

**Summary Minutes of the  
U.S. Environmental Protection Agency (EPA)  
Clean Air Scientific Advisory Committee (CASAC)  
Particulate Matter (PM) Panel  
Public Meeting  
May 23, 2016**

Date and Time: Monday, May 23, 2016, 2:00 PM – 6:00 PM ET

Location: Telephone and Audio Webcast

Purpose: To peer review the EPA's *Integrated Review Plan for the National Ambient Air Quality Standards for Particulate Matter (External Review Draft – April 2016)*

Participants: CASAC PM Panel (for full Panel, see roster<sup>1</sup>)

Dr. Ana Diez Roux, Chair

Dr. Peter Adams

Dr. John Adgate

Mr. George A. Allen

Dr. John Balmes

Dr. Kevin Boyle

Dr. Judith Chow

Dr. Douglas Dockery

Mr. Henry (Dirk) Felton

Dr. Mark Frampton

Dr. H. Christopher Frey

Dr. Terry Gordon

Dr. Jack Harkema

Dr. Joel Kaufman

Dr. Patrick Kinney

Dr. Michael Kleinman

Dr. Rob McConnell

Dr. David Peden

Mr. Richard Poirot

Dr. Jeremy Sarnat

Dr. James Jay Schauer

Dr. Lianne Sheppard

Dr. Barbara Turpin

Dr. Sverre Vedal

Dr. Ronald Wyzga

Mr. Aaron Yeow, Designated Federal Office (DFO)

Dr. Erika Sasser, EPA Office of Air Quality Planning and Standards (OAQPS)

Dr. Scott Jenkins, EPA OAQPS

Dr. John Vandenberg, EPA National Center for Environmental Assessment (NCEA)

Mr. Jason Sacks, EPA NCEA

Other Attendees (See Attachment A)

**Monday, May 23, 2016**

## **Opening Remarks**

Mr. Aaron Yeow, DFO, opened the meeting. He noted that pursuant to the Federal Advisory Committee Act (FACA) and EPA policy, the CASAC Panel's deliberations are held in public with advanced notice given in the Federal Register,<sup>2</sup> and the meeting minutes will be made publicly available after the meeting. He noted that there was a public comment period noted on the agenda for members of the public who registered in advance with the SAB Staff Office to make oral comments. He stated that there was also a clarifying comment period on the agenda where members of the public could request an opportunity to provide short clarifying comments. He noted that the Panel received written public comments, which were distributed to the Panel and also 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 Panel members. He then turned the meeting over to Dr. Ana Diez Roux, Chair of the CASAC.

Dr. Diez Roux welcomed everyone and had the Panel members introduce themselves. She then provided an overview of the Agenda.<sup>3</sup>

## **EPA Presentation on IRP**

Dr. Erika Sasser, EPA OAQPS, began the EPA presentation<sup>4</sup> to the panel, focusing on the statutory requirements of the National Ambient Air Quality Standards (NAAQS) and an overview of the process for reviewing the NAAQS. Dr. John Vandenberg, EPA NCEA, continued the presentation, focusing on the anticipated review schedule, and the purpose and organization of the Integrated Review Plan (IRP). Dr. Scott Jenkins, EPA OAQPS, then provided an overview of the current PM NAAQS, decisions made in the 2012 review regarding the primary and secondary standards, and the general scope of the current review. Mr. Jason Sacks, EPA NCEA, continued the presentation, focusing on policy-relevant questions of the current review, the purpose, scope, and general approach of the Integrated Science Assessment (ISA). Dr. Scott Jenkins completed the presentation, focusing on the purpose, general approach, and scope of the Risk and Exposure Assessments (REA), and the purpose and general approach of the Policy Assessment (PA).

## **Public Comments on the IRP**

Lindsey Jones, Texas Commission on Environmental Quality (TCEQ), made an oral statement<sup>5</sup> that focused on PM composition, causality, the shape of the PM dose-response curve, and exposure measurement error. Julie Goodman, Gradient, presented oral comments on behalf of the American Petroleum Institute, which focused on questions posed in the IRP indicating pre-drawn conclusions that do not leave room for new science to disprove previous conclusions; exposure measure error not carried through in epidemiological studies; and the study quality framework should not be limited to only epidemiological studies. Janice Nolen, American Lung Association, presented oral comments drawn from her written comments,<sup>6</sup> focusing on suggesting an accelerated review; supporting the previous CASAC recommendation on focusing on PM<sub>10-2.5</sub> as well as PM<sub>2.5</sub>; and urging the EPA to recognize that the 2012 annual standards are not adequate to protect public health.

## **Discussion of the IRP Charge Questions and Response to IRP Charge Questions**

The panel discussed the charge questions, found them clear, and did not have any proposed revisions.

The panel members found that Chapter 1 clearly and concisely articulates and provides the necessary introductory information and outline for the remainder of the document. They recommended including more information on the major outcomes of the kickoff workshop and to provide clear definitions of sensitive groups and at-risk populations upfront. The Legislative History section should include additional detail on the consideration of coarse particles (PM<sub>10-2.5</sub>).

For Chapter 2, panel members found it to generally provide appropriate descriptions and information and to clearly communicate the decisions and rationales for those decisions from the last PM NAAQS review. For the PM monitoring network, other PM metrics such as particle number concentration and PM-coarse should be considered. The EPA should seek scientific input early in the process from the CASAC Ambient Air Monitoring and Methods Subcommittee on PM monitoring technical issues. The areas of future research from the 2010 CASAC review on the 2nd Draft PA from the previous PM NAAQS review should be brought forward and summarize what the EPA has done to address them.

The panel members found that Chapter 3 did a good job describing the scope of the ISA and that it was sufficiently broad to capture the pertinent literature for review. Members had a few recommendations: include studies with N- and S- containing compounds, provide a better description of the cutoff for inclusion of studies with exposures less than 2 mg/m<sup>3</sup> and under what conditions, if any, would there be exceptions to the cutoff; clarifying why the evaluation of cancer risk will not include studies that use PM filter extracts or studies of individual PM components; provide a better discussion of the study quality evaluation; and provide more explanation about the process of determining causality.

For Chapter 4, the panel members recommended specifying the criteria that will be used to determine whether the HREA would be developed. The members also recommended expansion of the geographic scope of the HREA to the entire continental United States and that the EPA should consider using modeled PM rather than relying only on monitored PM for the HREA.

The panel members found that Chapter 5 was lacking in information on welfare effects other than visibility. There was some discussion about the importance of visibility as well as exploring other indicators (such as PM mass) other than light extinction.

For Chapter 6, panel members urged the agency that if REAs were performed, that the results would inform the PA. They also recommended for the agency to allow enough time in the review process for the CASAC to review 2 drafts of the PA.

One member suggested that perhaps the issue of natural versus anthropogenic background could be brought up in Chapter 3 on policy-relevant background. Other members agreed that it was not covered in the IRP and that it should be covered in Chapter 3.

### **Public Clarifying Comments**

Julie Goodman, Gradient, made a clarifying comment on behalf of the American Petroleum Institute, indicating that study quality criteria should not be used as a checklist, but should be used in interpreting results. There needs to be upfront criteria as well for selecting studies.

## Summary and Action Items

Dr. Diez Roux discussed the action items (consensus responses from the lead authors and revised individual comments from the panel members) as well as the remaining schedule for drafting the report.

The meeting was adjourned by Mr. Yeow at 5:05 p.m.

Respectfully Submitted:

Certified as Accurate:

*/Signed/*

*/Signed/*

---

Mr. Aaron Yeow  
Designated Federal Officer  
EPA SAB Staff Office

---

Dr. Ana Diez Roux  
Chair  
CASAC PM Panel

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 [May 23, 2016 CASAC PM Panel Meeting page](#):

---

<sup>1</sup> CASAC PM Panel Roster

<sup>2</sup> Federal Register Notice Announcing the Meeting

<sup>3</sup> Agenda

<sup>4</sup> EPA Presentation - Review of the National Ambient Air Quality Standards for Particulate Matter: Background, Anticipated Schedule, and Draft Integrated Review Plan

<sup>5</sup> Oral Statement from Lindsey Jones, Texas Commission on Environmental Quality

<sup>6</sup> Comments from Janice Nolen, American Lung Association

**ATTACHMENT A – Other Attendees  
CASAC PM Panel Public Meeting**

<b>Name</b>	<b>Affiliation</b>
Ailor, David	National Oilseed Processors Association
Baker, Laura	
Baxter, Lisa	
Beardslee, Renee	USEPA
Blase, Kurt	BlaseGroup LLC
Bolen, Brittany	Unites States Senate Environment and Public Works Committee
Brown, James	USEPA
Brown, Marie	South Carolina Department of Health and Environmental Control
Buckley, Barbara	USEPA
Chan, Elizabeth	USEPA
Dang, Phi	
Deitrich, Casey	ASC Services, LLC
DiBiase, Scott	Pinal County Air Quality
Dutton, Steve	USEPA
Elman, Barry	USEPA
Fritz, Patricia	New York State Department of Health
Goodman, Julie	Gradient
Graham, Stephen	
Guillen, Alex	
Hemming, Brooke	USEPA
Hines, Erin	USEPA
Igoe, Sheila	
Jansen, John	Southern Company
Jarabek, Annie	USEPA
Jones, Lindsey	Texas Commission on Environmental Quality
Jones, Samantha	USEPA
Kalisz, Cathe	American Petroleum Institute
Kirrane, Ellen	USEPA
Kotchmar, Dennis	USEPA
Kuhn, Andrew	Missouri Accontability Project
Langstaff, John	USEPA
Langworthy, Lucinda	Hunton & Williams, LLP
Lassiter, Meredith	USEPA
Lathem, Terry	Phillips 66
Levine, Jesse	Rubber Manufacturers Association
Loftis, Randy	Texas Climate News
Long, Michael	Cliffs Natural Resources
Long, Tom	USEPA
Luben, Tom	USEPA

<b>Name</b>	<b>Affiliation</b>
Lunsman, Tamara	Gradient
Mannato, Alfose	ExxonMobil
Martin, Mary	
McClellan, Roger	
McDow, Steve	USEPA
Miller, Greg	USEPA
Milloy, Steve	
Morack, Mindy	SAIC
Morales, Nick	Earthjustice
Nolen, Janice	American Lung Association
Ollison, Will	American Petroleum Institute
Parker, Stuart	IWP News
Patel, Molini	USEPA
Pinto, Joseph	USEPA
Popovech, Marusia	ExxonMobil Biomedical Sciences, Inc.
Reilly, Sean	Environment & Energy Publishing
Richmond-Bryant, Jennifer	USEPA
Sandiford, Vicki	USEPA
Sax, Sonja	Ramboll
Schmitt, Edwin	The Chinese University of Hong Kong
Schwartz, Chad	
Sigelko, Jenny	
Smith, Ross	PotashCorp
Stallworth, Holly	USEPA
Sturtz, Tim	Ramboll
Walsh, Debra	USEPA
Watzman, Bruce	National Mining Association
Wert, Mark	Massachusetts Department of Environmental Protection
Woods, Clint	Association of Air Pollution Control Agencies