

**U.S. Environmental Protection Agency
EPA Science Advisory Board (SAB) Staff Office
Clean Air Scientific Advisory Committee (CASAC)
CASAC Lead Review Panel**

**Summary Meeting Minutes of the CASAC's Public Advisory Teleconference
Tuesday, August 15, 2006 – 12:00 to 4:00 p.m. Eastern Time**

**EPA Science Advisory Board (SAB) Staff Office
1025 F. Street, N.W., Washington, DC 20004**

**Advisory Meeting to Review the Updated Executive Summary and Chapter 7
(Integrative Synthesis) of EPA's 2nd External Review Draft Air Quality
Criteria Document (AQCD) for Lead**

Panel Members: See CASAC Lead Review Panel Roster – Appendix A

Agenda: See Meeting Agenda – Appendix B

Purpose: The purpose of this public meeting was for the CASAC Lead Review Panel to review the updated Executive Summary and Chapter 7 (Integrative Synthesis) of EPA's *Air Quality Criteria for Lead (Second External Review Draft), Volumes I and II (2nd Draft Lead AQCD, May 2006)*.

Attendees: Chair: Dr. Rogene Henderson

CASAC Members: Dr. Ellis Cowling
Dr. James Crapo
Dr. Frederick Miller
Mr. Richard Poirot
Dr. Frank Speizer
Dr. Barbara Zielinska

Panel Members: Dr. Josh Cohen
Dr. Deborah Cory-Slechta
Dr. Bruce Fowler
Dr. Andrew Friedland
Dr. Robert Goyer
Mr. Sean Hays
Dr. Bruce Lanphear
Dr. Paul Mushak
Dr. Michael Newman
Dr. Michael Rabinowitz
Dr. Joel Schwartz
Dr. Ian Von Lindern

EPA SAB Staff: Mr. Fred Butterfield, CASAC Designated Federal Officer (DFO)

Other EPA Staff: Lester Grant, ORD, NCEA-RTP
Jee Young Kim, ORD, NCEA-RTP
Dennis Kotchmar, ORD, NCEA-RTP
Tim Lewis, ORD, NCEA-RTP
David Orlin, OGC, SWERLO
Dennis Kotchmar, ORD, NCEA-RTP
Tim Lewis, ORD, NCEA-RTP
David Svendsgaard, ORD, NCEA-RTP
Lori White, ORD, NCEA-RTP

Meeting Summary

The discussion followed the issues and general timing as presented in the meeting agenda (Appendix B).

TUESDAY, AUGUST 15, 2006

Convene Meeting, Call Attendance, Introduction and Administration

Mr. Fred Butterfield, Designated Federal Officer (DFO) for the CASAC, opened the meeting and the teleconference line at 12:00 p.m., called attendance, and welcomed all attendees. He noted that CASAC is a Federal advisory committee chartered under the Federal Advisory Committee Act (FACA) to provide advice and recommendations to the EPA Administrator. Consistent with FACA regulations, its deliberations are held as public meetings and teleconferences for which advance notice is given in the *Federal Register*. The DFO is present at all such meetings to assure compliance with FACA requirements. Meeting minutes were taken (by DFOs from the SAB Staff Office) for this teleconference. The minutes will be certified by the CASAC (and Lead Review Panel) Chair and made available on the SAB Web site (<http://www.epa.gov/sab>). All Panelists have earlier submitted documentation with respect to possible financial conflicts-of-interest, which was reviewed by a SAB staff member prior to the meeting and found to be satisfactory.

Purpose of Meeting

Dr. Rogene Henderson, CASAC and Lead Review Panel Chair, briefly stated the purpose of the meeting, which was to review the updated Executive Summary and Chapter 7 (Integrative Synthesis) of EPA's 2nd Draft Lead AQCD.

Public Comment Period

Mr. Butterfield facilitated the formal public comment period. (A summary listing of the public speakers is found in Appendix C.)

- Dr. Craig Boreiko, International Lead Zinc Research Organization (ILZRO) – Speaking on behalf of ILZRO, Dr. Boreiko noted as a general comment that the paper recently published in *Environmental Health Perspectives* (Schober *et al.*, 2006) and distributed by NCEA-RTP is an interesting analysis, but requires careful review and consideration. Dr. Boreiko's major comments are as follows: (1) the NHANES (National Health and Nutrition Examination Survey) III data also provide enough information to indicate that confounding is occurring in this data set, but not enough information to correct for it accurately; (2) in considering the elevated risk for cardiovascular disease, the observed effect size is disproportionate for the hypothesized impact upon blood pressure; (3) important confounding factors such as body mass index (BMI) were not included in the analysis; (4) the recent International Agency for research on Cancer (IARC) IARC Work Group on lead compound classification looked at previously published analyses of NHANES II mortality data, and essentially set the papers off to one side as contributing little to establishing a relationship between lead exposure and cancer, and the multiple concerns expressed suggest the need for great caution in reliance on the new EHP paper; (5) many of ILZRO's comments pertaining to the previous versions of Chapter 7 remain unaddressed. (A hard-copy of Dr. Boreiko's comments is located in FACA file for this meeting.)

There was opportunity for questions for Dr. Boreiko from the members of the Lead Panel following his presentation.

Summary of CASAC Lead Review Panel Discussion and Deliberations re: the Executive Summary and Integrative Synthesis of EPA's 2nd Draft Lead AQCD

The CASAC Lead Review Panel generally thought that Agency staff had significantly improved both the integrative synthesis chapter and the Executive Summary of the 2nd Draft Lead AQCD, in response to the Panel's previous comments and recommendations. In particular, the members of the Panel were pleased to note that the science-related discussion in the integrative synthesis chapter focused on both health and welfare (or environmental) effects, and that, in turn, this chapter had been moved in the document to follow the chapter on the environmental effects of lead.

The Lead Panel also agreed that the recently-published research paper by Schober *et al.* (EHP, 2006) on lead-related mortality that staff from EPA's National Center for Environmental Assessment in Research Triangle Park, NC (NCEA-RTP) provided to the Panel was important enough to be incorporated into both the Executive Summary and the integrative synthesis chapter, as well as in Chapter 6 (Epidemiologic Studies of Human Health Effects Associated with Lead Exposure), of the Final Lead AQCD. However, the members of the Panel noted that this should include the appropriate caveats that were discussed on both the conference call and in Panel members' individual written comments.

Additionally, Panel members also felt that multimedia exposure pathways, *i.e.*, the contribution of large lead reservoirs in other media such as water, soil, dust, plants and food, are very important for the determination of projected human subject lead levels and, by extension, to the establishment of Lead NAAQS; therefore, these should be discussed in both the integrative synthesis chapter and the Executive Summary. Finally, several Panel members recommended

that certain material from the chapter on the environmental effects of lead (*i.e.*, relating to the methodologies used in terrestrial ecosystem research, and EPA's standard lead environmental cycling schematic) was of sufficient importance as to merit inclusion in the Executive Summary of the Lead AQCD.

Members of the CASAC Lead Review Panel are submitting initial and revised individual review comments on the Integrative Synthesis chapter and the Executive Summary of the 2nd Draft Lead AQCD and hope that these will be addressed in the Final Lead AQCD. Finally, Lead Panel members look forward to reviewing the 1st Draft Lead Staff Paper from the Agency's Office of Air Quality Planning and Standards (OAQPS) in early 2007.

Summary, Wrap-up, Next Steps and Closing Remarks

The Chair thanked all members of the Lead Panel for their participation in this teleconference, meeting. She asked that all Panel members provide their individual inputs for the CASAC's brief draft/letter report to the EPA Administrator from the Lead Panel's review of the integrative synthesis chapter and the Executive Summary of the 2nd Draft Lead AQCD both to her and to Fred Butterfield, CASAC DFO by no later than Monday, August 21. In addition, the Chair requested that Panel members send her and the DFO their initial or revised individual review comments on the integrative synthesis or the Executive Summary, which will be appended to the CASAC's final letter/report for this meeting, by the same date.

The DFO adjourned the meeting at approximately 2:15 p.m.

Respectfully Submitted:

Certified as True:

/s/

/s/

Fred A. Butterfield, III

Rogene Henderson, Ph.D.

Fred A. Butterfield, III
CASAC DFO

Rogene Henderson, Ph.D.
CASAC Chair

Appendix A – Roster of the CASAC Lead Review Panel

**U.S. Environmental Protection Agency
Science Advisory Board (SAB) Staff Office
Clean Air Scientific Advisory Committee (CASAC)
CASAC Lead Review Panel**

CHAIR

Dr. Rogene Henderson*, Scientist Emeritus, Lovelace Respiratory Research Institute, Albuquerque, NM

MEMBERS

Dr. Joshua Cohen, Faculty, Center for the Evaluation of Value and Risk, Institute for Clinical Research and Health Policy Studies, Tufts New England Medical Center, Boston, MA

Dr. Deborah Cory-Slechta, Director, University of Medicine and Dentistry of New Jersey and Rutgers State University, Piscataway, NJ

Dr. Ellis Cowling*, University Distinguished Professor-at-Large, North Carolina State University, Colleges of Natural Resources and Agriculture and Life Sciences, North Carolina State University, Raleigh, NC

Dr. James D. Crapo [M.D.]*, Professor, Department of Medicine, National Jewish Medical and Research Center, Denver, CO

Dr. Bruce Fowler, Assistant Director for Science, Division of Toxicology and Environmental Medicine, Office of the Director, Agency for Toxic Substances and Disease Registry, U.S. Centers for Disease Control and Prevention (ATSDR/CDC), Chamblee, GA

Dr. Andrew Friedland, Professor and Chair, Environmental Studies Program, Dartmouth College, Hanover, NH

Dr. Robert Goyer [M.D.], Emeritus Professor of Pathology, Faculty of Medicine, University of Western Ontario (Canada), Chapel Hill, NC

Mr. Sean Hays, President, Summit Toxicology, Allenspark, CO

Dr. Bruce Lanphear [M.D.], Sloan Professor of Children's Environmental Health, and the Director of the Cincinnati Children's Environmental Health Center at Cincinnati Children's Hospital Medical Center and the University of Cincinnati, Cincinnati, OH

Dr. Samuel Luoma, Senior Research Hydrologist, U.S. Geological Survey (USGS), Menlo Park, CA

Dr. Frederick J. Miller*, Consultant, Cary, NC

Dr. Paul Mushak, Principal, PB Associates, and Visiting Professor, Albert Einstein College of Medicine (New York, NY), Durham, NC

Dr. Michael Newman, Professor of Marine Science, School of Marine Sciences, Virginia Institute of Marine Science, College of William & Mary, Gloucester Point, VA

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

Dr. Michael Rabinowitz, Geochemist, Marine Biological Laboratory, Woods Hole, MA

Dr. Joel Schwartz, Professor, Environmental Health, Harvard University School of Public Health, Boston, MA

Dr. Frank Speizer [M.D.]*, Edward Kass Professor of Medicine, Channing Laboratory, Harvard Medical School, Boston, MA

Dr. Ian von Lindern, Senior Scientist, TerraGraphics Environmental Engineering, Inc., Moscow, ID

Dr. Barbara Zielinska*, Research Professor, Division of Atmospheric Science, Desert Research Institute, Reno, NV

SCIENCE ADVISORY BOARD STAFF

Mr. Fred Butterfield, CASAC Designated Federal Officer, 1200 Pennsylvania Avenue, N.W., Washington, DC, 20460, Phone: 202-343-9994, Fax: 202-233-0643 (butterfield.fred@epa.gov)

* Members of the statutory Clean Air Scientific Advisory Committee (CASAC) appointed by the EPA Administrator

Appendix B – Meeting Agenda

**U.S. Environmental Protection Agency
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Meeting Agenda

12:00 p.m.	Convene Teleconference; Call Attendance; Introductions and Administration	Mr. Fred Butterfield, CASAC DFO
12:10 p.m.	Purpose of Meeting	Dr. Rogene Henderson, Chair
12:15 p.m.	Public Comment Period	Mr. Butterfield (Facilitator)
12:45 p.m.	Members’ Discussion and Deliberation	CASAC Lead Review Panel Members
	<u>Discussion Topic</u>	<u>Lead Discussant(s)</u>
	• Chapter 7 (Integrative Synthesis)	Dr. Fred Miller & Dr. Frank Speizer
	• Executive Summary	Dr. James Crapo
	• Other discussion items	—
3:50 p.m.	Summary and Next Steps	Dr. Henderson
4:00 p.m.	Adjourn Meeting	Mr. Butterfield

Appendix C – List of Public Speakers

List of Public Speakers

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#	Speaker’s Name	Organizational Affiliation(s)	Organization(s) Represented (i.e., comments offered on behalf of)
1	Dr. Craig Boreiko	International Lead Zinc Research Organization (ILZRO)	same