

**Summary Minutes**  
**U.S. Environmental Protection Agency**  
**Science Advisory Board**  
**Oil Spill Research Strategy Review Panel**

**Panel Members:** See Committee Roster – Attachment A

**Date and Time:** Thursday June 9, 2011, 1:00-3:30 PM (Eastern Time)

**Location:** Meeting conducted via teleconference

**Purpose:** To discuss substantive comments on the SAB advisory report, *Draft Advisory Report of the EPA's Oil Spill Research Strategy (525-2011)*.

**Attendees:**

Panel Chair: Dr. David T. Allen  
Members: Dr. Kevin Brown  
Dr. G. Allen Burton  
Dr. Richard Camilli  
Dr. James Clark  
Dr. Christine Economides  
Dr. Thomas Frazer  
Dr. Eileen Murphy  
Dr. Stephen M. Roberts  
Dr. James Sanders  
Dr. Kathrine Springman  
Dr. Ronald Tjeerdema

SAB Staff Office: Mr. Thomas Carpenter Designated Federal Officer  
Dr. Vanessa Vu, Director SAB Office

EPA ORD staff: Ms. Patricia Erickson  
Dr. Al Venosa  
Dr. Fran Kremer

Others Present: Pat Rizzuto, BNA, Inc.  
Mark Schleifstein, The Times-Picayune  
Cynthia Sarthou, Gulf Restoration Network  
Maria Hegstad, Inside EPA, Inside Washington Publishers  
Susan E. Boehme, ERM  
Ren Althouse, Morningside Partners  
Marshall Ford, Connecticut Capital  
Russell White, American Petroleum Institute  
Dr. Suneeta Mahagaokar, D.A.B.T., Shell Oil Company  
Martha Lindauer, Society of Toxicology  
Michael O'Neill, Sutherland Asbill & Brennan LLP

Dr. Don Aurand, Ecosystem Management & Associates, Inc.  
Linda M. Wilson, New York State Office of the Attorney General  
Commander Eric J. Miller, Interagency Coordinating Committee  
on Oil Pollution Research, US Coast Guard

**Meeting Materials:** All meeting materials are available on the SAB Web site, <http://www.epa.gov/sab>, at the [Oil Spill Research Strategy Panel Meeting](#) Page.

### **Convene Meeting**

The meeting was announced in the Federal Register<sup>1</sup> and proceeded according to the meeting agenda, as revised. Mr. Thomas Carpenter, Designated Federal Officer (DFO) for the SAB Oil Spill Research Strategy Review Panel convened the meeting at 1:00 p.m. on June 9, 2011. He stated that the EPA Science Advisory Board (SAB) was a chartered federal advisory committee and reviewed Federal Advisory Committee Act (FACA) requirements. He noted the Committee's compliance with ethics requirements. Mr. Carpenter stated that as DFO, he would be present during the Panels' business and deliberations. He stated that summary minutes of the meeting would be prepared and certified by the Chair. He stated that for this review, the SAB Staff Office had convened an ad-hoc panel inviting experts to participate in the review<sup>2</sup>.

### **Introduction of Members, Purpose of Meeting, and Review of the Agenda**

Dr. David Allen, Chair of the SAB Oil Spill Research Strategy Review Panel, hereafter referred to as the Panel, provided introductory remarks.

Dr. Allen stated that teleconference was convened to the review the *Draft Advisory Report on the EPA Oil Spill Research Strategy (May 25, 2011)*<sup>3</sup>, hereafter referred to as the Advisory Report and provided a brief overview. The organization of the draft advisory report directly responds to the Charge<sup>4</sup> to the SAB. Charge questions 1 and 2 focused on the scope of the Strategy in its entirety and whether the Strategy addressed and discussed the research and science that will be needed to support the Agency's future challenges. Question 3 focused on each of the four research themes and sought SAB advice on whether the project areas under each research theme addressed the key issues, if there are science questions that should be added or deleted from the Strategy and if the proposed project areas are adequately described.

Dr. Allen reviewed the meeting agenda<sup>5</sup> and provided an overview of how the Panel would develop a consensus advisory report providing advice in response to the charge questions. He noted that after the panel discussed the report a new draft, reflecting the discussions, would be distributed to the panel to review and provide consensus. The Chartered SAB would conduct a Quality Review of the Advisory Report by July 28. Pending that review, the SAB would approve the report, approve with minor changes, or ask the Panel to revise the report based on the Quality Review.

Dr. Allen noted that EPA would provide some brief remarks on the Draft Advisory Report and then lead reviewers and the Panel members would discuss the specific sections and their comments on the report.

### **Remarks from EPA Office of Research and Development**

Ms. Patricia Erickson from EPA Office of Research and Development provided some clarifications for the Panel to consider as it discussed the draft Advisory Report. Ms. Erickson noted that the discussion of responsibilities to prevent and respond to spill is specified in the Oil Pollution Act (OPA) and could be made clearer in the Oil Spill Research Strategy<sup>6</sup>. She distinguished between developing regulation(s) to prevent spills and developing research to better understand spills and the response needs. For example, she further explained the roles and responsibilities of the Bureau of Ocean Energy Regulation, Management, and Enforcement in the Department of Interior and Pipeline Hazard and Safety Management Agency in the Department of Transportation as the organizations that EPA coordinated with on the Deepwater and Enbridge spills, respectively. These organizations are responsible for developing spill prevention regulations and have responsibilities during spill response. She noted that the EPA was the lead agency for the Enbridge response and supported the Coast Guard in the Deepwater Horizon response.

She also commented that EPA appreciated the discussion about system approaches and informed the panel that oil spill research is being incorporated into the agencies new Integrated Transdisciplinary Research approach under the Sustainable and Health Communities Research Action Plan.

Panel members commented that the Advisory Report should reflect the distinction between OPA statutory requirements and research needs. They also discussed the need for the Advisory Report to emphasize that the first order responsibility is prevention, recognize that research is partitioned across agencies and indicate that coordination of oil spill research among agencies is the responsibility of the Interagency Committee to Coordinate Oil Pollution Research under the Coast Guard as cited in the OPA.

### **Discussion of General Issues: Charge Questions 1 and 2**

Dr. Thomas Frazer led the discussion of Charge questions 1 and 2. He reminded the Panel of the key point discussed at the April teleconference and described the responses to questions 1 and 2. The key points include:

- Discuss prevention research that may be managed by other agencies. The Strategy should recognize the importance of prevention to reducing the number of oil spills;
- Environmental justice issue(s) should be introduced with a general discussion in this section and specific issues addressed in the human health section as appropriate;
- The discussion of green chemistry should be expanded to account for green engineering and life cycle assessment; and
- Social and behavioral science research should be added to the Strategy

Panel members agreed with the recommendations for this section and provided comments to make them clearer. Several commented that the discussion of prevention and interagency coordination should be emphasized in this section. Others pointed out that the green chemistry and engineering points should be strengthened to identify avoidance of waste products during dispersant production. They agreed that the environmental justice section should be expanded to include EPA's definition, examples of research that accounts for environmental justice issues,

and additional provide references. Members also discussed adding recommendations for EPA to rank or prioritize research to provide a more transparent discussion of needs.

### **Discussion of Dispersants**

Dr. Kathrine Springman led the discussion on dispersants and provided an overview of the section. The draft Advisory Report addressed these key points discussed at the April teleconference:

- define efficacy and the endpoints that are being evaluated for dispersants;
- recognize and address the complexity of dispersant oil mixtures and other compounds;
- account for the many variables that need to be considered, collected and organized to provide meaningful data; and
- Identify research and projects that will develop results that support the needs of oil spill decision makers.

Dr. Springman also described the event based research strategy decision framework developed to address question 3c. An additional list of considerations for the event based research strategy was included as an appendix for the report.

Panel members agreed with the recommendations presented in this section. Several commented that the recommendation for EPA to define efficacy should be strengthened to provide more clarity, better define the types of categories EPA might consider in a decision framework and use consistent terms to describe cost benefit analyses with those used in other sections of the document. One panel member noted that efficacy test and toxicity test seem to be used interchangeably and do not necessarily provide the same outcomes. The discussion resulted in a recommendation that the specific testing regimes and outcomes ( i.e. toxicity, efficiency, or other potential impacts to oil spill response) should be clearer. Members agreed that Appendix B should be brought forward into the report in the section that recommends EPA consider an event-based research strategy to identify priority research.

Panel members noted that there was not a response to question 3b about removing research from consideration, as there was sufficient information. After discussion, the panel agreed that at this time projects should not be removed from consideration. However, they agreed the recommendation should direct EPA to evaluate research projects as the strategy progresses and determine if the research becomes sufficient in the future as outcomes are evaluated.

### **Discussion of Oil Spill Shoreline, Coastal, and Inland Effects**

Dr. James Clark led the discussion of research on shoreline, coastal, and inland ecological effects and provided an overview of the section and the key points from their discussion include:

- A need to develop a resource to house baseline ecological data for comparisons to spill scenarios;
- The Strategy needs to distinguish between short-term and long-term research;
- In developing the research EPA needs to communicate effectively among the interagency partners and collaborators; and
- The Agency should consider developing indicators that, and at appropriate levels, demonstrate ecosystem's response and recovery.

This section recommends that EPA should develop a decision management framework that considers population, community and ecosystems effects. It further recommends greater

interactions with other agencies, better characterization of exposure scenarios, and improved risk characterization and communication.

The panel agreed with the recommendations presented in this section and provided suggestions for clarification or greater emphasis. One member suggested that the discussion on “Deepwater Horizon” and “non-Deepwater Horizon” spills clarify and define the types of spills and environments EPA must consider and be prepared to initiate response actions as the principal or supporting agency. Members agreed with the rank, implement and assess approach described in the decision management framework recommended for the ecological assessments. Members also provided examples to bolster the discussion of research and models to better characterize exposure (i.e., Atlantis, ADIOS)

### **Discussion of Innovative Processes and Technology Development**

Dr. Kevin Brown led the discussion of research on innovative processes and technology development and provided an overview of the section and their comments. The panel agreed that key points from their April discussions include:

- Innovative processes and technology development should focus on EPA’s regulatory role;
- If EPA wishes to encourage the development of new or improved technologies the Agency should develop specific operational criteria as part of a review process;
- The Agency should consider using a net environmental benefit analysis approach to identifying and prioritizing research so that it addresses environmental tradeoffs associated with oil spill response decisions; and
- The Panel understands that prevention research may be managed by other agencies. The Strategy should recognize the importance of prevention to reducing the number of oil spills.

Panel members agreed with the recommendation presented in this section of the Advisory Report and provided comments to clarify and provide the agency with examples of innovative technologies and approaches to consider in their use in a response. One panel member noted the net environmental benefit analysis is specifically designed to address environmental trade-offs in situations such as oil spills and should be referenced in the discussion of an event management based approach to prioritize research.

### **Discussion of Human Health Impacts**

Dr. Stephen Roberts led the discussion of human health impacts research and provided an overview of the section. The section was based on the key point identified in the April teleconference. The panel agreed that key points from their discussion include:

- The Human health section needs to more clearly define the EPA roles and responsibilities;
- The lack of clarity about which agency is the lead, collaborators roles, and the scope and goals of the research makes the human health discussion weak;
- The Agency needs to consider and better articulate the research for the key exposure pathways, (i.e., water, food and sand); and
- The Agency needs to clearly state the risk communication project areas and goals. The Strategy does not differentiate between risk communication and risk communication research.

Panel members agreed with the recommendations presented in this section. Dr. Roberts also pointed out that many of the recommendations and points made on this section of the Strategy apply to other sections of the strategy. The Panel recommended a general discussion under question 1 and 2 to introduce issues (i.e., environmental justice) and specific examples should be provided in specific sections, as appropriate. Panel members agreed that the discussion on estimating cancer risks and environmental justice should be expanded to provide examples, additional bibliographic references and cross references to other sections of the report as appropriate

### **Discussion of Next Steps**

Dr. Allen reviewed the points the Panel members identified as key issues and asked the panel for any additional thoughts. Panel members agreed that the key issues were identified and did not identify any additional issues or comments. Dr. Allen asked the DFO to summarize the next step for Panel members to develop the Advisory Report

Mr. Carpenter stated that writing teams would edit sections of the draft Advisory Report based on comments provided, discussed and agreed upon by the Panel. The DFO and Chair would develop a new version of the report and send it to the Panel by July 1. The panel was requested to review the draft Advisory Report and provide their consensus on the Advisory Report to the DFO by July 7. A Quality Review by the Chartered SAB was scheduled for July 28, 2011. Dr. Allen asked the Panel for any questions or clarifications. Hearing no request from the Panel, he then called upon the DFO to adjourn the meeting

The Designated Federal Officer adjourned the meeting at 3:15 p.m.

Respectfully Submitted:

Certified as True:

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Mr. Thomas Carpenter  
SAB DFO

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Dr. David Allen  
Chair

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by committee members during the course of deliberations within the meeting. Such ideas, suggestions, and deliberations do not necessarily reflect definitive consensus advice from the panel members. The reader is cautioned not to rely on the minutes represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.

### **Materials Cited**

The following meeting materials are available on the SAB Web site, <http://www.epa.gov/sab>, at the [Oil Spill Research Strategy Panel Meeting](#) Page .

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<sup>1</sup> Federal Register Notice Announcing the Meeting (76 FR 28224-28225)

<sup>2</sup> Determination Memorandum and Biosketches of Candidates

<sup>3</sup> Draft (5-25-2011) Review of EPA's Draft Oil Spill Research Strategy

<sup>4</sup> Charge to the SAB Oil Spill Research Strategy Review Panel

<sup>5</sup> Meeting Agenda

<sup>6</sup> Presentation to the Science Advisory Board Panel – Draft Oil Spill Research Strategy

**ATTACHMENT A**  
**U.S. Environmental Protection Agency**  
**Science Advisory Board**  
**Oil Spill Research Strategy Review Panel**

**CHAIR**

**Dr. David T. Allen**, Professor, Department of Chemical Engineering, University of Texas, Austin, TX

**Ms. Yvonne Addassi**, Senior Environmental Scientist, California Office of Spill Prevention and Response, California Department of Fish and Game, Sacramento, CA,

**Dr. Kevin Brown**, Professor, Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA

**Dr. G. Allen Burton**, Professor and Director, Cooperative Institute for Limnology and Ecosystems Research, School of Natural Resources and Environment, University of Michigan, Ann Arbor, MI

**Dr. Richard Camilli**, Associate Scientist, Applied Ocean Physics and Engineering, Woods Hole Oceanographic Institution, Woods Hole, MA

**Dr. James Clark**, Independent Consultant, Edmonds, WA

**Dr. Christine Ehlig-Economides**, Professor, Petroleum Engineering, College of Engineering, Texas A&M University, College Station, TX

**Dr. Thomas Frazer**, Professor, Fisheries and Aquatic Sciences, School of Forest Resource Conservation, University of Florida, Gainesville, FL

**Dr. James R. Mihelcic**, Professor, Civil and Environmental Engineering, University of South Florida, Tampa, FL

**Dr. Eileen Murphy**, Grants Facilitator, Ernest Mario School of Pharmacy, Rutgers University, Piscataway, NJ

**Dr. Stephen M. Roberts**, Professor, Department of Physiological Sciences, Director, Center for Environmental and Human Toxicology, University of Florida, Gainesville, FL

**Dr. James Sanders**, Director and Professor, Skidaway Institute of Oceanography, Savannah, GA

**Dr. Kathrine Springman**, Associate Professor, Chemistry Department, Portland State University, Portland, OR

**Dr. Ronald Tjeerdema**, Professor and Chair, Environmental Toxicology, College of Agricultural and Environmental Sciences, University of California, Davis, CA

**SCIENCE ADVISORY BOARD STAFF**

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