

**Summary Minutes of the  
U.S. Environmental Protection Agency (EPA)  
Clean Air Scientific Advisory Committee (CASAC)  
Lead Review Panel  
Public Teleconference  
May 5, 2011**

Date and Time: Tuesday, May 5, 2011, 1:00 PM – 5:00 PM ET

Location: Teleconference Only

Purpose: The purpose of the teleconference was to provide consultative advice on EPA's Draft Integrated Review Plan for the National Ambient Air Quality Standards for Lead (Draft IRP).

Participants: CASAC Lead Panel (for full roster, see Attachment A)

Dr. H. Christopher Frey, Chair

Mr. George Allen

Dr. Herbert Allen

Dr. Richard Canfield

Dr. Deborah Cory-Slechta

Dr. Cliff Davidson

Dr. Philip Goodrum

Dr. Chris Johnson

Dr. Susan Korrick

Dr. Michael Kosnett

Dr. Roman Lanno

Mr. Richard Poirot

Dr. Joel Pounds

Dr. William Stubblefield

Dr. Ian von Lindern

Dr. Gail Wasserman

Dr. Michael Weitzman

Mr. Aaron Yeow, Designated Federal Officer (DFO)

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

Dr. Ellen Kirrane, EPA NCEA

Dr. Deirdre Murphy, EPA Office of Air Quality and Planning Standards

Other Attendees (See Attachment B)

**Thursday, May 5, 2011**

### **Opening Remarks**

Mr. Aaron Yeow, the DFO for the CASAC Lead Review Panel, opened the meeting. He noted that as required under the Federal Advisory Committee Act (FACA), the Panel's deliberations are held in public with advanced notice given in the Federal Register<sup>1</sup>, and the meeting minutes will be made publicly available after the meeting. He noted that the Panel received one request from the public to present oral comments, and received one set of written comments from the public. He also noted that the Panel members are all in compliance with federal ethics regulations and conflict-of-interest laws that pertain to them. He then turned the meeting over to Dr. Chris Frey, Chair of the CASAC Lead Review Panel.

Dr. Frey welcomed everyone, introduced the Panel, described what a consultation was, and described the review schedule. He indicated that the purpose of the meeting was to provide consultative advice on EPA's Draft Integrated Review Plan for the National Ambient Air Quality Standards for Lead (Draft IRP)<sup>2</sup>. He reviewed the Agenda for the meeting<sup>3</sup>, and introduced Dr. John Vandenberg, from EPA's National Center for Environmental Assessment (NCEA) for his presentation.

### **EPA Presentation**

Dr. John Vandenberg, EPA NCEA, made a presentation<sup>4</sup> to the Panel. He introduced the Lead National Ambient Air Quality Standards (NAAQS) team, consisting of staff from EPA's NCEA and OAQPS and provided an overview of the NAAQS review process and the schedule for the current Lead NAAQS review. He then turned it over to Dr. Deirdre Murphy for the remainder of the presentation.

Dr. Deirdre Murphy, OAQPS, presented the Panel with two overarching questions for the Lead NAAQS review: in light of newly available information, is the current primary standard requisite to protect public health with an adequate margin of safety and in light of newly available information, is the current secondary standard protective of public welfare from any known or anticipated adverse effects? She provided an overview of the science policy workshop held in May 2010 and gave an outline of the Draft IRP document.

### **Public Comment**

Mr. Richard Watson, Richard Watson & Associates, Inc., registered to provide oral comments, but was not present on the call.

### **Chapter 3 - Key Policy-Relevant Issues**

The Panel members generally believed that overall it was a good start. Most of the policy-relevant questions were identified. One member stated that EPA need to consider the effects of lead on reactive oxygen, whether it is a real effect, or just a measure of exposure. The member also stated that EPA should consider the Agency's Metals Framework document and to include

more information about the chemistry of lead, bioavailability, and bioaccumulation. Another member indicated that one missing policy-relevant issue is cumulative risk, that lead may enhance other risk factors.

#### **Chapter 4 - Science Assessment**

The Panel was generally please with the chapter and believed that the plan was strong and complete. Several members commented that they would have like to see what the criteria for selection of studies were. One member indicated that examining critical loads was a promising way to look at ecosystems. Several members commented that other human health outcomes besides neurocognitive measures should be expanded upon in the document, particularly emerging outcomes such as behavioral outcomes. One member commented that focusing too much on early development may cause the missing out of other important time frames such as adolescence.

#### **Chapter 5 - Quantitative Risk and Exposure Assessment**

One member commented that even though air is the indicator, the primary exposure route for lead is not inhalation. Several Panel members mentioned consideration of an incremental risk assessment approach. One member indicated that although chemistry matters, bioavailability matters as well. He applauded EPA for wanted to use existing approaches, but noted that some of those approaches are quite outdated. He noted that the Agency's Metals Framework document should guide the risk assessment.

#### **Chapter 6 - Ambient Air Monitoring**

Several members criticized the TSP high-volume sampler. It was designed in the 1940s and if introduced as a new sampler today, it would not pass as a Federal Reference Method (FRM). The members encouraged EPA to consider what particle sizes they are after and develop or evaluate other sampling methods to capture those size cuts.

Dr. Frey discussed next steps and action items.

With the business concluded, the Designated Federal Officer adjourned the meeting at 4:00 PM ET.

Respectfully Submitted:

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Mr. Aaron Yeow  
Designated Federal Officer  
EPA SAB Staff Office

Certified as Accurate:

*/signed/*

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Dr. H. Christopher Frey  
Chair  
CASAC Lead Review 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 5, 2011 CASAC Lead Review Panel Meeting page](#):

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<sup>1</sup> Federal Register Notice Announcing the Meeting

<sup>2</sup> Integrated Review Plan for the National Ambient Air Quality Standards for Lead - External Review Draft (March 2011)

<sup>3</sup> Agenda for May 5, 2011 Public Meeting

<sup>4</sup> Review of the National Ambient Air Quality Standards for Lead - Draft Integrated Review Plan

## ATTACHMENT A - ROSTER

### U.S. Environmental Protection Agency Clean Air Scientific Advisory Committee CASAC Lead Review Panel (2010-2013)

#### CHAIR

**Dr. H. Christopher Frey**, Professor, Department of Civil, Construction and Environmental Engineering, College of Engineering, North Carolina State University, Raleigh, NC

#### MEMBERS

**Mr. George A. Allen**, Senior Scientist, Northeast States for Coordinated Air Use Management (NESCAUM), Boston, MA

**Dr. Herbert Allen**, Professor Emeritus, Department of Civil and Environmental Engineering, University of Delaware, Newark, DE

**Dr. Richard Canfield**, Senior Research Associate, Division of Nutritional Sciences, Cornell University, Ithaca, NY

**Dr. Deborah Cory-Slechta**, Professor, Department of Environmental Medicine, School of Medicine and Dentistry, University of Rochester, Rochester, NY

**Dr. Cliff Davidson**, Professor, Civil and Environmental Engineering, Syracuse University, Syracuse, NY

**Dr. Philip E. Goodrum**, Senior Project Manager, Environmental Resources Management (ERM), Dewitt, NY

**Dr. Sean Hays\***, President, Summit Toxicology, Allenspark, CO

**Dr. Philip Hopke**, Bayard D. Clarkson Distinguished Professor, Department of Chemical and Biomolecular Engineering, Clarkson University, Potsdam, NY

**Dr. Chris Johnson**, Professor, Department of Civil and Environmental Engineering, Syracuse University, Syracuse, NY

**Dr. Susan Korrick**, Assistant Professor of Medicine, Department of Medicine, Brigham and Women's Hospital, Channing Laboratory, Harvard Medical School, Boston, MA

**Dr. Michael Kosnett**, Associate Clinical Professor, Division of Clinical Pharmacology and Toxicology, Department of Medicine, University of Colorado Health Sciences Center, Denver, CO

**Dr. Roman Lanno**, Associate Professor and Associate Chair, Department of Evolution, Ecology, and Organismal Biology, Ohio State University, Columbus, OH

**Mr. Richard L. Poirot**, Environmental Analyst, Air Pollution Control Division, Department of Environmental Conservation, Vermont Agency of Natural Resources, Waterbury, VT

**Dr. Joel Pounds**, Scientist, Cell Biology & Biochemistry, Biological Sciences Division, Battelle - Pacific Northwest National Laboratory, Richland, WA

**Dr. Michael Rabinowitz\***, Geochemist, Clinical Instructor in Neurology, Harvard University, Newport, RI

**Dr. William Stubblefield**, Senior Research Professor, Department of Molecular and Environmental Toxicology, Oregon State University, Corvallis, OR

**Dr. Ian von Lindern**, President, TerraGraphics Environmental Engineering, Inc., Moscow, ID

**Dr. Gail Wasserman**, Professor of Clinical Psychology in Child Psychiatry, Division of Child and Adolescent Psychiatry, College of Physicians and Surgeons, Columbia University, New York, NY

**Dr. Michael Weitzman**, Professor, Pediatrics; Psychiatry, New York University School of Medicine, New York, NY

\*Did not participate in this review.

#### **SCIENCE ADVISORY BOARD STAFF**

**Mr. Aaron Yeow**, Designated Federal Officer, U.S. Environmental Protection Agency, Science Advisory Board (1400R), 1200 Pennsylvania Avenue, NW, Washington, DC, Phone: 202-564-2050, Fax: 202-565-2098, (yeow.aaron@epa.gov)

**ATTACHMENT B – Other Attendees  
CASAC Lead Panel Public Teleconference**

**May 5, 2011**

<b>Name</b>	<b>Affiliation</b>
Bertrand, Charlotte	EPA
Bowers, Terri	Gradient
Bryant, Christopher	Bergeson & Campbell, P.C.
Flynn, Thomas J. III	SC Department of Health and Environmental Control
Gouze, Steve	CalEPA Air Resources Board
Kurtz, Katharine	US Navy
Ross, Mary	EPA
Volpe, Rosalind	International Lead Zinc Research Org
Wilson, Linda	NYS Office of the Attorney General