

HAPPENINGS at the SAB

...ensuring a solid technical basis for environmental protection

Volume 8 Number 11

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GUEST EDITORIAL



The SAB and the Role of Science at EPA

Science is not the only important factor in environmental and public health protection, but it is essential. For example, it is clear that the solution to urban smog does not now depend on obtaining further information on tropospheric chemistry - that understanding and affecting human behavior in a democratic society is actually much more important at this time. But without a thorough understanding of the complex science associated with urban smog based on over fifty years of research, our efforts to intelligently and efficiently manage mobility, power generation and urban development for the benefit of public health and welfare would be without foundation.

In our society, environmental protection cannot be achieved without the careful and enlightened integration of scientific knowledge into the admittedly complex process. Critics point out that science is imperfect and sometimes unable to give the answers we want, at least on a timely basis. While that is often true and decisions have to be made in the absence of full scientific understanding, science must help guide our decisions and continue to inform and correct whatever path we take.

There are two essential components in the use of science in an Agency such as EPA. One is that we must believe that the scientific information we are using is the best available. At the present time, there is no better way to assure this than to subject our science to *independent peer review*.

Secondly, the Agency needs advice on how existing and emerging science can best be used, and in the integration of the best available science with the other factors that must go into the management process: economics and social issues to name only two. Guidance is best given by people who are smart, informed, free of conflicts of interest, and committed to public service. Peer review requires the same credentials.

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Happenings at the Science Advisory Board

It is for these reasons that Congress and the Administrators of the EPA created the EPA Science Advisory Board. For over 25 years it has served the Agency and the American public by offering advice and conducting scientific peer reviews of important Agency documents. Many feel that it is the preeminent scientific advisory panel in the federal government.

The reorganization process that has been undergoing study within the SAB for the past ten months was stimulated by a desire to make the SAB even more effective and to enhance the role of scientific advice in environmental policy-making. The newly appointed Board by the Administrator, will have the capacity to initiate more direct consultations, special workshops, studies or form new ad hoc panels. The reorganization will also allow SAB greater opportunity to focus on newer, highly visible and priority environmental science issues facing the Agency, such as the use of genomics in risk assessments and emerging technologies for remediation or pollution prevention. We invite you to visit the EPA website, http://www.epa.gov/sab/reorg_of_epasab.html to view more detailed information on the reorganization.

William H. Glaze, Chair, SAB Executive Committee
Oregon Health & Science University

TENTATIVE SAB MEETING CALENDAR FOR NOVEMBER & DECEMBER

Several of the Federal Advisory Committee Act (FACA) meetings noted below have been announced in the Federal Register (FR), together with additional background information. Readers can automatically receive e-mailed copies of FR Notices by subscribing to the SAB Listserver; see Section Updates below.

If a series of meetings is anticipated, the number of the meeting in the series is indicated in parentheses; e.g., "(#2)".

NOVEMBER



- | | | |
|--------------|-------------------|---|
| 5-6 | Committee: | Special Council Panel for the Review of the Third 812 Analysis |
| | Topic(s): | Review of the Third 812 Analysis and the Clean Air Act Section 812 Cost and Benefits Draft Report to Congress |
| | Location: | Hilton Washington, Embassy Row, Washington, DC |
| | Chair: | <i>Dr. Trudy Cameron, University of Oregon</i> |
| | DFO: | <i>Dr. Angela Nugent</i> |
| | Email: | nugent.angela@epa.gov |
| 12-13 | Committee: | Clean Air Scientific Advisory Committee's Particulate Matter (PM) Review Panel |
| | Topic(s): | Review the 1 st Revised Draft of the Staff Paper and Risk Assessment for PM |
| | Location: | Clarion Hotel, Research Triangle Park, NC |
| | Chair: | <i>Dr. Philip Hopke, Clarkson University</i> |
| | DFO: | <i>Mr. Fred Butterfield</i> |
| | Email: | butterfield.fred@epa.gov |

Happenings at the Science Advisory Board

14

Committee: Science Advisory Board, Environmental Economics Advisory Committee's (EEAC) Advisory Panel on Environmental Economics Research Strategy (APEERS)

Topic(s): Environmental Economics Research Strategy

Location: Hilton Arlington & Towers, Arlington, VA

Chair: *Dr. Maureen Cropper, The World Bank*

DFO: *Mr. Thomas Miller*

Email: miller.tom@epa.gov

24F

Committee: Science Advisory Board, Multimedia, Multipathway, and Multireceptor Risk Assessment (3MRA) Modeling System Review Panel

Topic(s): Review of the 3MRA Model

Location: Ariel Rios Building, Room 6013, Teleconference

Chair: *Dr. Thomas Theis, University of Chicago-Illinois*

DFO: *Ms. Kathleen White*

Email: white.kathleen@epa.gov

DECEMBER



3F

Committee: Science Advisory Board, Committee on Valuing the Protection of Ecological Systems and Services

Topic(s): Valuing the Protection of Ecological Systems and Services

Location: By Teleconference Only

Chair: *Dr. Domenico Grasso, Smith College*

DFO: *Dr. Angela Nugent*

Email: nugent.angela@epa.gov

Happenings at the Science Advisory Board

- 10**
- Committee: Science Advisory Board, Drinking Water Committee
Topic(s): Office of Water/Office of Research and Development (OW/ORD) Briefings on CWA/SDWA Intersection and Drinking Water Multi-Year Research Plan
- Location: Ronald Reagan Building, Horizon Ball Room, Washington, DC
- Chair:* Dr. Rhodes Trussell, Trussell Technologies, Inc.
DFO: Dr. James Rowe
Email: rowe.james@epa.gov
- 10**
- Committee: Science Advisory Board
Topic(s): Briefing on Goals 1 & 2 Science and Technology
Location: Ronald Reagan Building, Horizon Ball Room, Washington, DC
- Chair:* Dr. William Glaze, Oregon Health & Science University
DFO: Mr. Thomas Miller
Email: miller.tom@epa.gov
- 11**
- Committee: Science Advisory Board
Topic(s): Workshop on Environmental Protection (attendance by registration only)
Location: Ronald Reagan Building, Horizon Ball Room, Washington, DC
- Chair:* Dr. William Glaze, Oregon Health & Science University
DFO: Mr. Robert Flaak
Email: flaak.robert@epa.gov

Happenings at the Science Advisory Board

- 12** Committee: Science Advisory Board, Environmental Health Committee/Integrated Human Exposure Committee (EHC/IHEC)
- Topic(s): Joint Coordination Meeting of FY 2004 Activities
- Location: Ronald Reagan Building, Horizon Ball Room, Washington, DC
- Chair: *Dr. Rebecca Parkin, The George Washington University*
- DFO: *Dr. Suhair "Sue" Shallal*
- Email: shallal.suhair@epa.gov
-
- 19F** Committee: Special Council Panel for the Review of the Third 812 Analysis
- Topic(s): Review of the Clean Air Act (CAA) Section 812 Cost and Benefits Draft Report to Congress
- Location: By Teleconference Only
- Chair: *Dr. Trudy Cameron, University of Oregon*
- DFO: *Dr. Angela Nugent*
- Email: nugent.angela@epa.gov
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- 22F** Committee: Special Council Panel for the Review of the Third 812 Analysis
- Topic(s): Review of the Clean Air Act (CAA) Section 812 Cost and Benefits Draft Report to Congress
- Location: By Teleconference Only
- Chairs: *Dr. Trudy Cameron, University of Oregon*
- DFO: *Dr. Angela Nugent*
- Email: nugent.angela@epa.gov

To View Calendar of Future Meetings Click Here
Or
Go to the SAB website www.epa.gov/sab/mtgcal.htm

Happenings at the Science Advisory Board

COMMITTEE ACTIVITIES IN OCTOBER



On October 1-2, the Science Advisory Board's (SAB) Executive Committee (EC) held a public meeting. Dr. Paul Gilman, EPA Assistant Administrator for Research and Development updated the Executive Committee on a number of Agency activities of interest to the SAB and then responded to questions from the members. Agency representatives from the Office of the Chief Financial Officer and the Office of Research and Development (ORD) presented a framework for the SAB to use in its review of the cross-agency science and technology budget. The framework is based on the new EPA Strategic Plan which distributes EPA's activities across five strategic Goals. The Goals include: 1) Clean Air and Global Climate Change, 2) Clean and Safe Water, 3) Land Preservation and Restoration, 4) Healthy Communities and Ecosystems, and 5) Compliance and Environmental Stewardship. The Goal structure also provides a framework which EPA plans, conducts, and accounts for its activities and outcomes. Representatives from ORD gave a brief introduction to the types of scientific programs that are conducted by the Agency in each of the Goal areas. It is significant that the new Strategic Plan has a separate Objective for science within each strategic Goal. The Board and the Agency agreed to continue interacting in an information gathering mode on each of the Goal areas in order to prepare the SAB for the review of the FY 2005

science and technology budget once it is available.

The Executive Committee also reviewed and approved a report from its Panel on the "Supplemental Guidance for Assessing Cancer Susceptibility from Early-Life Carcinogens." The Panel report was approved subject to editorial changes that were requested by a number of the Executive Committee reviewers. The Executive Committee also discussed a series of candidate scientific themes that were suggested as focal topics for the SAB Meeting which is scheduled to be held from December 10-11, 2003. The members agreed to move forward with preparatory work on a number of issues that could be the focus of the science portion of the SAB Meeting, for example, 1) Impacts of "Omic" Technologies on Human Health and Ecological Risk, 2) Environmental Implications of Nanotechnology, 3) Approaches for Monitoring Air Pollutants, and 4) Anticipation and Prevention of Emerging and Re-emerging Contaminants.

On October 2, the Environmental Processes and Effects Committee (EPEC) held a public meeting to provide a Consultation to the Health and Ecological Criteria Division, Office of Science and Technology, Office of Water. The Agency is proposing several approaches to develop water-quality criteria for suspended and bedded sediments, and wanted input from EPEC members. The committee members heard presentations from scientists from the Office of Water, Office of Research and Development, and individual members provided input to the Agency.

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The rest of the meeting was concerned with plans for committee activities in FY 2004. Dr. Michael Newman led a discussion with Agency scientists on the subject of ecological risk assessment. EPEC has proposed a self-initiated project on the topic that was given a high priority by the Executive Committee. However, Agency officials wanted to discuss the nature and scope of the project before the committee began work. EPEC members also heard a presentation by Dr. Peter Grevatt, Chief of the Water-Quality Monitoring Branch, Office of Water, on the Agency's Water-Quality Monitoring Initiative. The presentation and resulting discussion will be used to guide modifications of EPEC's proposal for a self-initiated project on water-quality monitoring. EPEC was also provided with a short summary of upcoming Agency-requested reviews.

On October 3, the EPA Clean Air Scientific Advisory Committee (CASAC) and the CASAC Particulate Matter (PM) Review Panel conducted a teleconference meeting. The purpose of this publicly-accessible teleconference was: (1) for the CASAC to review, deliberate on, and approve the report of the CASAC National Ambient Air Monitoring Strategy (NAAMS) Subcommittee; and (2) for the CASAC Particulate Matter (PM) Review Panel to discuss follow-on matters related to its review of the *EPA Air Quality Criteria Document for Particulate Matter (Fourth External Review Draft)*.

The CASAC NAAMS Subcommittee is charged with providing advice, information and recommendations to the Agency on the technical bases and design aspects of the National Ambient Air Monitoring Strategy. The

NAAMS Subcommittee held a public meeting in Research Triangle Park, North Carolina, on July 8-9, 2003 to review the NAAMS document. During the first portion of this October 3 teleconference, those members of the CASAC who were not members of the NAAMS Subcommittee deliberated on the draft report from the Subcommittee. The CASAC approved the report, which will be finalized with the changes discussed during that day's teleconference.

The second portion of the October 3 conference call was a continuation of the CASAC PM Review Panel's review of the Fourth External Review Draft of the Air Quality Criteria Document (AQCD) for PM held in Research Triangle Park (RTP), NC, on August 25-26, 2003. EPA is in the process of updating, and revising where appropriate, the PM AQCD for PM as issued in 1996. The *EPA Air Quality Criteria for Particulate Matter (Fourth External Review Draft)* can be viewed and downloaded from the NCEA Web site at: <http://www.epa.gov/ncea>.

Dr. Les Grant, Director of the EPA's National Center for Environmental Assessment (NCEA/RTP), briefly described the events which led to the restructuring of PM AQCD Chapter 9, "Integrative Synthesis." Dr. Grant's team decided to identify several key issues and then to focus on a set of questions, centering on the new information that has been published and its implications for changes to any key conclusions drawn in the 1996 document. This led to proposed framework for restructuring Chapter 9 in the form an outline which was prepared and provided to the Panel as part of the meeting materials (and which is also available on the CASAC Particulate Matter Review Panel page of the SAB Web site located

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at: <http://www.epa.gov/sab/panels/casacpmpanel.html>). The basic approach was to pose a question in relation to a key topic or conclusion from the prior integrated synthesis; provide a snapshot of what was previously said; then present any new information from studies conducted since, and how it might be used to arrive at new conclusions. The PM Review Panel conducted an in-depth discussion of this proposed framework, which Dr. Grant stated was very helpful, adding that the writing team will be able to accommodate many of the comments and concerns expressed by the Panelists. The CASAC PM Review Panel will meet next in a public meeting scheduled for November 12-13, 2003, at RTP, during which Dr. Grant will provide an update on the revisions to the 4th revised draft AQCD for PM, and the Panel will discuss follow-on matters related to its ongoing review of that document.

On October 9, the EC's **Multimedia, Multipathway, and Multireceptor Risk Assessment (3MRA) Modeling System Panel** held a teleconference. At this public conference call meeting, the Panel had structured discussions to assist in the review of the 3MRA Model System and supporting documentation. The Panel had prepared and circulated their preliminary responses to charge questions 1, 3 and 4 and had received a write-up on water balance from EPA. The Panel began with summaries of recent fact-finding calls on validation, uncertainty, and health & ecological issues. After this, the Panel asked EPA questions on topics such as effective and actual mass in the waste management units, the Agency's response to prior peer reviews, and why EPA thinks of 3MRA as a screening tool. The discussion of 3MRA as a screening tool led

to an extensive discussion of the meaning of "tiers" in the modeling context. Two members were asked to identify criteria which might be used to classify the modules in 3MRA. Finally, the Panel discussed the agenda for the scheduled October 28-30 face-to-face meeting in Washington at which the Agency plans to provide additional information on model comparison and mass balance.

On October 21-22, the **SAB, Radiation Advisory Committee (RAC)** held a public meeting to conduct a second consultation regarding the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) supplement dealing with Materials and Equipment (MARSAME). The first consultation took place on February 25 -27, 2003. The RAC also received an update on EPA's Office of Radiation and Indoor Air (ORIA) and the federal MARSSIM Work Group activities, program updates from ORIA staff, as well as discussions of other Committee business for the balance of the fiscal year.

On October 23, the **Special Council Panel for the Review of the Third 812 Analysis** held a public teleconference call to prepare for a public meeting on November 5-6 and to discuss the Special Council Panel draft report "Interim Installment: Review of the Revised Analytical Plan for EPA's Second Prospective Analysis." The Special Council Panel heard comments from the Agency on the draft report and discussed additions and changes to that draft document. The Special Council Panel suggested changes to the draft agenda for the November 5-6th meeting and identified topics for additional

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Agency briefings at that session.

On October 27, the SAB's Committee on Valuing the Protection of Ecological Systems and Services held an Initial EPA Background Workshop. The purpose of the Workshop was to provide a brief introduction for the Committee to the major types of EPA decisions involving valuing ecological systems and services, current EPA tools and EPA's needs. After a welcome from Ms. Louise Wise, Acting Deputy Associate Administrator, Office of Policy Economics and Innovation, and her introduction to EPA's interest in developing and implementing a strategic plan for ecological benefits, the Committee heard from senior managers representing 9 major program offices and 2 EPA regional offices. Presenters were asked to provide the following background information related to their program, as background information for the Committee's work: brief description of their program and mission; decisions made related to protecting ecological resources; tools and approaches now used for valuing the protection of ecological systems and services; tools and approaches needed; and science advice from the Committee that would be most valuable.

Presentations provided by Agency managers at the workshop have been posted on the SAB Website as a background document for the Committee. The direct url address is: <http://yosemite.epa.gov/SAB/sabcvpess.nsf/2a890dc663b46bc685256d63006ac3aa/daa8fb420333ee85256dd00045acc0?OpenDocument>.

The information can also be accessed through the home web page for the

Committee (<http://www.epa.gov/sab/panels/vpesspanel.html>), and choosing the link for "Background Documents for the Committee on Valuing the Protection of Ecological Systems and Services."

On October 28, the SAB's Committee on Valuing the Protection of Ecological Systems and Services held its first advisory meeting. There were two purposes: (1) to provide initial consultative advice on the cross-program, intra-Agency effort to develop a Strategic Plan for Ecological Benefits, and (2) to plan the Committee's work.

In the consultation, the Committee decided not to address all the 7 charge questions posed by the Agency at the meeting. Instead, the Committee focused on questions and suggestions related to the Agency's goals and objectives for the plan. It suggested the Agency return for a fuller consultation and later advisory. Members of the Committee provided advice to the Agency, which will be captured in the minutes of the consultation meeting. Some general themes that emerged included: a suggestion that the Agency provide more specific rationale for the strategic plan that drew from past EPA experience and examples; articulating the plan's goals and objectives in light of lessons learned from those examples; considering undertaking case studies of different types at different scales, including both monetized and non-monetized studies; addressing the issue of transferability across temporal and spatial scales; and considering a step-wise approach to bridging between regional and

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national analyses. The Committee suggested many sources of information and data that might be useful to the Agency, including recent National Research Council work and work in progress on valuing ecological resources.

In regard to its own work planning, the Committee identified 6 initial themes that might relate to its final report and began group efforts to develop those themes. The themes include: (1) Purpose/contextual influences such as spatial and temporal scale, vulnerability of ecosystems, type of decision, decision makers, and audience; (2) Values in democratic society -- how they are elicited, measured, weighed, and communicated; what kinds of processes underlie these efforts; (3) Alternative approaches/methods for valuing ecological system, services and outcomes-- what can be quantified, what can be monetized? How do these findings vary with different kinds of decisions, alternative technological solutions?; (4) Analytical and philosophical challenges in linking ecological and economic analyses; (5) How to express the "delta value" due to EPA's action with respect to nation's ecological assets -- national environmental policy and investment; and the (6) Institutional framework at EPA to facilitate ecological benefits assessment. The Committee plans to hold a public teleconference on December 3, 2003, to discuss these themes, other themes that may emerge, and its workplan to develop advice relating to them.

On October 28-30, the EC's **Multimedia, Multipathway, and Multireceptor Risk Assessment (3MRA) Modeling System Panel** held a public

meeting in Washington, DC. On October 28, the Agency provided additional presentations, generally, on mass balance, uncertainty analysis, sensitivity analysis and a comparison study with the TRIM model. Using the draft response to charge questions for discussion at the face-to-face meeting circulated on October 24 and the presentations, the Chair identified about two dozen potential summary points for discussion by the Panel. The bulk of October 29 and 30 was given to the discussion of these points, their refinement into paragraphs, and their assignment to various sections of the report. Panelists also reviewed sections of the summary table on prior peer reviews and Agency responses in their individual areas of expertise. On the afternoon of the last day, the Chair summarized the Panel's current thinking on the model system and the Agency responded. However, final agreement depends on final language, and further writing is needed.

Panelists are sending revised or additional written materials to the question coordinators by November 14. The coordinators will integrate this material into a draft which will be circulated about November 21 for discussion at a November 24 public conference call meeting. An additional conference call meeting is planned for December 15. The Panel hopes to finalize its report early in the new year.

On October 30, the **Health Effects Subcommittee (HES) of the Advisory Council on Clean Air Compliance Analysis (Council)** held a public teleconference call. The purpose of the call was to discuss a draft report entitled "Advisory on Plans for Health Effects

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Analysis in the Analytical Plan for EPA's Second Prospective Analysis Benefits and Costs of the Clean Air Act, 1990-2020; An Advisory by the Advisory Council for Clean Air Compliance Analysis," developed during the HES public meeting on August 27-29, 2003. The HES received comments from the Agency on the draft report, and discussed several issues related to the report generally in a session, led by Dr. Bart Ostro. Dr. Nino Kuenzli then led a discussion of a charge question concerning the Agency's plans to conduct an expert elicitation pilot on the topic of premature mortality resulting from exposure to particulate matter. Subcommittee members will provide revised text for several charge questions. The goal is to submit the revised report to the Council for its review and approval and transmission to the Agency by the end of the calendar year.

STATUS OF FORMATION OF SAB PANELS



The Board has developed a revised Panel Formation process for the recruitment of ad-hoc review panels. For the latest detailed information, please visit our website, www.epa.gov/sab/panels/paneltopics.html.

COMPUTER NEWS



(1) SAB Website is within the EPA Home Page. You are invited to visit the SAB Website at URL: <http://www.epa.gov/sab>

The site offers such features as:

- (a) Full-text reports for FY1994-FY2003
- (b) Background information about the structure, function, and membership of the SAB
- (c) A projected calendar of SAB meetings
- (d) Recent issues of HAPPENINGS
- (e) Draft/final agendas of upcoming meetings and draft/final minutes of

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past meetings.

(2) **SAB Listserver** - By subscribing to the free SAB Listserver, you will automatically receive copies of all Federal Register notices announcing SAB meetings, together with brief descriptions of the topics to be covered at the meetings. These notices will be e-mailed to you within 24-hours of their publication in the Federal Register.

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STAFF NEWS

Mr. Richard Albores joined the SAB Staff Office on November 10, 2003, on a six-month detail as the Acting Deputy Director for Management. He will be responsible for supervising technical and administrative staff and managing the administrative functions in support of SAB advisory activities. Mr. Albores served as Senior Counsel to EPA's Environmental Appeals Board

(EAB) where he was responsible for a wide range of penalty and permit appeals submitted to the EAB under the Agency's environmental statutes. He began his EPA career with the Office of General Counsel (OGC) providing regulatory counseling and litigation support in the Agency's implementation of the Superfund program and the Resource Conservation and Recovery Act. Prior to joining the Agency, Mr. Albores served as Managing Editor of the *Ecology Law Quarterly*. He is a member of the State Bar of California, and the U.S. Supreme Court Bar.

Dr. Anthony Maciorowski joined the SAB Staff Office on November 17, 2003, on a four-month detail as the Acting Associate Director for Science. He will be responsible for overseeing scientific and technical matters within the Staff Office, leading scientific outreach activities and securing the participation of suitably eminent members of the scientific community in all SAB advisory activities. Mr. Maciorowski comes from EPA's Office of Water, where he served as the Associate Director for Ecology in the Health and Ecological Criteria Division within the Office of Science and Technology. In that capacity he supervised the development of ambient aquatic life criteria for chemicals, nutrient criteria, biological criteria, and regulation of land applied sewage sludges. He joined EPA in 1992 as Chief of the Ecological Effects Branch in the Office of Pesticide Programs.

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BON MOT



There is an old saying, *"If you don't stand for something, then you'll fall for anything."*

Don't get caught falling down.