

**Summary Minutes of the
U.S. Environmental Protection Agency (EPA)
Clean Air Scientific Advisory Committee (CASAC)
Oxides of Nitrogen Review Panel
Public Teleconference
August 13, 2015**

Date and Time: Thursday, August 13, 2015, 1:00 PM – 5:00 PM ET

Location: Telephone only

Purpose: To discuss CASAC draft reviews of EPA’s *Integrated Science Assessment (ISA) for Oxides of Nitrogen—Health Criteria (Second External Review Draft—January 2015)* and *Review of the Primary National Ambient Air Quality Standards for Nitrogen Dioxide: Risk and Exposure Assessment Planning Document (REA PD)*.

Participants: Chartered CASAC

Dr. Ana Diez Roux, Chair (for full CASAC, see CASAC roster¹)
Mr. George Allen
Dr. Judith Chow
Dr. Jack Harkema
Dr. Helen Suh
Dr. Kathleen Weathers

CASAC Oxides of Nitrogen Review Panel (for full Panel, see Panel roster²)

Dr. Ana Diez Roux, Chair
Dr. H. Christopher Frey, Immediate Past Chair
Mr. George Allen
Dr. Matthew Campen
Dr. Douglas Dockery
Dr. Philip Fine
Dr. Panos Georgopoulos
Dr. Jack Harkema
Dr. Joel Kaufman
Dr. Michael Kleinman
Dr. Timothy Larson
Dr. Jeremy Sarnat
Dr. Lianne Sheppard
Dr. Helen Suh
Dr. Jim Zhang

Mr. Aaron Yeow, Designated Federal Office (DFO)

Other Attendees (See Attachment A)

Opening Remarks

Mr. Aaron Yeow, DFO, opened the meeting. He noted that as required under the Federal Advisory Committee Act (FACA), the CASAC and the panel's deliberations are held in public with advanced notice given in the Federal Register³ and the meeting minutes will be made publicly available after the meeting. He noted that there were two public comment periods on the agenda for members of the public (that registered in advance with the SAB Staff Office) to make oral comments. He noted that written public comments had been posted on the meeting webpage. He stated that the SAB Staff Office determined that there were no issues with conflict-of-interest nor any issues with an appearance of a loss of impartiality for any of the CASAC or CASAC panel members. He then turned it over to Dr. Ana Diez Roux, Chair of the CASAC.

Dr. Diez Roux welcomed everyone and provided an overview of the Agenda.⁴

Public Comments on the Draft CASAC ISA Report

Julie Goodman, Gradient, made comments on behalf of the American Petroleum Institute, focusing on the need for a thorough study quality evaluation to be conducted as part of evidence integration and for the EPA to clarify how the study quality criteria are applied in the ISA.

Deborah Shprentz, consultant to the American Lung Association, presented comments⁵ which focused on the need for the CASAC to explicitly state its concurrence with the causality determinations for NO₂ exposure effects stated in the ISA.

Discussion of the Draft CASAC ISA Report

Dr. H. Christopher Frey led the panel discussion of the Draft CASAC ISA Report.

Consensus Responses to Charge Questions

For the response to the charge question for Chapter 1, the panel identified a few grammatical errors and typos to be corrected. For the response to the charge questions for Chapter 2, the panel identified a few clarifying edits, including clarification of the recommendations for Table 2-6 and Table 2-7. The panel had some discussion about how much certified near-road monitoring data should be included in the final ISA. It was agreed that they would recommend inclusion of certified data through the end of 2014. There was some discussion about specifying that the Marylebone Road monitoring site in London is in a street canyon.

The panel discussed clarifying the recommendation regarding the exposure modeling approaches in Chapter 3 of the ISA and backing off the prior recommendation for classifying the exposure assessment approaches for informing causal determinations. For the response to the charge questions for Chapter 4, the panel agreed to remove the detailed discussion about cilia and refer to Dr. Michael Kleinman's individual comments. The panel also agreed to remove the discussion about oxidative stress. There were a few clarifying edits identified by the panel for the response to the charge questions for Chapters 5 and 6. For the response to the charge questions for Chapter 7, the panel agreed to changing "causal framework" to "framework for evaluating effect modification".

Letter to the Administrator

The panel agreed to make the necessary edits to the letter to make it consistent with the changes discussed for the responses to charge questions. The panel agreed to explicitly state its concurrence with the causal determinations made in the ISA. The panel also agreed with removing the reference to the descriptive table for exposure assignment methods and removing some of the detail on improvements for Chapter 7, referencing the response to charge questions instead.

Disposition of Draft ISA Report

The Chartered CASAC members approved the report with the changes discussed by the panel.

Public Comments on Draft CASAC REA Planning Document Report

Julie Goodman, Gradient, made comments on behalf of the American Petroleum Institute, focusing on the need for more information on how core-based statistical areas will be selected, how quantitative uncertainty analyses will be conducted, the analysis on results for exposure benchmarks should be above 100 ppb, and how an epidemiology-based risk assessment of respiratory effects for long-term NO₂ exposure is not feasible.

Deborah Shprentz, consultant to the American Lung Association, presented comments⁶ which focused on the near-road monitoring network showing very few areas with concentrations above 100 ppb, for the exposure assessment to evaluate exposures less than 100 ppb, and for the CASAC to recommend that the EPA review the adequacy of the current monitoring network for NO₂.

Discussion of Draft CASAC REA Planning Document Report

Dr. Frey led the panel discussion of the Draft CASAC REA Planning Document Report.

Consensus Responses to Charge Questions

For the response to the charge question 2a for Chapter 2, the panel agreed to add air quality monitor siting characteristics as additional information that should be considered by the EPA for inclusion in the REA PD. The panel also agreed to recommending inclusion of certified near-road monitoring data through the end of 2014 to the REA PD. There was discussion about the two-step adjustment approach for adjusting ambient NO₂ concentrations to just meet the existing NAAQs and the effect of the magnitude of adjustment on uncertainty. For the response to the charge questions for Chapter 3, the panel agreed to edits regarding long-term exposure modeling to be less presumptive regarding what will control the standard and less prescriptive regarding hybrid/blended approaches.

Letter to the Administrator

The panel agreed to edits to the letter to better distinguish comments and recommendations for risk assessment from those relating to exposure assessment. The panel agreed to combine the last two paragraphs of the letter regarding epidemiology-based risk assessment with the second paragraph of the first page of the letter.

Disposition of Draft REA Planning Document Report

The Chartered CASAC members approved the report with the changes discussed by the panel.

Summary and Action Items

With business concluded, the meeting was adjourned by Mr. Yeow at 5:00 pm.

Respectfully Submitted:

Certified as Accurate:

/Signed/

/Signed/

Mr. Aaron Yeow
Designated Federal Officer
EPA SAB Staff Office

Dr. Ana Diez Roux
Chair
CASAC

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by Panel members during the course of deliberations within the meeting. Such ideas, suggestions and deliberations do not necessarily reflect consensus advice from the Panel members. The reader is cautioned to not rely on the minutes to 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.

Materials Cited

The following meeting materials are available on the CASAC website: <http://www.epa.gov/casac>, at the [August 13, 2015 CASAC and CASAC Oxides of Nitrogen Review Panel Meeting page](#):

¹ CASAC Roster

² CASAC Oxides of Nitrogen Review Panel Roster

³ Federal Register Notice Announcing the Public Meeting

⁴ Agenda

⁵ Oral Statement on the Draft CASAC ISA and REA Planning Document Reports by Deborah Shprentz, Consultant to the American Lung Association.

⁶ Oral Statement on the Draft CASAC ISA and REA Planning Document Reports by Deborah Shprentz, Consultant to the American Lung Association.

ATTACHMENT A – Other Attendees
CASAC and CASAC Oxides of Nitrogen Review Panel Public Meeting

Name	Affiliation
Alman, Breanna	USEPA
Beardsley, Renee	USEPA
Brellenthin, Nicole	Gradient
Buckley, Barbara	USEPA
Burkett, Jeff	The Empire District Electric Co.
Dutton, Steve	USEPA
Ethridge, Shannon	Texas CEQ
Forsgren, Frank	Nevada Division of Environmental Protection
Frasier, Lucy	Zephyr Environmental Corporation
Goodman, Julie	Gradient
Jenkins, Scott	USEPA
Kirrane, Ellen	USEPA
Kotchmar, Dennis	USEPA
Lamson, Amy	USEPA
Landsell, Terry	Clean Air Carolina
Lin, Huang	Pennsylvania Department of Environmental Protection
Luben, Tom	USEPA
Macauley, Laura	USEPA
McDow, Stephen	USEPA
Nichols, Jennifer	USEPA
Ollison, Will	American Petroleum Institute
Owens, Beth	USEPA
Parker, Stuart	InsideEPA
Patel, Molini	USEPA
Popovech, Marusia	ExxonMobil Biomedical Sciences, Inc.
Richmond-Bryant, Jennifer	USEPA
Sacks, Jason	USEPA
Shprentz, Deborah	Consultant to the American Lung Association
Steichen, Ted	American Petroleum Institute
Stevens, Tina	USEPA
Vandenberg, John	USEPA