI) takes into account another chemical form of biologically reactive nitrogen, NH_x that is important to aquatic acidification, but is not a criteria pollutant.

The panel agreed that the letter should strongly state the need to review the Policy Assessment one more time.

Discussion of draft response to charge questions

No comments on response to question 24a.

Response to question 24b. Members spoke of the need for consistency across the report regarding appropriate target levels of acid neutralizing capacity (ANC). Members agreed that the following language should be used for the responses to charge questions 24b and 11:

“There is substantial confidence that there are adverse effects at ANC levels below 20 µeq/L, and reasonable confidence that there are adverse effects below 50 µeq/L. Levels of 50 µeq/L and higher would provide additional protection, but the Panel has less confidence in the significance of the incremental benefits as the level increases above 50 µeq/L.”

Response to question 24c and passim. Members agreed to change language from “the panel feels” to “the panel believes” The panel agreed on additional copy edits to question 24c.

Response to question 24d. Members agreed to remove the second sentence and to strengthen the language on line 33.

Response to question 23. No substantive changes.

Response to question 22. Members discussed copy edits. For question Cii, members suggested clarifying language relating to snow melts and distinguishing analyses that must be done in the near term from future research needs.

Response to question 21. Members discussed edits to lines 21 and 22 to indicate that the choice of averaging time needs to inform the variability of uncertainty analysis and drop unneeded clauses. Members discussed dropping the last sentence on lines 25 and 26.

No discussion of response to question 20.

Response to question 19. Members agreed to acknowledge issues with instrumental methods and costs, but to encourage EPA to explore passive sampling methods used by the AMoN network .

No discussion of response to question 18.

Response to question 17. Members agreed to clarify that the purpose of the recommended workshop would be to enumerate and prioritize research needs identified in Integrated Science Assessment, Risk and Exposure Assessment, and Policy Assessment for the NO_x and SO_x secondary NAAQS review.

Response to question 16. Members agreed that line 32 should clarify that the uncertainty analysis of ecosystem models described should be continued as a research activity in the future.

No discussion of response to question 15

Response to question 14. Members agreed to include language encouraging EPA to example the approach for uncertainty analysis provided in public comments provided by the Electrical Power Research Institute. Members agreed to specify that EPA should evaluate model performance for the revised Policy Assessment.

Response to question 13 and passim Members agreed to substitute the word “detrimental effect” for “dis-benefit.”

No discussion of response to question 12.

Response to question 11. Members agreed to edit the response to more fully answer the question by inserting the following language at the end of line 9: “The reduction in or loss of sensitive species that would otherwise have been present in that ecosystem is an appropriate pointer to adversity to public welfare.” Members noted that additional text would be added, consistent with the response to question 24.

No discussion of response to question 10.

Response to question 9. Members agreed to copy editing suggestions and to drop the specification of “chemical mechanisms” on page 11, line 17.

No substantive discussion of questions 8, 7, or 6.

Response to question 5. Members agreed to make the following change to page 8, line 43: to replace “trajectory of changes...” with “to estimate a functional relationship between AAPI” and changes in...”. Members agreed to strengthen language to indicate that a further evaluation of robustness is “required” (instead of “is needed”).

No substantive discussion of questions 4, 3, 2, or 1.

The chair asked if any member of the panel would not concur on the letter and responses to charge questions, subject to edits discussed. No member responded.

Summary and next steps

The panel Chair noted that he would work with the DFO to revise the letter and response to charge questions and provide it to the panel for concurrence by email before the full CASAC review of the draft document on December 6.

The Designated Federal Officer adjourned the meeting at 4:00 p.m.

Respectfully Submitted:

Certified as True:

/signed/

/signed/

Dr. Angela Nugent
SAB DFO

Dr. Armistead Russell
SAB Chair

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by committee members during the course of deliberations within the meeting. Such ideas, suggestions, and deliberations do not necessarily reflect definitive consensus advice from the panel members. The reader is cautioned to not rely on the minutes represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories,

commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.

Individuals who requested teleconference access or identified themselves on the teleconference

Kate Bardsley
Podesta Group

Frank M. Forsgren
Nevada Division of Environmental Protection

Steve Gouze
Air Resources Board

Andrew O. Hollis
Regulation and SIP Management

John J. Jansen
Southern Company

Rick Krause
American Farm Bureau Federation

Ashley Lyon
Beef Industry Information Center

Karen Martin
EPA, Office of Air and Radiation

Mary Maupin
Michigan Department of Natural Resources and Environment

Tom Moore, Air Quality Program Manager
Western Governors' Association

Ona Papageorgiou
New York State Department of Environmental Conservation

Stuart Parker,
Clean Air Report,

Heather Ptak
Alaska Natural Gas Transportation Projects

Sarah K. Raymond
IDEM-Office of Air Quality

Richard Scheffe

EPA, Office of Air and Radiation

Brittany Westlake
American Chemical Society

Linda M. Wilson
NYS Office of the Attorney General

Materials Cited

The following meeting materials are available on the CASAC Web site,
<http://www.epa.gov/casac>, at the [page for the October 5-6, 2010 CASAC Panel meeting](http://www.epa.gov/casac):
<http://yosemite.epa.gov/sab/sabproduct.nsf/bf498bd32a1c7fd85257242006dd6cb/fb2980a363c0078b852577bd004ba8fc!OpenDocument&Date=2010-11-09>

¹ Roster, Clean Air Scientific Advisory Committee (CASAC) Oxides of Nitrogen (NO_x) and Sulfur Oxides (SO_x) Secondary Review Panel

² Federal Register Notice Announcing the Meeting

³ Agenda

⁴ Draft panel letter, *Review of the 2nd draft Policy Assessment for the Secondary NO_x and SO_x NAAQS*, (10.29.10 Draft Report and Enclosure C)