



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

**OFFICE OF THE ADMINISTRATOR  
SCIENCE ADVISORY BOARD**

July 1, 2009

**Memorandum**

**SUBJECT:** Formation of the Environmental Engineering Committee Augmented for the Aging Infrastructure Consultation

**FROM:** Edward Hanlon */Signed/*  
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**TO:** Vanessa Vu, Ph.D.  
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**THRU:** Anthony Maciorowski, Ph.D. */Signed/*  
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EPA's Office of Research and Development (ORD) initiated a research program in 2007 to improve and evaluate innovative technologies and techniques for reducing the cost and improving the effectiveness of operations, maintenance, and replacement of aging and failing systems for drinking water and wastewater treatment and conveyance. The outputs from this research program are intended to assist EPA's program and regional offices to implement Clean Water Act and Safe Drinking Water Act requirements; to help states and tribes meet their programmatic requirements; and to assist utilities to more effectively implement comprehensive management of drinking water and wastewater treatment and conveyance systems, provide reliable service to their customers, and meet their statutory requirements.

This memorandum documents the set of determinations that were necessary for forming the Environmental Engineering Committee augmented for the Aging Infrastructure consultation. This consultative effort will address the request of EPA's Office of Research and Development's (ORD) to the SAB to provide early independent scientific consultative advice on ORD's Sustainable Water Infrastructure Initiative research plan.

This memorandum addresses:

- (A) The type of advisory body that will be used to conduct the advisory activity and the types of expertise needed to address the general charge;
- (B) Financial conflict of interest considerations, including identification of parties who are potentially interested in or may be affected by the topic concerning which advice is to be given;
- (C) How regulations concerning “appearance of a lack of impartiality,” pursuant to 5 C.F.R. § 2635.502, apply to members of the augmented Committee; and
- (D) How individuals were selected for the augmented Committee.

## **DETERMINATIONS:**

(A) The type of advisory body that will be used to conduct the advisory activity and the types of expertise needed to address the general charge

The EPA SAB Staff Office published a notice in the Federal Register (Volume 74, Number 60, Pages 14553 – 14555) on March 31, 2009 announcing that the SAB Environmental Engineering Committee will be augmented with experts and will conduct this consultation to provide early independent scientific consultative advice on ORD’s Sustainable Water Infrastructure Initiative research plan.

To augment expertise on the EEC, the SAB Staff Office sought public nominations of nationally and internationally recognized scientists and engineers in multidisciplinary fields such as microbiology, environmental science, and chemistry; and civil, environmental, chemical, and mechanical engineering. The Federal Register Notice noted that the SAB Staff Office particularly sought scientists and engineers with specialized expertise in condition assessment, system rehabilitation, and in reducing the cost and improving the effectiveness of operations, maintenance, and replacement of aging and failing drinking water, stormwater, and wastewater treatment and conveyance systems. Also, the SAB Staff Office sought nominations of individuals with experience in applying this expertise towards municipal infrastructure systems.

(B) Financial conflict of interest considerations, including identification of parties who are potentially interested in or may be affected by the topic concerning which advice is to be given

(a) Identification of parties who are potentially interested in or may be affected by the topic concerning which advice is to be given: The principal interested and affected parties for this topic are: (1) EPA; (2) State, regional and local water program (or water pollution control) agencies and utilities, and State regulatory officials; and (3) the water pollution research community.

(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 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 [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 EEC augmented for the Aging Infrastructure Consultation involve a particular matter? A “particular matter” refers to matters that “...will involve deliberation, 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)]. 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)].

In providing active advice concerning ORD’s Sustainable Water Infrastructure Initiative research plan, the augmented EEC’s activity 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 are associated or involved with the potentially interested or affected parties, as identified in Section (B)(a) above.

(ii) Will there be personal and substantial participation on the part of augmented 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)]. For this review, the SAB Staff Office has determined that committee members will be participating personally in matters presented to them through attendance at meetings, teleconferences and other means. Since committee members will be providing the Agency with advice and recommendations on ORD’s Sustainable Water Infrastructure Initiative research plan, and such advice is expected to directly influence whether and how ORD will fund specific research within this topic area, participation in this review will be substantial.

(iii) Will there be a direct and predictable effect on SAB EEC augmented for the Aging Infrastructure Consultation members’ 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 a speculative, possibility that the matter will affect the financial interest." [5 C.F.R. § 2640.103(a)(ii)].

The work that this committee will perform will not have a direct and predictable financial effect on committee members, since the SAB Staff Office has determined that no committee members are current or anticipated recipients of ORD Grants or Agreements, or are otherwise under Contract with EPA for financial gain, associated with ORD's Sustainable Water Infrastructure Initiative research plan. Therefore, the SAB Staff Office has determined that there is no direct and predictable effect on any committee member's financial interests.

(C) How regulations concerning "appearance of a lack of impartiality," pursuant to 5 C.F.R. § 2635.502, apply to members of the augmented Committee

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 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."

Each potential member was evaluated against the 5 C.F.R. 2635(a)(2) general requirements regarding an appearance of a lack of impartiality. Information used in this evaluation was provided by prospective committee members through their submission of a confidential financial disclosure form (EPA Form 3110-48, "Confidential Financial Disclosure Form for Special Government Employees Serving on Federal Advisory Committees at the U.S. Environmental Protection Agency").

To ascertain whether there is any appearance of a lack of impartiality, the following four questions were posed to each prospective member of the SAB EEC augmented for the Aging Infrastructure consultation with respect to the forthcoming charge for the augmented Committee:

(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 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.

Upon review of submitted financial disclosure forms, the SAB Staff Office has determined that there are no conflicts of interest or appearances of a lack of impartiality associated with prospective members for this committee.

**(D) How Individuals Were Selected For The Augmented Committee:**

On May 14, 2009, the SAB Staff Office posted on the SAB Web site a short list of 36 candidates to augment the EEC for public comment. The SAB Staff Office received no public comments on this short list of candidates or EEC Members.

The SAB Staff Office Director, taking all factors into account, makes the final decision about the membership for the augmented EEC Committee. 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 advisory committees; and, for the Committee as a whole, (f) diversity and balance of scientific expertise and viewpoints.

On the basis of the above-specified criteria, the members of the augmented committee for the aging infrastructure consultation are as follows:

**EEC Members**

**Dr. David A. Dzombak**, Carnegie Mellon University, **CHAIR**

**Dr. Viney Aneja**, North Carolina State University

**Dr. John C. Crittenden**, Georgia Institute of Technology

**Dr. Taylor Eighmy**, Texas Tech University

**Dr. Cindy M. Lee**, Clemson University

**Dr. Reid Lifset**, Yale University

**Dr. James R. Mihelcic**, University of South Florida

**Dr. Horace Moo-Young**, California State University, Los Angeles

**Dr. Catherine Peters**, Princeton University

**Dr. Mark Rood**, University of Illinois

**Dr. John R. Smith**, Alcoa Inc.

**Consultants**

**Mr. John Colbert**, Massachusetts Water Resources Authority (MWRA)

**Mr. Larry Jaworski**, Black & Veatch Inc.

**Mr. Larry Johnson**, Palm Beach County Water Utilities Department, FL

**Ms. Liliana Maldonado**, CH2M Hill Inc.

**Mr. Michael Selna**, Independent Consultant

**Dr. Vanessa Speight**, Malcolm Pirnie Inc.

**Dr. Michael Stenstrom**, University of California at Los Angeles

Concurred:

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

**July 1, 2009**  
Date