



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF THE ADMINISTRATOR  
SCIENCE ADVISORY BOARD

April 30, 2008

**MEMORANDUM**

**SUBJECT:** Determination of Panel Membership for Advisory Council on Clean Air Compliance Analysis Augmented for Benefits of Reduced PM-Mortality using Expert Elicitation

**FROM:** Holly Stallworth, Ph.D.  
Designated Federal Officer  
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**THRU:** Daniel Fort  
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EPA Science Advisory Board Staff Office (1400F)

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

This memorandum documents the process and addresses the set of determinations used in augmenting the Advisory Council on Clean Air Compliance Analysis (Council) and its Health Effects Subcommittee to review an assessment of the benefits of reducing particulate matter, specifically PM<sub>2.5</sub>. Section A provides background information on the project. Section B addresses:

1. The general charge developed for the Panel;
2. The type of panel that will be used to conduct the review, the name of the Panel, and identification of the types of expertise needed to address the charge;
3. How individuals were placed on the "short list" of candidates for the Panel;
4. Identification of parties who are potentially interested in or may be affected by the topic to be reviewed;
5. Whether the charge involves a particular matter and how conflict of interest regulations apply to members of the panel; and
6. Selection of Panel membership.

## **A. Background**

EPA's Office of Air and Radiation has requested the Council's advice on using the results of a recently conducted expert elicitation in the regulatory context of a benefits assessment conducted as part of a regulatory impact analysis for a regulation promulgated in 2006. To better characterize uncertainty in the health benefits of particulate matter reductions, EPA's Office of Air and Radiation undertook an expert elicitation study in 2005-2006 to characterize the uncertainty in the concentration-response function for premature mortality related to particulate matter, specifically PM<sub>2.5</sub>. EPA applied the results of this study to develop probabilistic estimates of reductions in premature mortality as part of its regulatory impact analysis for the 2006 National Ambient Air Quality Standards for Particle Pollution. The Council, augmented with additional experts chosen through the process described in this memo, will review Chapter 5 and the Executive Summary of the regulatory impact analysis (found at [www.epa.gov/ttn/ecas/regdata/RIAs/Chapter%205\\_Benefits.pdf](http://www.epa.gov/ttn/ecas/regdata/RIAs/Chapter%205_Benefits.pdf)) on May 8, 2008.

## **B. Determinations**

### **1) The general charge to the Panel:**

In generally, the Council has been asked to comment on EPA's characterization of the concentration-response function as expressed in the PM-Mortality Expert Elicitation report. Specific technical issues include causality, thresholds, the shape of the function, and methods for aggregating the results from various experts. The Council is also asked to comment on whether EPA successfully communicated the results of its benefits assessment based on the PM-Mortality Expert Elicitation. Charge questions are posted at [http://yosemite.epa.gov/sab/sabproduct.nsf/FCD650449AB6241D85257439005704BA/\\$File/Charge+Questions-PM+EE+Review+4-15-08+for+5-9-08+Meeting.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/FCD650449AB6241D85257439005704BA/$File/Charge+Questions-PM+EE+Review+4-15-08+for+5-9-08+Meeting.pdf).

### **2) Type of panel that will be used to conduct the review, the types of expertise needed to address the charge, and the name of the panel:**

This advisory activity will be conducted by the Council augmented with additional experts. The SAB Staff Office solicited nominations from the public through a *Federal Register* notice on June 28, 2007 seeking nationally recognized scientists with expertise and experience related to uncertainty analysis or expert elicitation in the following fields: statistics, mathematics, biostatistics, cognitive psychology, decision analysis, environmental economics, human health sciences, ecological science, epidemiology, policy analysis, risk assessment, and risk communication. This *Federal Register* notice solicited nominations for four new advisory activities related to implementation of methods related to uncertainty analysis and expert elicitation. The request from EPA's Office of Air and Radiation to review its benefits assessment for the PM<sub>2.5</sub> standard was one of the four new advisory activities described in the *Federal Register* notice. Thus the additional experts needed to augment the Council were chosen from the nominations received in response to this solicitation. The name of the augmented Council is the Advisory Council on Clean Air Compliance Analysis Augmented for Benefits of

Reduced PM-Mortality using Expert Elicitation (hereinafter, augmented Council).

**3) How individuals were placed on the “short list”:**

The SAB Staff Office identified 36 experts to be considered for the four uncertainty panels described in the *Federal Register* notice of June 28, 2007. On March 26, 2008, the SAB Staff Office posted a notice on the SAB website inviting public comments on the “short list” of candidates for the four panels. In particular, the notice stated that the Staff Office would welcome any information pertinent to the candidate’s potential service on the Panel and/or expert workgroups of the panel, and asked that comments be submitted no later than April 16, 2008. The SAB Staff Office received 1 comment on the “short list” of candidates for the Council advisory activities. Ms. Lisa Conner commented on behalf of EPA’s Office of Air Quality Planning and Standards in the Office of Air and Radiation.

**4) Identification of parties who are potentially interested in or may be affected by the topic to be reviewed:**

Potentially interested parties may include: 1) federal, state, and local government agencies; 2) non-governmental organizations that focus on environmental policy development; 3) A broad range of academic and industry researchers; or academic, industry, and government sponsored research institutes addressing environmental indicators and national environmental trends.

**5) Whether the charge involves a particular matter and how conflict of interest regulations apply to members of the panel:**

18 U.S.C 208 provision states that:

“An employee is prohibited from participating personally and 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.”

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 a lack of impartiality guidelines” may still apply and need to be considered.

**Personal and Substantial Participation:**

Participating personally means participating directly. Participating substantially refers to involvement that is of significance to the matter [5C.F.R. 2640.103(a)(2)]. For this advisory activity, panel members will be participating personally in the matter through attendance at meetings, teleconferences and other means.

### Direct and Predictable Effect:

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 a speculative, possibility that the matter will affect the financial interest." [5 C.F.R. 2640.103(a)(ii)].

### Particular Matter:

A "particular matter" refers to matters that "...will involve deliberations, decision, or action that is focused upon the interests 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)].

The augmented Council's activity in addressing EPA's benefits assessment for its PM<sub>2.5</sub> standard particular matter standard (as described in Section A) does not include matters that involve deliberation, decision or action that is focused upon the interest of specific people, or a discrete and identifiable class of people. The augmented Council's activity does not include matters which involve formal parties or extend to legislation or policy-making that is narrowly focused upon the interests of a discrete and identifiable class of persons. The augmented Council is concerned with the technical issues associated with characterizing the concentration response function between particulate matter and mortality. As such, this is something that is directed to the consideration of broad policy options directed to the interests of a large and diverse group of people and is not a particular matter. Thus, the criterion for a particular matter concerning specific parties is not met and no financial conflict of interest as defined in 18 USC 208 exists.

### Appearance of a Lack of Impartiality Considerations:

The Code of Federal Regulations [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 who 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 received authorization from the agency designee."

Further, 5 C.F.R. 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.”

Candidates 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 from information provided by potential advisory panel members (including, but not limited to, EPA 3110-48 confidential financial disclosure forms) and public comment as well as their responses to the following questions:

1. Have you had any previous involvement with EPA’s expert elicitation on particulate matter and mortality, including authorship, participation as an expert, collaboration with the authors or peer review functions? If so please identify that involvement.
2. Have you had any previous involvement with the benefits assessment of reduced PM-mortality based on expert elicitation, including authorship, collaboration with the authors or peer review functions? If so please identify that involvement.
3. Have you served on previous advisory panels or committees that have addressed PM-mortality based on expert elicitation? If so please identify those activities.
4. Have you made any public statements (written or oral) on the conduct of the EE study? Have you made any public comments on EPA’s benefits assessment of reduced PM-mortality based on expert elicitation? If so please identify those statements.
5. Have you made any public statements that would indicate to an observer that you have taken a position on PM-mortality based on expert elicitation? If so please identify those statements.
6. Do you know of any reason that you might be unable to provide impartial advice on EPA’s benefits assessment of reduced PM-mortality based on expert elicitation or any reason that your impartiality in the matter might be questioned?

Responses to these questions from candidates were used by the SAB Staff Office to make determinations on the individuals who would serve on the augmented Council.

#### **6) Selection of Membership:**

The SAB Staff Director serves as the Deputy Ethics Official of the Science Advisory Board and makes the decisions about who will serve on the Council and who will augment the Council for particular advisory activities. As a result of a review of all responses to these questions, financial disclosure, public comments and other relevant information, the Deputy Ethics Official of the Science Advisory Board, in consultation with the SAB Ethics and FACA Policy Officer, has determined that there are no conflicts of interest or appearances of a lack of impartiality for the members of the Advisory Council on Clean Air Compliance Analysis

Augmented for Benefits of Reduced PM-Mortality using Expert Elicitation.

A determination has been made that the following individuals will serve on the Advisory Council on Clean Air Compliance Analysis Augmented for Benefits of Reduced PM-Mortality using Expert Elicitation.

1. Dr. James K. Hammitt, Harvard University, Boston, MA
2. Dr. David T. Allen, University of Texas, Austin, TX
3. Dr. Dallas Burtraw, Resources for the Future, Washington, DC
4. Dr. Aaron Cohen, Health Effects Institute, Boston, MA
5. Dr. John Evans, Harvard University, Portsmouth, NH
6. Dr. Christopher Frey, North Carolina State University, Raleigh, NC
7. Dr. Shelby Gerking, University of Central Florida, Orlando, FL
8. Dr. Wayne Gray, Clark University, Worcester, MA
9. Dr. John Fintan Hurley, Institute of Occupational Medicine, Edinburgh United Kingdom
10. Dr. F. Reed Johnson, Research Triangle Institute, Research Triangle Park, NC
11. Dr. Katherine Kiel, College of the Holy Cross, Worcester, MA
12. Dr. Michael T. Kleinman, University of California, Irvine, CA
13. Dr. Virginia McConnell, Resources for the Future, Washington, DC
14. Dr. Rebecca Parkin, George Washington University Medical Center, Washington, DC
15. Dr. David Popp, Syracuse University, Syracuse, NY
16. Dr. Chris Walcek, State University of New York, Albany, NY
17. Dr. Ronald Wyzga, Electric Power Research Institute, Palo Alto, CA

Concurred,

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

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5-2-08  
Date