

**United States Environmental Protection Agency (U.S. EPA) Science Advisory Board (SAB)
Teleconference Meeting
January 23, 2015
Meeting Minutes**

Date and Time: January 23, 2015, 1:00 p.m. to 4:30 p.m.

Location: By teleconference only

Purpose: To discuss information provided in the agency's Fall 2013 and Spring 2014 Regulatory Agendas and to review draft SAB reports on the EPA's draft web-based Report on the Environment and the EPA's draft Environmental Justice Technical Guidance.

Meeting Participants:

SAB Members (see Roster¹)

Dr. David T Allen, Chair	Dr. Surabi Menon
Dr. George Alexeeff	Dr. James R. Mihelcic
Dr. Joseph Arvai	Dr. H. Keith Moo-Young
Dr. Costel Denson	Dr. Eileen Murphy
Dr. Joel Ducoste	Dr. James Opaluch
Dr. David Dzombak	Mr. Richard Poirot
Dr. Elaine Faustman	Dr. David Richardson
Dr. H. Christopher Frey	Dr. Amanda Rodewald
Dr. Cynthia M. Harris	Dr. Gina Solomon
Dr. Robert Johnston	Dr. Daniel Stram
Dr. Kimberly L. Jones	Dr. Paige Tolbert
Dr. Madhu Khanna	Dr. John Vena
Dr. Francine Laden	Dr. Charles Werth
Dr. Elizabeth Matsui	Dr. Peter Wilcoxon
Dr. Kristina Mena	Dawn Wright

SAB Staff:

Dr. Angela Nugent, Designated Federal Officer (DFO)
Mr. Thomas Carpenter, DFO for the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science
Ms. Stephanie Sanzone, DFO for the SAB Advisory Panel on EPA's Report on the Environment 2014
Dr. Suhair Shallal, DFO for the SAB Environmental Justice Technical Guidance Review Panel
Mr. Christopher Zarba, SAB Staff Office Director

Other Attendees: Names of those who requested the teleconference call-in number are provided in Attachment A.

Meeting Materials:

All materials for the meeting are available on the SAB webpage at:

<http://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/6b87be5e93df1d7e85257daa006a36b7!OpenDocument&Date=2015-01-23>

Meeting Summary:

Convene the meeting

Dr. Nugent, Designated Federal Officer (DFO) for the chartered SAB, formally opened the meeting and noted that this federal advisory committee teleconference of the SAB had been announced in the Federal Register² (published December 30, 2014, 79 FR 78430-78431). The SAB is an independent, expert federal advisory committee chartered under the authority of the Federal Advisory Committee Act (FACA). The SAB is empowered by law, the Environmental Research, Development, and Demonstration Authorization Act (ERDDAA), to provide advice to the EPA Administrator on scientific and technical issues that support the EPA's decisions. The DFO noted that the Federal Register notice announcing the meeting had provided the public with an opportunity to provide written and oral comment. There were no requests for oral comment and no written public comments received. No agency representative asked to make remarks at the teleconference.

The DFO stated that the SAB consists entirely of special government employees (SGEs) appointed by EPA to their positions. As SGEs, chartered SAB members are subject to all applicable ethics laws and implementing regulations. EPA has determined that advisors participating in this meeting have no financial conflicts of interest or appearance of a loss of impartiality under ethic regulations specified in 5 CFR 2635 relating to the topic of this meeting.

Purpose of the teleconference and review of the agenda

The SAB Chair, Dr. David Allen, noted that the purpose of the teleconference was to discuss information provided in the agency's Fall 2013 and Spring 2014 Regulatory Agendas and to review draft SAB reports on the EPA's draft web-based Report on the Environment and the EPA's draft Environmental Justice Technical Guidance. The meeting generally proceeded according to the agenda.³

Fall 2013 Regulatory Agenda update and recommendation for the Spring 2014 Regulatory Agenda

Dr. Allen briefly reviewed the purpose of the SAB's regulatory agenda science screening activity, which was to determine, as authorized by as authorized by section (c) of the Environmental Research, Development and Demonstration Authorization Act, whether to review the adequacy of the science supporting planned regulatory actions in the agency's Regulatory Agenda. He introduced Dr. James Mihelcic, Chair of the SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science, to review the recommendations from

the work group and informed participants that the work group memorandum⁴ contained important background on this activity.

Spring 2014 Regulatory Agenda

Dr. James Mihelcic reviewed the Board's statutory authority for screening the science associated with planned actions and the process used by the work group in evaluating available agency information to develop recommendations for the chartered SAB. He acknowledged the contributions of work group members Drs. Taylor Eighmy, H. Christopher Frey, and Gina Solomon. He discussed the three major planned actions that were the focus of SAB attention, the work group's recommendations, and supporting rationales. The work group recommended that no further SAB consideration was merited for two actions [National Emission Standards for Hazardous Air Pollutants: Ferroalloys Production (2060-AQ11) and Renewable Fuel Program - 2015 Volume Standards (2060-AS22)]. For the Interstate Transport Rule for the 2008 Ozone NAAQS (2060-AS05), the work group recommended that the SAB defer consideration of the planned action until more information is available.

There was a short discussion of the timing of the Interstate Transport Rule; Dr. Mihelcic noted that no information had been provided to the work group regarding its timetable.

The Chair invited a motion to dispose of the work group recommendations. Dr. Jim Opaluch moved that: (1) the SAB Chair convey a letter to the Administrator noting that the SAB has determined that no further consideration is merited at this time for two planned actions [National Emission Standards for Hazardous Air Pollutants: Ferroalloys Production (2060-AQ11) and Renewable Fuel Program - 2015 Volume Standards (2060-AS22)] and that the Board looks forward to a briefing from the agency about plans for the Interstate Transport Rule for the 2008 Ozone NAAQS (2060-AS05) as the timing and underlying science matures, and (2) the minutes for the January 23, 2015 teleconference should show that if the SAB has not heard plans for a briefing before the next review of the regulatory agenda, the SAB Chair would examine whether the Interstate Transport Rule for the 2008 Ozone NAAQS merited discussion at a Board meeting. Dr. Gina Solomon seconded the motion. The motion was approved unanimously with no abstentions.

Dr. Allen thanked the work groups for its analysis and its thoughtful report of recommendations.

Fall 2013 Regulatory Agenda update

Dr. David Allen introduced this update by noting that the chartered SAB had determined on June 11, 2014 that all but one major new planned action in the Fall 2013 Regulatory Agenda did not merit SAB consideration. Dr. James Opaluch provided an update on the final outstanding item from the SAB's consideration of the Fall 2013 Regulatory Agenda, Action 2040-AF03, Development of Best Management Practices for Recreational Boats under § 312(o) of the Clean Water Act.⁵ He summarized fact-finding after the SAB's June 11, 2014 teleconference and recommendations regarding the action. He noted the important and difficult issue of secondary transport of invasive species by recreational boats and the social science questions related to this topic. Fact finding had revealed that the EPA may not proceed with this action, thus the action

did not merit further SAB consideration at this time. However, given the importance of the invasive species threat, the fact-finding group recommended that the SAB be apprised of the status of this action when the Board considers new regulatory agendas and that the SAB should request agency briefings on: (1) invasive species science being developed and used across the agency; and, (2) the legal authorities existing to address this major, high priority global environmental threat.

Dr. Costel Denson moved that the Chair of the Board convey a letter to the Administrator including the fact-finding group's recommendations. Dr. Kristina Mena seconded this motion. Discussion then followed regarding the need to modify the motion to include a specific reference to the science behind secondary transport. The Board Chair agreed to work with Dr. James Opaluch in developing the final text of this letter

The motion was approved unanimously with no abstentions.

Quality review of the draft report, *Review of the EPA's draft Report on the Environment 2014*⁶

Dr. Allen began the quality review portion of the agenda by reminding Board members that many SAB reports are developed by ad hoc panels and that it is a major duty of the SAB to determine if panel consensus draft reports are ready to transmit to the Administrator as an SAB report and under what conditions. In reaching that determination Board members focus on the SAB's four quality review questions:

- Were the charge questions adequately addressed?
- Are there any technical errors or omissions in the report or issues that are not adequately dealt with in the draft report?
- Is the draft report clear and logical?
- Are the conclusions drawn or recommendations provided supported by the body of the draft report?

Presentation from the Panel Representative

Dr. David Allen introduced Dr. Robert Johnston to represent the SAB Advisory Panel on EPA's Report on the Environment (ROE) 2014, since the panel chair, Dr. James Sanders, had completed his term on the Chartered SAB in December 2014. Dr. Allen asked Dr. Johnston to provide background on the draft report as an introduction to the quality review discussion. Dr. Johnson acknowledged the preliminary written comments received from chartered SAB members⁷ and noted that several members of the chartered SAB who were on the teleconference also served on the ROE panel (Drs. Joseph Arvai, H. Christopher Frey, James Mihelcic, Eileen Murphy, James Opaluch, and Amanda Rodewald). He thanked the entire panel for its hard work and gave a brief description of the agency's draft web-based ROE, the charge questions to the panel, and the draft report's conclusions. Although the panel report had numerous recommendations for improving the ROE, it was the strong consensus of the panel that none of the recommendations should imply significant delays for disseminating the ROE quickly.

Chartered SAB Discussion and Disposition of the Report

After Dr. Johnston completed his remarks, the lead reviewers briefly summarized their written comments. Dr. Joel Ducoste, the first lead reviewer on the call, found the panel's draft report addressed a broad range of issues and commended the panel for identifying nuances that need to be addressed. He agreed with the panel's conclusion that the ROE should better explain and integrate the sustainability framework and added that the agency should provide more visual cues to important relationships in the ROE. The ROE should use images and text to describe trade-offs, interactions, and a systems perspective. Where the current ROE presents indicators in themes and tables, it would be better to provide a "visual approach" that links Table 1 to the sustainability framework. He also suggested that it might be useful to provide key words to help unsophisticated users. He agreed that specific examples might also help guide users. He also expressed concern that there may be significant differences between national and regional data sets and that it may be daunting to keep both data sets current. The concern over resources and the importance of updating data stressed in the panel's response to charge question 4 should be stressed throughout the report. Finally, he expressed concern that the concepts of resilience and resistance may be hard to quantify.

Dr. Madhu Khanna, the second lead reviewer on the call, commended the panel and expressed agreement with Dr. Ducoste's major points. She acknowledged that sustainability was an appropriate framework for the ROE, but that improvements were needed in terms of data, explication of the framework, and interrelationship of major ROE elements to fully implement this framework. It was important to bring out connections between the three dimensions of sustainability (environment, economy and society), including their complementarities and tradeoffs. She suggested that it would be helpful for the report to elaborate more on what should be provided on the website. Examples are needed that show not only tradeoffs between environmental indicators, but also across different environmental, economic and social indicators. The ROE might also note other tools for assessing sustainability, such as lifecycle analysis, cost-benefit analysis, and equity analysis. She recommended that the conceptual model show the role of regulation in graphics and supporting texts. She noted more work should be done to improve uniform frameworks for presenting data, especially in terms of the units used. Some indicators are presented in totals and others are broken down into units that make the data easier to digest and understand. She acknowledged that standard measures of Gross Domestic Product (GDP) don't account for environmental impacts, but that a green GDP indicator is a challenging, aspirational goal at this time and should be characterized as a medium- to long-term objective. She suggested that the report could be strengthened by providing more clarity around short-, medium-, and long-term recommendations.

Dr. Francine Laden, the third lead reviewer on the call, agreed that the draft report was a very thorough review and supported its strong focus on sustainability. She noted that it is crucial for the ROE to define sustainability clearly. She found no technical errors but made three suggestions for improving the panel's draft report: (1) the report should identify the priorities associated with its recommendations; (2) the ROE should make clear what the updating policy for the website will be – this will be important for planning and allocating resources; and (3) the panel's findings and recommendations related to the "Where you live" should be mentioned in the Executive Summary, because this data-access pathway is likely to be used by many users.

Dr. Ingrid Burke, the fourth lead reviewer, was not able to be on the call. Dr. Allen noted that her points, provided in written comments, were generally covered by others.

Dr. Allen observed that many Board members had made comments regarding sustainability as a ROE framework. He stated that the Board should be consistent in its comments regarding sustainability across its recent reports. The forthcoming SAB-BOSC report, “*Strategic Research Planning for 2016-2019: A Joint Report of the Science Advisory Board and Board of Scientific Counselors*,” contains language regarding the definition of sustainability and the utility and adequacy of the “three pillars” approach. He recommended the panel check on the recommendations in SAB-BOSC report regarding the definition of sustainability and provide a reference to the SAB-BOSC report in a revised report on the ROE.

Dr. Johnston thanked the lead reviewers for their comments. He noted that most comments related to additional points that could be stressed or added to the report. Most comments can be addressed relatively easily with additions to the report, Executive Summary and letter. He agreed that the panel could accommodate Dr. Allen’s point regarding sustainability to ensure that the SAB was speaking with one voice in the SAB-BOSC and ROE reports. He suggested that he work with Drs. Khanna and Arvai to add language to the report regarding examples of tradeoffs and complementarities across indicators. Dr. Johnston noted that the panel had wrestled with assigning priorities for short-, medium and long-term recommendations in the draft report, but dropped that approach because the panel found the timeframes ambiguous and wanted to give the agency flexibility to disseminate the ROE. He acknowledged that the panel may have gone too far in removing information about priorities. Although it would be difficult to assign priorities to each recommendation without further panel deliberation, it would be possible to “add a few well-placed sentences” about groups of goals and recommendations and emphasize that it is important for the agency to post the ROE.

After Dr. Johnston’s remarks, the Board’s general discussion began. One member emphasized the importance for the panel to insert information about priorities because the report is not clear about the priority of different recommendations and could be misinterpreted to imply that dissemination of the ROE should be delayed. He also noted that the report seemed to differ from the SAB-BOSC discussion of sustainability, which emphasized that there can be synergies between economics and the environment involved in sustainability. In places, the draft ROE report appears to take a stance that environmental quality can only be taken at cost of economic or social metrics.

Dr. Johnston responded that it would be relatively straightforward to highlight more pressing short-term goals and emphasize that the majority of recommendations are medium-term, long-term or aspirational. The letter to the Administrator can highlight this more clearly. A Board member who served on the panel emphasized that the agency had advised the panel not to be overly concerned about possible resource constraints associated with implementing recommendations. Another member responded that if the panel is unable to identify its top priorities, it should state clearly that the committee is not in a good position to judge resources. It is important to be transparent and not give the impression that all suggestions have equal priority.

Dr. Johnston then returned to this issue of tradeoffs between indicators and noted that “this is a delicate topic.” Often there are trade-offs, but one should not assume the universality of certain tradeoffs. Members responded that the draft report should not discuss tradeoffs and synergies between environmental, economic and social indicators in too great detail and instead refer to the SAB-BOSC report and note that there is growing sophistication in literature addressing this point. The report should consider more than unidirectional impacts of one pillar on another. Impacts can be positive as well as negative.

Other members then provided comments:

- The draft web-based ROE was user-friendly and immediately useful. The panel report should retain a positive assessment of the current agency draft ROE.
- The report should not refer to the “goal of sustainability,” because the EPA Strategic Plan considers sustainability as an overarching principle, not a goal.
- It would be inappropriate to recommend that the ROE contain indicators based on benefit/cost analysis because it is a ROE “ground rule” that indicators are based on measureable things, not model outputs.

Dr. Allen concluded the discussion by summarizing the generally favorable comments received and Dr. Johnston’s willingness to refine the report in light of written and oral comments and his willingness to work with a small work group of Board members in revising the document. Dr. Allen invited a motion for the disposition of the report. Dr. David Dzombak moved that Dr. Johnston work with Board members on the panel and interested Board members who would identify themselves to the SAB Staff Office to revise the report consistent with the quality review discussion. The revised report would come to the Board chair for his approval and transmission to the Administrator. Dr. Opaluch seconded the motion. The motion was approved unanimously with no abstentions. Dr. Dzombak indicated his willingness to assist in revisions to the report. Other Board members were asked to identify themselves to the DFO by January 27, 2015 as willing to assist in revisions to the report.

Quality review of the draft report, SAB Review of the EPA’s Draft Technical Guidance for Assessing Environmental Justice in Regulatory Analysis (11/20/2014 Draft)⁸

Presentation from the Panel Representative

Dr. David Allen introduced Dr. H. Keith Moo-Young, Chair of the SAB Environmental Justice Technical Guidance Review Panel. Dr. Moo-Young provided background on the draft report.⁹ He emphasized the purpose and context of the agency’s draft Environmental Justice Technical Guidance: to assist risk assessors and analysts in regulatory development. He summarized the charge questions, panel findings and major recommendations.

Chartered SAB Discussion and Disposition of the Report

After Dr. Moo-Young completed his remarks, the lead reviewers briefly summarized their comments. Dr. George Alexeeff, the first lead reviewer on the call, commended the panel. He noted that the report supported the EPA's effort, but he sensed a vigorous debate within the panel, leading to ambiguity in recommendations. He acknowledged the difficulty of addressing the very large number of charge questions and stated that a lot more work needs to be done to improve the quality of the SAB report." He identified the following as areas that needed clarification: (1) the appropriateness of quantitative vs. qualitative data – there is lack of clarity regarding the recommendations; (2) the appropriate use of risk assessment – the report should clarify if and how the current risk assessment model can be used in analysis; (3) the differences between and appropriate use of cumulative risk assessment and cumulative impact assessment – one looks at probabilities and the other uses different methods; and (4) the recommended alternatives to risk assessment and their feasibility for actual use in decision-making now, as opposed to screening tools or methods still under development.

Dr. Joseph Arvai, the second lead reviewer on the call, commended the draft report for its thoroughness, but expressed two concerns: (1) the draft raises a number of critiques without making recommendations to address those areas and (2) the draft is repetitive. Regarding the first concern, the draft report seems to take issue with risk-based approaches but offers no alternatives. It mentions the precautionary principle as one alternative, without discussing its detractors and limitations. The draft also talks about multiple stressors and cumulative effects without recommending or evaluating how they can be addressed. The discussion of qualitative and quantitative data is unclear; there is not enough discussion or recommendations regarding the reliability of data. The draft report makes an excellent comment about the need to broaden analysis beyond the economic characterization of risks and costs, but doesn't say how the agency might go about doing that. There is much research available related to First Nations that could be drawn on to strengthen discussion on these points. He noted that the list of 55 references in the draft report includes only 16 peer reviewed publications. He recommended that the draft report should have included more guidance based on current research on environmental justice, rather than focusing on the risk assessment literature. He concluded by noting that the Executive Summary does not do a good job of addressing the charge questions. Although his comments emphasize points that need to be improved, he did recognize the tremendous amount of work and good ideas in the report.

Dr. Kristina Mena, the third lead reviewer on the call, expressed agreement with the other commenters. She noted inconsistency between the letter to the Administrator and Executive Summary and suggested that the Executive Summary should call for staff hires to strengthen the science for environmental justice analyses. She also called for mention of increasing public participation in such analyses through community-based participatory research. She called for the report to focus on environmental justice and how risk assessment can be used to analyze environmental justice questions, rather than how environmental justice can fit into risk assessment. She stated that the report should include better references to peer-reviewed literature and examples.

Dr. Peter Wilcoxon, the fourth lead reviewer on the call, stated that the committee did a good job pointing out flaws in the agency's draft Environmental Justice Technical Guidance. The draft report should be revised to eliminate repetition, include cross-references, and be clearer. He also noted that the report did not adequately address charge question 2.

After the lead reviewers completed their comments, Dr. Moo-Young responded that the panel tried to avoid entering the policy arena in the draft report. He welcomed comments to provide a list of additional peer reviewed literature. The draft report mentions the following alternatives to risk assessment: the precautionary principle, impact assessment and health impact assessment. Redundancy was built into the report because the charge questions had redundancies. He noted that the issue of staffing was mentioned in the Executive Summary and that the panel found that the agency was doing a good job of addressing its human resource needs

The Board's general discussion of the draft report began. Members made the following points:

- Although it is appropriate for the draft report to address the qualitative vs. quantitative data issue by recommending that the most relevant data be used, the report contains incorrect statements about quantitative vs. qualitative data. On page 13, ordinal data are described as non-quantitative data, although they are a type of quantitative data. The report should be carefully revised to be clear on this point.
- The report needs a clearer discussion of whether costs should be considered in environmental justice analyses. If costs are to be considered, additional clarity regarding recommendations is needed.
- The discussion of equilibrium analysis should distinguish between small-scale partial equilibrium analysis and general equilibrium analysis. Agency guidance from the National Center for Environmental Economics addresses this issue and should be cited.
- Could the methodologies recommended in this report be made clearer so that they could be understood and implemented by environmental justice communities with limited resources?
- It is unclear how the broad set of factors identified on page 24, line 34-38, which expand the traditional concerns included in human health risk assessment, would be interpreted, used and possibly misused. What are the pros and cons of considering these broad sets of factors?
- How should the list of research priorities on page 38 be interpreted? The list is very broad and seems to include almost everything one could study. It is unclear who the audience for the list is and whether there are truly areas that are foundational for moving environmental justice analysis forward.
- The report should be revised to make responses to charge questions clearer and remove text that is repetitive, tangential, or unresponsive to the charge questions. Such changes would make the text less repetitive and allow the reader to more easily follow the organizational thread.
- The report should be revised to answer the charge questions.
 - The different components of charge question 2 should each be addressed.
 - Charge question 3 should be answered more clearly. It is not clear on page 15, lines 10-14, whether the sentence beginning "From the risk analysis perspective" was the response or whether some alternative would be better.

- The report should make clearer the basis of many broad findings, such as “EPA should focus on the data.” What specific components in the EPA’s draft Environmental Justice Technical Guidance are problematic and how they should be changed?
- The draft SAB panel report provides inconsistent discussion of disproportionality in different parts of the report. The report should be rewritten to be internally consistent and accurately based on the EPA’s draft document.
- The panel report should focus on the EPA’s draft technical guidance for analysts. It is not the place to reopen a broad discussion on the appropriateness of risk assessment or how to design a cumulative impact assessment. Those topics are separate topics addressed in other documents.
- The report should distinguish between the actual practice of risk assessment and norms for risk assessment. Risk assessment is capable of dealing with disproportional impacts, although that may not be done in practice. Environmental justice questions are addressed as part of risk assessment and should be encouraged. Other methods, such as the precautionary principle, have down sides. For this report, it would be fair to focus on the limitations in the practice of risk assessment, which can be improved.
- The report should clarify that risk assessment is not purely quantitative. Hazard identification is often qualitative and procedures for those inferences are being refined. Other qualitative factors in risk assessment are effects modifiers and exposure modifiers, differentiated by socio-economic status. It might be useful to point the report in the direction of which aspects of risk assessment need improvement.

After members completed their comments, Dr. Moo-Young noted that the panel’s meeting preceded the SAB-BOSC meetings where ORD detailed its Environmental Justice roadmap, so that information regarding research planning was not available at that time. A revised report could include a link to the SAB-BOSC report. He noted that the panel draft report could clarify what was meant by a lack of definition of disproportionality – does it involve 5% or 50% of disproportionate impacts? The Executive Order defines it generally, but does not identify the scope of concern.

Dr. Allen then summarized the major points of the quality review. Many members have comments related to improving clarity throughout the document, Executive Summary and letter; making responses to questions more evident; and making succinct and very clear recommendations. He spoke of the need for members of the panel to see the revised report. He asked for a motion to dispose of the report.

Dr. Arvai moved that (1) the panel chair work with a group of self-identified Board members and SAB staff to revise the report, improving clarity throughout the document, Executive Summary and letter; making responses to questions more evident; and making succinct and very clear recommendations and (2) the panel chair send a revised document responsive to the Board’s comments to panel members to identify any objections to the revisions. The revised report would then come back to the Board Chair for a final disposition. Dr. Denson seconded the motion. The motion was approved unanimously with no abstentions.

Board members were asked to identify themselves to the DFO by January 27, 2015 as willing to assist in revisions to the report.

The DFO adjourned the meeting at 4:15 p.m.

Respectfully Submitted

Certified as Accurate

/Signed/

/Signed/

Dr. Angela Nugent
SAB DFO

Dr. David T. Allen
SAB 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 to not rely on the minutes to 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.

Attachment A: Names of those who requested the teleconference call-in number

Jennifer Bowen, EPA
Carlton Eley, EPA
Jeff Frithsen, EPA
Chuck French, EPA
Brenda Groskinsky, EPA
Fred Hauchman, EPA
Maria Hegstad, Inside EPA
Martha H. Keating, EPA
Michael Kolian, EPA
Christopher A. Lamie, Eastern Research Group, Inc.
Charles Lee, EPA
Kelly Maguire, EPA
Mary Manibusan, EPA
Patricia A. Murphy, EPA
Al McGartland, EPA
Tracy Nagelbush, Van Ness Feldman LLP
Seema Shapelle, EPA
Ann Wolverton, EPA

Materials Cited

The following meeting materials are available on the SAB website,
<http://www.epa.gov/sab>, at the page for the [January 23, 2015](#) teleconference:
<http://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/6b87be5e93df1d7e85257daa006a36b7!OpenDocument&Date=2015-01-23>

¹ Roster of SAB members

² Federal Register published December 20, 2014, 79 FR 78430-78431

³ Meeting Agenda, January 23, 2015

⁴ Recommendations regarding the Spring 2014 Regulatory Agenda.

⁵ Follow-up to the Chartered SAB's June 11, 2014 Discussion of the Fall 2013 Regulatory Agenda

⁶ *Draft (11-03-14) Review of the EPA's draft Report on the Environment 2014*

⁷ Report on the Environment Draft Report Member Comments as of 01/21/15

⁸ *SAB Review of the EPA's Draft Technical Guidance for Assessing Environmental Justice in Regulatory Analysis (11/20/2014 Draft*

⁹ Environmental Justice Technical Guidance Draft Report Member Comments as of 01/20/15.