



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON D.C. 20460

OFFICE OF THE ADMINISTRATOR  
SCIENCE ADVISORY BOARD

May 24, 2011

**MEMORANDUM**

**SUBJECT:** Addendum to the May 23, 2011 Memorandum: Formation of Science Advisory Board Mercury Review Panel

**FROM:** Angela Nugent, Ph.D. /Signed/  
Designated Federal Officer (DFO)  
EPA Science Advisory Board Staff Office (1400R)

**THRU:** Wanda Bright /Signed/  
  
SAB Ethics Officer  
EPA Science Advisory Board Staff Office (1400R)

**TO:** Vanessa Vu, Ph.D.  
Director  
EPA Science Advisory Board Staff Office (1400R)

On May 23, 2011, the Science Advisory Board (SAB) Staff Office Director signed a memorandum that announced to the public the members of the SAB's Mercury Review Panel. The memorandum provided a set of determinations that were necessary for forming the SAB Panel, and described all relevant information considered in forming the Panel, including a review of the confidential financial disclosure forms and evaluation of an appearance of a lack of impartiality. Subsequently, the SAB Staff Office has received additional information regarding membership of the Mercury Review Panel. Based on review of this additional information, the members of the EPA's Mercury Review Panel are as follows:

**CHAIR**

Dr. Stephen M. Roberts, University of Florida, Gainesville, FL

**MEMBERS**

Dr. David T. Allen, University of Texas, Austin, TX  
Dr. Thomas Burbacher, University of Washington, Seattle, WA  
Dr. James Burch, University of South Carolina, Columbia, SC  
Dr. Hillary Carpenter, Minnesota Department of Health, St. Paul, MN  
Dr. Celia Chen, Dartmouth College, Hanover, NH

Dr. Miriam L. Diamond, University of Toronto, Toronto, Ontario, CANADA  
Dr. Charles T. Driscoll, Jr., Syracuse University, Syracuse, NY  
Dr. Thomas Holsen, Clarkson University, Potsdam, NY  
Dr. James Hurley, Wisconsin State Laboratory of Hygiene, Madison, WI  
Dr. David Krabbenhoft, U.S. Geological Survey, Middleton, WI  
Dr. Leonard Levin, Electric Power Research Institute, Palo Alto, CA  
Dr. C. Jerry Lin, Lamar University, Beaumont, TX  
Dr. Jana Milford, University of Colorado, Boulder, CO  
Dr. M. Christopher Newland, Auburn University, Auburn, AL  
Dr. Nicholas Ralston, University of North Dakota, Grand Forks, ND  
Dr. Stephen L. Rathbun, University of Georgia, Athens, GA  
Dr. Eric P. Smith, Virginia Polytech Institute and State University, Blacksburg, VA  
Dr. Alan Stern, New Jersey Department of Environmental Protection/University of Medicine and  
Dentistry of New Jersey, Trenton, NJ  
Dr. Edward Swain, Minnesota Pollution Control Agency, Saint Paul, MN  
Dr. Edwin van Wijngaarden, University of Rochester, Rochester, NY  
Dr. Robert Wright, Harvard School of Public Health, Boston, MA

Concurred,

*/Signed/*

*May 24, 2011*

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Vanessa Vu, Ph.D.  
Staff Director  
EPA Science Advisory Board (1400F)

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Date



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WASHINGTON D.C. 20460

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May 23, 2011

**MEMORANDUM**

**SUBJECT:** Formation of Science Advisory Board (SAB) Mercury Review Panel

**FROM:** Angela Nugent, Ph.D. /S/  
Designated Federal Officer (DFO)  
EPA Science Advisory Board Staff Office (1400R)

**THRU:** Wanda Bright  
SAB Ethics Officer  
EPA Science Advisory Board Staff Office (1400R)

**TO:** Vanessa Vu, Ph.D.  
Director  
EPA Science Advisory Board Staff Office (1400R)

EPA's Office of Air and Radiation has requested peer review of the March 2011 draft risk assessment for mercury, entitled *Technical Support Document: National-Scale Mercury Risk Assessment Supporting the Appropriate and Necessary Finding for Coal and Oil-Fired Electric Generating Units*. This technical document was developed to support a proposed rule concerning regulation of hazardous air pollutants (HAPs) released from coal-burning electric generating units in the United States (U.S. EGUs) under Section 112(n)(1)(A) of the Clean Air Act (CAA).

This memorandum addresses the set of determinations that were necessary for forming the SAB Mercury Review Panel, including:

- (A) The type of review body that will be used to conduct the review, and the nature of the review;
- (B) The list of candidates to be considered for the panel;
- (C) Financial conflict of interest considerations, including identification of parties who are potentially interested in or may be affected by the topic to be reviewed;
- (D) How regulations concerning "appearance of a lack of impartiality," pursuant to 5 C.F.R. § 2635.502, apply to members of the Panel; and

(E) The selection of Panel members.

**DETERMINATIONS:**

(A) The type of review body that will be used to conduct the review, and the nature of this review.

An *ad hoc* panel, composed of subject matter experts, will be formed under the auspices of the Science Advisory Board to provide peer review EPA's *Technical Support Document: National-Scale Mercury Risk Assessment Supporting the Appropriate and Necessary Finding for Coal and Oil-Fired Electric Generating Units –Draft March 2011*.

(B) The list of candidates to be considered for the Panel.

The SAB Staff Office announced to the public through *Federal Register* notices published February 28, 2011 (76 FR 10896-10897) and March 30, 2011 (76 FR 17649-17650) that it was soliciting nominations of nationally and internationally recognized scientists with research experience and expertise in the following disciplines, particularly related to mercury: atmospheric fate, transport and modeling; aquatic fate, transport and modeling; bioaccumulation; human exposure; epidemiology; toxicology, including reproductive and neurotoxicology, biostatistics, and risk assessment.

The SAB Staff Office identified 40 experts to be considered for the Panel. These candidates were identified through the public nomination process or by SAB staff, have relevant expertise, and are willing to serve on the Panel. On April 14, 2011, the SAB Staff Office posted a notice on the SAB Web site inviting public comments on the List of Candidates for the Panel, including biographical sketches, by May 5, 2011. The SAB Staff Office received comments on the candidate list from the following members of the public:

- Angela M Grooms, Utility Water Act Group, Washington, DC;
- Mae Gustin, University of Nevada-Reno, Reno, Nevada;
- Scott Hall and Robin L. Garibay, Environ International Corporation, Brentwood, TN;
- Daniel Jacob, Harvard University, Cambridge, MA;
- Jim Rock, PPG Industries, New Martinsville, WV; and
- Lee B. Zeugnin, Hunton& Williams, Washington, DC on behalf of the Utility Air Regulatory Group.

(C) Financial conflict of interest considerations, including identification of parties who are potentially interested in or may be affected by the topic to be reviewed.

(a) Identification of parties who are potentially interested in or may be affected by the topic to be reviewed: The principal interested and affected parties for this topic are: (1) electrical utility companies; (2) those involved with the interests of private or public organizations that may be affected by regulations developed on the basis of EPA's draft technical support document, *Technical Support Document: National-Scale Mercury Risk Assessment Supporting*

*the Appropriate and Necessary Finding for Coal and Oil-Fired Electric Generating Units; and 3) federal, state, or local governments that may be affected by such regionations.*

(b) Conflict of interest considerations: For Financial Conflict of Interest (COI) issues, the basic 18 U.S.C. § 208 provision states that: “An employee is prohibited from participating *personally or substantially* in an official capacity in any *particular matter* in which he, to his knowledge, or any person whose interests are imputed to him under this statute has a *financial interest*, if the particular matter will have a direct and predictable effect on that interest [emphasis added].” For a conflict of interest to be present, all elements in the above provision must be present. If an element is missing the issue does not involve a formal conflict of interest; however, the general provisions in the appearance of impartiality guidelines must still apply and need to be considered.

(i) Does the general charge to the SAB Mercury Review Panel involve a particular matter? A “particular matter” refers to matters that “...will involve deliberation, decision, or action that is focused upon the interest of specific people, or a discrete and identifiable class of people.” It does not refer to “...consideration or adoption of broad policy options directed to the interests of a large and diverse group of people.” [5 C.F.R. § 2640.103 (a)(1)]. A particular matter of general applicability means a particular matter that is focused on the interests of a discrete and identifiable class of persons, but does not involve specific parties [5 C.F.R. § 2640.102(m)].

The activity of the Mercury Review Panel in reviewing EPA’s draft document, *Technical Support Document: National-Scale Mercury Risk Assessment Supporting the Appropriate and Necessary Finding for Coal and Oil-Fired Electric Generating Units*, will qualify as a *particular matter of general applicability* because the resulting advice will be part of a deliberation, and under certain circumstances the advice could involve the interests of a discrete and identifiable class of people but does not involve specific parties. That group of people constitutes those who may be affected by regulations, as identified above.

(ii) Will there be personal and substantial participation on the part of the Panel members? Participating personally means direct participation in this review. Participating substantially refers to involvement that is of significance to the matter under consideration. [5 C.F.R. § 2640.103(a)(2)]. For this review, the SAB Staff Office has determined that the *SAB Panel members will be participating personally in the matter*. Panel members will be providing the Agency with advice and recommendations on development of the EPA draft document, and such advice is expected to directly influence the Agency’s approach for setting a technology-based standard for reducing HAP emissions. *Therefore, participation in this review also will be substantial.*

(iii) Will there be a direct and predictable effect on a Panel member’s financial interest? A direct effect on a participant’s financial interest exists if “...a close causal link exists between any decision or action to be taken in the matter and any expected effect of the matter on the financial interest. ...A particular matter does not have a direct effect ...if the chain of causation is attenuated or is contingent upon the occurrence of events that are speculative or that are independent of, and unrelated to, the matter. A particular matter

that has an effect on a financial interest only as a consequence of its effects on the general economy is not considered to have a direct effect.” [5 C.F.R. § 2640.103(a)(i)] A predictable effect exists if, “...there is an actual, as opposed to speculative, possibility that the matter will affect the financial interest.” [5 C.F.R. § 2640.103(a)(ii)]

Prospective candidates for the Panel were evaluated against the requirements of 5 C.F.R. § 2640.101(a), using each candidate’s confidential financial disclosure form (EPA Form 3110-48), to determine whether the work of the Panel will have a direct and predictable effect on his or her financial interests.

(D) How regulations concerning “appearance of a lack of impartiality,” pursuant to 5 C.F.R. § 2635.502, apply to members of the Panel

The Code of Federal Regulations at 5 C.F.R. § 2635.502(a) states that: “Where an employee knows that a particular matter involving specific parties is likely to have a direct and predictable effect on the financial interest of a member of his household, or knows that a person with whom he has a covered relationship is or represents a party to such matter, and where the person determines that the circumstances would cause a reasonable person with knowledge of the relevant facts to question his impartiality in the matter, the employee should not participate in the matter unless he has informed the agency designee of the appearance problem and has received authorization from the agency designee.” Further, § 2635.502(a)(2) states that, “An employee who is concerned that circumstances other than those specifically described in this section would raise a question regarding his impartiality should use the process described in this section to determine whether he should or should not participate in a particular matter.”

Prospective candidates for the Panel were evaluated against the 5 C.F.R. 2635(a)(2) general requirements for considering an appearance of a lack of impartiality. Information used in this evaluation has come public comment, information independently gathered by the SAB Staff Office, and from information provided by candidates including, but not limited to, EPA 3110-48 confidential financial disclosure forms. Information from prospective candidates included responses to the following supplemental questions (included on the EPA 3110-48 confidential financial disclosure form):

1. Do you know of any reason that you might be unable to provide impartial advice on the matter to come before the panel/committee/subcommittee or any reason that your impartiality in the matter might be questioned?
2. Have you had any previous involvement with the review document(s) under consideration including authorship, collaboration with the authors, or previous peer review functions? If so, please identify and describe that involvement.
3. Have you served on previous advisory panels, committees or subcommittees that have addressed the topic under consideration? If so, please identify those activities.
4. Have you made any public statements (written or oral) on the issue that would indicate to an observer that you have taken a position on the issue under consideration? If so, please

identify those statements.

(E) The selection of Panel members

The SAB Staff Office Director makes the final decision about who serves on the Mercury Review Panel, based on all relevant information. This includes a review of the member's confidential financial disclosure form (EPA Form 3110-48) and an evaluation of an appearance of a lack of impartiality, and application of criteria to ensure a balanced panel.

As a result of a review of all relevant information including each candidate's confidential financial disclosure form (EPA Form 3110-48), information gathered by SAB Staff, and public comments, the SAB Staff Office has determined that there are no conflicts of interest or appearances of a lack of impartiality for the members of this Panel.

For the SAB Staff Office, a balanced committee or panel is characterized by inclusion of candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the general charge. Specific criteria to be used in evaluating an individual committee member include: (a) scientific and/or technical expertise, knowledge, and experience (primary factors); (b) availability and willingness to serve; (c) absence of financial conflicts of interest; (d) absence of an appearance of a lack of impartiality; (e) skills working in committees, subcommittees and advisory panels; and, for the committee as a whole, (f) diversity of scientific expertise, and viewpoints.

On the basis of the above-specified criteria, the members of the Mercury Review Panel are as follows:

CHAIR

Dr. Stephen M. Roberts, University of Florida, Gainesville, FL

MEMBERS

Dr. David T. Allen, University of Texas, Austin, TX

Dr. Thomas Burbacher, University of Washington, Seattle, WA

Dr. James Burch, University of South Carolina, Columbia, SC

Dr. Hillary Carpenter, Minnesota Department of Health, St. Paul, MN

Dr. Celia Chen, Dartmouth College, Hanover, NH

Dr. Miriam L. Diamond, University of Toronto, Toronto, Ontario, CANADA

Dr. Charles T. Driscoll, Jr., Syracuse University, Syracuse, NY

Dr. Thomas Holsen, Clarkson University, Potsdam, NY

Dr. James Hurley, Wisconsin State Laboratory of Hygiene, Madison, WI

Dr. David Krabbenhoft, U.S. Geological Survey, Middleton, WI

Dr. Leonard Levin, Electric Power Research Institute, Palo Alto, CA

Dr. C. Jerry Lin, Lamar University, Beaumont, TX

Dr. Jana Milford, University of Colorado, Boulder, CO

Dr. M. Christopher Newland, Auburn University, Auburn, AL

Dr. Nicholas Ralston, University of North Dakota, Grand Forks, ND

Dr. Stephen L. Rathbun, University of Georgia, Athens, GA

Mr. Robin Reash, American Electric Power, Columbus, OH

Dr. Eric P. Smith, Virginia Polytech Institute and State University, Blacksburg, VA

Dr. Alan Stern, New Jersey Department of Environmental Protection/University of Medicine and Dentistry of New Jersey, Trenton, NJ

Dr. Edward Swain, Minnesota Pollution Control Agency, Saint Paul, MN

Dr. Edwin van Wijngaarden, University of Rochester, Rochester, NY

Dr. Robert Wright, Harvard School of Public Health, Boston, MA

Concurred,

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*May 23, 2011*

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Vanessa Vu, Ph.D.  
Staff Director  
EPA Science Advisory Board (1400F)

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Date