



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON D.C. 20460

OFFICE OF THE ADMINISTRATOR  
SCIENCE ADVISORY BOARD

January 29, 2014

EPA-SAB-14-003

The Honorable Gina McCarthy  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

Subject: Science Advisory Board (SAB) Consideration of EPA Planned Actions in the  
Spring 2013 Unified (Regulatory) Agenda and their Supporting Science

Dear Administrator McCarthy:

As part of its statutory duties, the Science Advisory Board (SAB) recently concluded a series of discussions about possible review of the science supporting major EPA planned actions. The EPA Office of Policy provided notice of release of the Spring 2013 Semiannual Regulatory Agenda on July 3, 2013. Since that time, the SAB held a public meeting on December 4-5, 2013 and public teleconference on January 21, 2014 to discuss whether to review the science supporting any of the planned regulatory actions in that agenda in order to provide advice and comment on the adequacy of the science, as authorized by section (c) of the Environmental Research, Development and Demonstration Authorization Act.

The SAB appreciates the information provided by the EPA Office of Policy and the EPA program offices describing the planned actions, associated scientific questions, and agency plans for scientific analyses and peer review. The SAB also appreciates information provided by the public regarding the planned actions. The written information provided and the results of fact-finding discussions with EPA Staff are available on the SAB website.

The SAB focused its attention on 11 major actions identified by the EPA Office of Policy as being planned but not yet proposed as of the date the Semiannual Regulatory Agenda was published in the *Federal Register* on July 3, 2013. After discussions held at the public meeting on December 4-5, 2013 and the public teleconference on January 21, 2014, the SAB decided that it will not undertake review of the science supporting any actions in the semi-annual regulatory

agenda at this time. However, the SAB wishes to communicate three important points related to the review of major planned actions included in the Spring 2013 Semiannual Regulatory Agenda.

First, in regard to the planned action entitled *Revision of 40 CFR Part 192 -- Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching Processing Facilities* (2060-AP43), the SAB wishes to evaluate the science supporting the proposed rule after it is proposed, when more information about the proposed rule and the science supporting it are made available. At that time the SAB will determine whether it wishes to offer advice and comment to the Administrator. The SAB made this decision because there was insufficient information provided by the agency to date about the scientific and technical basis for this planned action.

Second, in regard to the action entitled *Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generation Units* (2060-AQ91), the SAB defers to EPA's legal view, communicated to the SAB by staff from EPA's Office of Air and Radiation, that the portion of the rulemaking addressing coal-fired power plants focuses on carbon capture and that the regulatory mechanisms for addressing potential risks associated with carbon sequestration are not within the scope of the Clean Air Act. Carbon sequestration, however, is a complex process, particularly at the scale required under this rulemaking, which may have unintended multi-media consequences. The Board's strong view is that a regulatory framework for commercial-scale carbon sequestration that ensures the protection of human health and the environment is linked in important systematic ways to this rulemaking. Research and information from the EPA, Department of Energy, and other sources related to carbon sequestration merit scientific review by the National Research Council or the SAB. Indeed, the Board notes that Section 704 of the Energy Independence and Security Act of 2007 directly calls for the National Research Council to review such research conducted by the Department of Energy and that this review has not yet occurred. The SAB asks the EPA to explore options for conducting such a review in a timely manner. The Board also advises the agency to monitor technological progress on carbon capture as the regulation is implemented.

Third, and more generally, the SAB is seeking ways to improve the process for future review of the semi-annual regulatory agenda. The Board requests that the EPA describe in a more complete and consistent manner the scientific and technological bases for major planned actions and associated peer review. More complete and timely agency information when the Board begins considering the regulatory agenda will enable the SAB to make informed decisions in an expeditious manner about whether to provide advice and comment on science supporting planned agency actions. The SAB Staff Office will be meeting soon with EPA program offices to discuss improved processes to provide the SAB with the information needed for the Board's deliberations.

On behalf of the SAB, I thank you for the opportunity to support EPA through consideration of the science supporting actions in the agency's regulatory agenda.

Sincerely,

//s//

Dr. David T. Allen, Chair  
Science Advisory Board

Enclosure

(1) Roster of SAB Members

## **U.S. Environmental Protection Agency Science Advisory Board**

### **CHAIR**

**Dr. David T. Allen**, Gertz Regents Professor of Chemical Engineering and the Director of the Center for Energy and Environmental Resources, The University of Texas, Austin, TX

### **MEMBERS**

**Dr. George Alexeeff**, Director, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency, Oakland, CA

**Dr. Pedro Alvarez**, Department Chair and George R. Brown Professor of Engineering, Department of Civil & Environmental Engineering, Rice University, Houston, TX

**Dr. Joseph Arvai**, Svare Chair in Applied Decision Research, Department of Geography, University of Calgary, Calgary, Alberta, Canada

**Dr. Thomas Burbacher**, Professor, Department of Environmental and Occupational Health Sciences, School of Public Health, University of Washington, Seattle, WA

**Dr. Ingrid Burke**, Director and Wyoming Excellence Chair, Haub School and Ruckelshaus Institute of Environment and Natural Resources, University of Wyoming, Laramie, WY

**Dr. Edward T. Carney**, Departmental Senior Science Leader and Director of Predictive Toxicology Center, Toxicology & Environmental Research and Consulting, The Dow Chemical Company, Midland, MI

**Dr. Peter Chapman**, Principal and Senior Environmental Scientist, Golder Associates Ltd, Vancouver, BC, Canada

**Dr. Terry Daniel**, Professor of Psychology and Natural Resources, Department of Psychology, School of Natural Resources, University of Arizona, Tucson, AZ

**Dr. George Daston**, Victor Mills Society Research Fellow, Global Product Stewardship, The Procter & Gamble Company, Mason, OH

**Dr. Costel Denson**, Managing Member, Costech Technologies, LLC, Newark, DE

**Dr. Otto C. Doering III**, Professor, Department of Agricultural Economics, Purdue University, W. Lafayette, IN

**Dr. Michael Dourson**, President, Toxicology Excellence for Risk Assessment, Cincinnati, OH

**Dr. Joel Ducoste**, Professor, Department of Civil, Construction, and Environmental Engineering, College of Engineering, North Carolina State University, Raleigh, NC

**Dr. David A. Dzombak**, Walter J. Blenko, Sr. University Professor of Environmental Engineering, Department of Civil and Environmental Engineering, College of Engineering, Carnegie Mellon University, Pittsburgh, PA

**Dr. T. Taylor Eighmy**, Vice Chancellor for Research and Engagement, Office of Research, University of Tennessee, Knoxville, TN

**Dr. Elaine M. Faustman**, Professor and Director, Environmental and Occupational Health Sciences, University of Washington, Seattle, WA

**Dr. R. William Field**, Professor, Department of Occupational and Environmental Health, and Department of Epidemiology, College of Public Health, University of Iowa, Iowa City, IA

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

**Dr. John P. Giesy**, Professor and Canada Research Chair, Veterinary Biomedical Sciences and Toxicology Centre, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

**Dr. Steven Hamburg**, Chief Scientist, Environmental Defense Fund, Boston, MA

**Dr. Cynthia M. Harris**, Director and Professor, Institute of Public Health, Florida A&M University, Tallahassee, FL

**Dr. Robert J. Johnston**, Director of the George Perkins Marsh Institute and Professor, Economics, Clark University, Worcester, MA

**Dr. Kimberly L. Jones**, Professor and Chair, Department of Civil Engineering, Howard University, Washington, DC

**Dr. Catherine Karr**, Associate Professor - Pediatrics and Environmental and Occupational Health Sciences and Director - NW Pediatric Environmental Health Specialty Unit, University of Washington, Seattle, WA

**Dr. Madhu Khanna**, Professor, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, Urbana, IL

**Dr. Nancy K. Kim**, Senior Executive, Health Research, Inc., Albany, NY

**Dr. Francine Laden**, Mark and Catherine Winkler Associate Professor of Environmental Epidemiology, Harvard School of Public Health, and Channing Division of Network Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA

**Dr. Lois Lehman-McKeeman**, Distinguished Research Fellow, Discovery Toxicology, Bristol-Myers Squibb, Princeton, NJ

**Dr. Cecil Lue-Hing**, President, Cecil Lue-Hing & Assoc. Inc., Burr Ridge, IL

**Dr. Elizabeth Matsui**, Associate Professor, Pediatrics, School of Medicine, Johns Hopkins University, Baltimore, MD

**Dr. Kristina D. Mena**, Associate Professor, Epidemiology, Human Genetics, and Environmental Sciences, School of Public Health, University of Texas Health Science Center at Houston, El Paso, TX

**Dr. Surabi Menon**, Director of Research, ClimateWorks Foundation, San Francisco, CA

**Dr. James R. Mihelcic**, Professor, Civil and Environmental Engineering, University of South Florida, Tampa, FL

**Dr. Christine Moe**, Eugene J. Gangarosa Professor, Hubert Department of Global Health, Rollins School of Public Health, Emory University, Atlanta, GA

**Dr. H. Keith Moo-Young**, Chancellor, Office of Chancellor, Washington State University, Tri-Cities, Richland, WA

**Dr. Eileen Murphy**, Director of Research and Grants, Ernest Mario School of Pharmacy, Rutgers University, Piscataway, NJ

**Dr. James Opaluch**, Professor and Chair, Department of Environmental and Natural Resource Economics, College of the Environment and Life Sciences, University of Rhode Island, Kingston, RI

**Dr. Duncan Patten**, Director, Montana Water Center, and Research Professor, Hydroecology Research Program, Department of Land Resources and Environmental Sciences, Montana State University, Bozeman, MT

**Dr. Martin Philbert**, Dean and Professor, Environmental Health Sciences, School of Public Health, University of Michigan, Ann Arbor, MI

**Mr. Richard L. Poirot**, Air Quality Planning Chief, Air Quality and Climate Division, Vermont Department of Environmental Conservation, Montpelier, VT

**Dr. Stephen Polasky**, Fesler-Lampert Professor of Ecological/Environmental Economics, Department of Applied Economics, University of Minnesota, St. Paul, MN

**Dr. Amanda Rodewald**, Director of Conservation Science, Cornell Lab of Ornithology and Associate Professor, Department of Natural Resources, Department of Natural Resources, Cornell University, Ithaca, NY

**Dr. James Sanders**, Executive Director, Skidaway Institute of Oceanography, University of Georgia, Savannah, GA

**Dr. William Schlesinger**, President, Cary Institute of Ecosystem Studies, Millbrook, NY

**Dr. Gina Solomon**, Deputy Secretary for Science and Health, Office of the Secretary, California Environmental Protection Agency, Sacramento, CA

**Dr. Daniel O. Stram**, Professor, Department of Preventive Medicine, Division of Biostatistics, University of Southern California, Los Angeles, CA

**Dr. Peter S. Thorne**, Director, Environmental Health Sciences Research Center and Professor and Head, Department of Occupational and Environmental Health, College of Public Health, University of Iowa, Iowa City, IA

**Dr. Paige Tolbert**, Professor and Chair, Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA

**Dr. Jeanne VanBriesen**, Professor, Department of Civil and Environmental Engineering, Carnegie Mellon University, Pittsburgh, PA

**Dr. John Vena**, University of Georgia Foundation Professor in Public Health and Head, Department of Epidemiology and Biostatistics, Georgia Cancer Coalition Distinguished Scholar, College of Public Health, University of Georgia, Athens, GA

**Dr. Peter J. Wilcoxon**, Associate Professor, Economics and Public Administration, The Maxwell School, Syracuse University, Syracuse, NY

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

**Dr. Angela Nugent**, Designated Federal Officer, U.S. Environmental Protection Agency, Washington, DC,