



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

OFFICE OF THE ADMINISTRATOR
SCIENCE ADVISORY BOARD

March 2, 2016

MEMORANDIUM

SUBJECT: Determinations Associated with the Science Advisory Board (SAB)
Review of EPA's Methodology for Updating its Mortality Risk
Valuation Estimates for Policy Analysis

FROM: Thomas Armitage /signed/
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The EPA's National Center for Environmental Economics in the Agency's Office of Policy has sought the advice of the Science Advisory Board on proposed improvements to the agency's methodology for estimating benefits associated with reduced risk of mortality. The methodology takes into account the amounts that individuals are willing to pay for reductions in mortality risk. The resulting valuations are combined into an estimate known as the value of statistical life (VSL) which is used in regulatory benefit-cost analysis. The EPA's Office of Policy is requesting that the SAB review the following documents: (1) *Valuing Mortality Risk for Policy: a Meta-analytic Approach*, a white paper prepared by the EPA Office of Policy to describe the agency's interpretation and application of SAB recommendations received in July 2011 regarding updates to the EPA's estimates of mortality risk valuation; (2) *The Effect of Income on the Value of Mortality and Morbidity Risk Reductions*, a report prepared for the EPA's Office of Air and Radiation on options for updating the agency's recommended estimate for the income elasticity of the value of statistical life; and (3) *Recommended Income Elasticity and Income Growth Estimates: Technical memorandum* an EPA memorandum providing supplementary information to the Report.

This memorandum addresses the set of determinations that were used in selecting the SAB Environmental Economics Advisory Committee to conduct this review, including:

1. The type of review body that will be used to conduct the review, and the nature of the review;

2. The types of expertise needed to address the general charge;
3. Financial conflict of interest considerations, including identification of parties who are potentially interested in or may be affected by the topic to be reviewed;
4. How regulations concerning “appearance of a loss of impartiality” pursuant to 5 C.F.R. § 2635.502 apply to members of the committee;
5. Other considerations that might affect the objectivity of members of the committee; and
6. How individuals were selected for the committee.

DETERMINATIONS:

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

The SAB Environmental Economics Advisory Committee (EEAC) is a standing committee of the Board that provides advice through the chartered SAB on science and research to assess public benefits and costs of EPA’s environmental programs. The chair of the EEAC is a member of the chartered SAB and the committee’s report will be reviewed by the chartered SAB before it is transmitted to the EPA Administrator.

2. The types of expertise needed to address the general charge.

The EEAC includes experts with experience in environmental economics issues, including expertise in the use of stated preference and revealed preference methods for nonmarket valuation, in particular, valuing mortality risk reductions. The committee includes the relevant expertise needed to address the charge for the review of the methodology for updating mortality risk valuation estimates for policy analysis.

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

(a) Identification of parties (or class of parties) whose financial interests may be affected by the matter to be reviewed: The SAB review of the methodology for updating mortality risk valuation estimates for policy analysis may affect EPA’s broad guidance for analysis of the benefits of regulatory actions. *However, the SAB review does not involve the interests of a discrete and identifiable class of parties, nor does it involve specific parties.*

(b) Conflict of interest considerations: For Financial Conflict of Interest (COI) issues, the basic 18 U.S. Code § 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.

- (i) Does the general charge to the committee 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)]. *The review of the methodology for updating mortality risk valuation estimates for policy analysis does not focus on the interests of specific parties or a discrete and identifiable class of parties. As such, the charge to the SAB EEAC constitutes simply a matter, rather than a particular matter.*

(ii) Will there be personal and substantial participation on the part of the committee 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)] *The charge to the SAB EEAC to review the methodology for updating mortality risk valuation estimates for policy analysis constitutes a matter, rather than a particular matter. When a charge is not a particular matter, then 18 U.S.C. 208 does not apply and a COI cannot arise.*

(iii) Will there be a direct and predictable effect on committee members’ financial interests? 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 on the financial interest.... 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)(ii)]. *The charge to the SAB EEAC to review the methodology for updating mortality risk valuation estimates for policy analysis constitutes a matter, rather than a particular matter. When a charge is not a particular matter, then 18 U.S.C. 208 does not apply and a COI cannot arise.*

4. How regulations concerning “appearance of a loss of impartiality” pursuant to 5 C.F.R. § 2635.502 apply to members of the committee.

The Code of Federal Regulations at 5 C.F.R. 2635(a)(2) describes general requirements for considering an appearance of a loss of impartiality for employees of the Executive Branch (including Special Government Employees) participating in a *particular matter involving specific parties*. *The SAB Staff Office has determined that the charge to the SAB EEAC to review the methodology for updating mortality risk valuation estimates for policy analysis is not a particular matter involving specific parties; i.e., this matter does not involve “any judicial or other proceeding, application, request for a ruling or other determination, contract, claim, controversy, investigation, charge, accusation, arrest or other particular matter involving a specific party or parties in which the United States is a party or has a direct and substantial interest” [5 C.F.R. 2637.102(a)(7)].*

5. Other considerations that might affect the objectivity of members of the committee.

Members of SAB committees and panels must be scientific and technical experts who are objective and open-minded, able to engage in deliberative discussions with scientists who may have disparate perspectives. To evaluate candidates, the SAB Staff Office considers information provided by the public in response to the invitation for public comment on the candidates, information provided by candidates (including on the EPA Form 3110-48), and information independently gathered by SAB

staff.

As part of a determination that committee or panel members are objective and open-minded on the topic of the review, and consistent with the agency's Peer Review Policy, the SAB Staff Office considers previous involvement in the matter before the committee. This evaluation includes responses provided by candidates to the following supplemental questions contained in EPA Form 3110-48:

- (a) 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?
- (b) Have you had any current or 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.
- (c) Have you served on previous advisory panels, committees or subcommittees that have addressed the topic under consideration? If so, please identify those activities.
- (d) 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.

The SAB Staff Office has determined that there is no reason to believe that participating members of the SAB Environmental Economics Advisory Committee would not be objective and open-minded and able to engage in deliberative discussions with scientists who may have disparate points of view on the matter before the Committee.

6. How individuals were selected for the EEAC Mortality Risk Valuation Review.

Members of SAB standing committees, including the EEAC, are appointed by the Administrator for staggered 3-year terms. As part of the annual membership process, candidates are sought for positions on the SAB and its standing committees for members whose terms are ending and an opportunity is provided for public comments on the candidates. Prior to each review activity, members' confidential financial disclosure forms are evaluated to ensure that no financial COI or other ethics issues will arise due to the nature of the matter to come before the committee.

For the SAB and its standing committees, a balanced committee or panel is characterized by candidates who possess the necessary domains of scientific knowledge, relevant 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 panel member include: (a) scientific and/or technical expertise, knowledge, and experience; (b) availability and willingness to serve; (c) absence of financial conflicts of interest; (d) absence of an appearance of a loss of impartiality pursuant to 5 C.F.R. § 2635.502; (e) skills working on advisory committees and panels (including objectivity and open-mindedness); and (f) for the committee as a whole, diversity of scientific expertise and viewpoints.

The SAB Staff Office Director makes the final decision about who participates in the SAB EEAC review of the methodology for updating mortality risk valuation estimates for policy analysis based on all of the relevant information, including a review of each member's confidential financial

disclosure form (EPA Form 3110-48), the responses to the questions above, public comments, and information independently gathered by SAB Staff.

On the basis of the above-specified criteria, the following current members of the Environmental Economics Advisory Committee are eligible to participate in the review of the methodology for updating mortality risk valuation estimates for policy analysis:

SAB Environmental Economics Advisory Committee (2016):

- Dr. Madhu Khanna, University of Illinois at Urbana-Champaign (CHAIR)
- Dr. Kevin Boyle, Virginia Polytechnic Institute and State University
- Dr. Sylvia Brandt, University of Massachusetts
- Dr. Richard Carson, University of California, San Diego
- Dr. Mary Evans, Claremont McKenna College
- Dr. Wayne Gray, Clark University
- Dr. F. Reed Johnson, RTI Health Solutions
- Dr. Matthew Kotchen, Yale University
- Dr. Matthew Neidell, Columbia University
- Dr. James Opaluch, University of Rhode Island
- Dr. Daniel Phaneuf, University of Wisconsin-Madison
- Dr. Andrew Plantinga, University of California, Santa Barbara
- Dr. Richard Ready, Montana State University
- Dr. V. Kerry Smith, Arizona State University
- Dr. Stephen Swallow, University of Connecticut
- Dr. George Van Houtven, Research Triangle Institute
- Dr. JunJie Wu, Oregon State University
- Dr. Junhua Zhao, Michigan State University

Concurred,

/signed/

3/2/2016

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Date