

**Summary Minutes of the Science Advisory Board Advisory Panel on EPA's  
Report on the Environment Public Teleconference  
February 18, 2004, 11 a.m. – 2 p.m. EST  
Ariel Rios Building, Washington, D.C.**

Panel Members: See Panel Roster – Appendix A

Date and Time: Wednesday, February 18, 2004, 11 a.m. – 2 p.m. Eastern Time

Location: Ariel Rios Building, 1200 Pennsylvania Ave., N.W., Washington, D.C.

Purpose: The purpose of this teleconference meeting of the Science Advisory Board (SAB) Advisory Panel on EPA's Report on the Environment (ROE) was to prepare for a face-to-face review meeting by: 1) discussing the draft ROE and charge questions to the Panel and, 2) discussing the agenda for the face-to-face meeting.

Attendees: Chair: Dr. Virginia Dale

Panel Members: Dr. Mark Bain  
Dr. Phillip Bromberg  
Dr. Timothy Buckley  
Dr. Joseph Bunnell  
Dr. Ann Marie Gephart  
Dr. Joseph Helble  
Dr. Arturo Keller  
Dr. Charles Kolb  
Dr. George Lambert  
Dr. Norman LeBlanc  
Dr. John McManus  
Dr. Maria Morandi  
Dr. David Ozonoff  
Dr. Kathryn Saterson  
Dr. Peter Scheff  
Dr. Oswald Schmitz  
Dr. Mark Schwartz  
Dr. Alan Steinman  
Dr. Stephen Trombulak  
Dr. Cynthia Warrick  
Dr. Barry Wilson

EPA SAB Staff: Dr. Thomas Armitage, Designated  
Federal Officer  
Dr. Vanessa Vu, SAB Staff Office Director  
Dr. Anthony Maciorowski, SAB Associate  
Director for Science

Mr. Richard Albores, SAB Acting  
Deputy Director

Other EPA Staff:

Dr. Peter Preuss, Director, National Center for Environmental  
Assessment, Office of Research and Development  
Dr. Denice Shaw, National Center for Environmental  
Assessment, Office of Research and Development  
Mr. Steve Young, Acting Associate Director, Environmental  
Analysis Division, Office of Environmental Information

Others Participating:

Mr. Glen J. Barrett, Health Scientist, American Petroleum Institute  
Mr. Walter C. Retzsch, Manager Environmental Stewardship, American Petroleum  
Institute

Meeting Summary

The discussion followed the issues and timing as presented in the meeting agenda  
(Appendix B)

Convene Meeting, Call Attendance

Dr. Thomas Armitage, Designated Federal Officer (DFO) for the Advisory Panel on  
EPA's Report on the Environment (ROE Panel) called attendance. He noted that the  
teleconference was being held as a public meeting under the requirements of the Federal  
Advisory Committee Act (FACA). The DFO is present at all such meetings to assure  
compliance with FACA requirements. Meeting minutes were taken by the DFO for this  
teleconference. Dr. Armitage noted that the minutes will be certified by the Panel Chair  
and made available on the SAB website. He also noted that all Panel members have  
submitted financial conflict of interest information which was reviewed by the SAB Staff  
Office prior to the teleconference and found to be satisfactory.

Dr. Anthony Maciorowski, SAB Staff Office Associate Director for Science thanked the  
Chair and members of the ROE Panel for their efforts. He said that the Panel will be  
providing important advice to EPA on the Agency's draft Report on the Environment.

Purpose of the Call and Review of the Agenda

Dr. Virginia Dale, Panel Chair, thanked the Panel members for their work and reviewed  
the agenda for the teleconference. She stated that the purpose of the teleconference was  
to prepare for the face-to-face Panel meeting to be held on March 9-12 in Washington,  
D.C. She stated that the teleconference will provide an opportunity for the Panel to  
discuss EPA's charge to the Panel, and to ask EPA clarifying questions about the charge

questions and the draft Report on the Environment (ROE). She also noted that there was time on the teleconference agenda for discussion of the face-to-face meeting agenda and Panel member work assignments.

Discussion of EPA's purpose in developing the draft ROE and EPA's intended use of recommendations from the ROE Panel

Dr. Peter Preuss, Director of EPA's National Center for Environmental Assessment, presented a brief chronology of the development of the draft ROE and discussed EPA's purpose in developing the ROE.

Dr. Pruess stated that EPA started developing the ROE in late 2001. EPA Administrator Whitman directed Agency offices to prepare a report on the environment that could be used as a starting point for discussion with the American People. The Administrator directed EPA staff to have the draft report completed within 12 months. A series of meetings were then held within EPA, and the Agency's Offices of Environmental Information and Research and Development began discussing indicators that might be used to identify endpoints of interest for use in the ROE. Given the short time frame for developing the report, it was clear that EPA had to use available information. It was decided that the ROE would be structured to answer key questions about the environment. A number of groups were formed to develop the questions and identify indicators that could be used to answer the questions.

EPA also created a format for describing the indicators to be included in the ROE and established an external group to help review the indicators that were proposed. A process was established to winnow and choose the indicators that are most useful. EPA decided to report indicators at the national level and to develop a report with two components, a widely read public report, and a technical report containing much more information about the indicators.

The Panel asked Dr. Preuss and other EPA staff a number of questions focused on how EPA decided to include key questions and indicators in the draft ROE. Dr. Bromberg asked whether the draft ROE was written to address only those areas where EPA has statutory responsibilities, and how EPA decided to exclude questions from the report. He noted that there is nothing in the draft ROE on global warming or bioterrorism. Dr. Preuss responded that EPA decided to focus largely on areas where the Agency had responsibility for protection of air, water, and land resources. EPA also decided that the report should be anchored in either human health or ecological condition outcomes. EPA tried hard to connect the pieces in the first three chapters of the draft ROE (air, water, and land) with the two chapters on human health and ecological condition. There was discussion with the White House (Office of Science and Technology Policy) concerning global warming. Governor Whitman made the decision not to include global warming in the draft ROE because a separate report was being developed on global change, and that report would deal with global warming.

Dr. Bromberg noted that Chapter Four of the draft ROE provides health statistics describing the status of human health in the U.S. and other countries. Chapter Four discusses emerging trends in human health effects such as autism. However, Chapter Four does not focus on how human health is related to information in the first three chapters of the draft ROE. Dr. Preuss indicated that EPA is very aware of this. The Agency tried not to speculate about relationships for which there was little supporting data. For most health endpoints, the causes are so multifaceted that it is difficult to tear them apart. It was difficult to complete these kinds of analyses within the 12 month window of time that EPA was given for completion of the draft ROE. Dr. Preuss indicated that he would like to include more discussion about this in the next ROE.

Dr. Schmitz said that he has similar concerns about the draft ROE. He noted that in the chapter on land use, no attempt was made to link environmental changes such as forest cover loss with important indicators such as bird species diversity. He asked whether these kinds of omissions were a result of the short time frame for completion of the draft ROE. Dr. Shaw responded that EPA did not have time to dig into data sets to develop these kinds of syntheses. Mr. Young responded that EPA did try to describe in the draft ROE what is known and what is not known. Both Dr. Shaw and Mr. Young indicated that it is a perhaps greater challenge to describe what is not known.

Dr. Ozonoff stated that it is difficult to comment on what is not in the report. He asked EPA to describe what was not included in the report and was “left on the cutting room floor”. Dr. Preuss responded that not much was left on the cutting room floor. Several indicators were considered and not included, such as the Clean Water Act Section 305(b) water quality data. In some cases EPA found that there were flaws in the data and they were not used. Some indicators did not make it through the review process.

The Panel then asked EPA staff a number of questions focused on EPA’s purpose in developing the draft ROE, and how EPA intends to use the ROE. Dr. Trombulak noted that there are two ways to look at the report, it can be a snapshot or an ongoing assessment. He said that these two different approaches call for treating indicators in different ways. He asked EPA staff to describe the Agency’s thinking concerning the purpose of the ROE. Dr. Shaw responded, stating that EPA tried to identify indicators that could be used in subsequent reports, but the Agency did not identify indicators with the specific intention of making the ROE a continuing series.

Dr. Bromberg noted that the danger in publishing a ROE is that, once it appears, it becomes the state of things. He acknowledged that developing the draft ROE was a difficult undertaking. Time pressure precluded a thorough approach to a difficult task. Nevertheless, the draft ROE is not a report on the environment, it is a first draft of an ongoing effort that EPA has a responsibility to continue.

The Panel then discussed how EPA would use recommendations in the advisory report of the SAB ROE Panel. Dr. Dale asked two questions: how will the advisory report from the Panel be used? and when will another ROE be developed? Dr. Preuss responded, stating that that he hoped the comments from the Panel will lead to a better second

version of the ROE. He stated that planning has already begun for a second report that will be produced by late 2005. Comments from the Panel will be used to think through what the report will look like. He noted that EPA wants to use the ROE to bolster strategic planning efforts. EPA must revise its Strategic Plan by 2006 and the Agency wants to get the ROE synchronized with the Strategic Plan.

Dr. McManus asked whether the Panel's comments will be used to revise the current draft Report on the Environment or be used to develop future reports on the environment. Dr. Morandi asked whether EPA was considering adding a preamble to the current draft addressing appropriate uses of the report. Dr. Ozonoff noted that former EPA Administrator Whitman directed Agency offices to produce draft ROE, and he asked whether current Administrator Leavitt will want to produce another report on the environment. Dr. Bromberg also noted that the ROE is not required by statute and that it is not clear whether Administrator Leavitt has directed Agency offices to produce another report to support strategic planning. Dr. Shaw responded, stating that the current ROE has been released as a draft, and that EPA wants to build on comments from both the public and the Science Advisory Board to produce future reports on the environment. The current draft report is available on the internet, and the Science Advisory Board report will also go on the internet to provide comments on the draft ROE. However, EPA does not plan to remove the "draft" label from the current report. Mr. Young stated that EPA does intend to issue another report on the environment, and that input from the Science Advisory Board review will be important. EPA expects to release the next report in late 2005 in order to inform the 2006 strategic planning process. EPA expects to remove the "draft" label from future reports and issue them as final documents. Mr. Young also noted that there is a statutory requirement, the Government Performance and Results Act (GPRA), that requires strategic planning and demonstration of program outcomes. Demonstration of program outcomes has become very important to the Office of Management and Budget, and in this regard the ROE is also very important.

The Panel then discussed the appropriate title of the report, and whether it should be characterized as a report on the state of our knowledge about the environment. Dr. Shaw indicated that this kind of discussion at the planned face-to-face meeting will be very helpful.

The Panel asked a number of additional questions about how EPA chose the set of indicators in the draft ROE. Dr. Kolb asked whether the indicators in the draft ROE were published in other forums. Dr. Steinman noted that EPA should try to develop and include indicators in the ROE that will be of greatest value, assuming that resources are available for this work. Dr. Shaw responded, stating that data from many sources were included in the draft ROE. Some of the information was provided by other federal agencies. Indicators were selected to address the questions posed in the ROE. Dr. Shaw stated that EPA is looking for input from the Science Advisory Board on the kinds of indicators that should be used.

Dr. Bromberg noted that there might be a perception that broader questions were not discussed in the draft ROE because data are not available. Dr. Shaw agreed that there are

limitations on what it was provided in the report, and said that the Panel should view the report as a prototype for further discussion.

#### Discussion of EPA's charge to the Panel

The Panel then discussed EPA's charge questions for the face-to-face meeting, and asked EPA clarifying questions. Several members of the Panel noted that the charge should state that EPA does not intend to revise the draft ROE, but is conducting the Science Advisory Board review to obtain advice for use in developing future reports on the environment. Dr. Dale agreed that this change should be made, and Dr. Vu noted that the charge would be revised.

Dr. Satterson noted that the charge questions to the panel can be taken in the context that the ROE as a both snapshot of environmental conditions and a vehicle to manage for environmental results. In considering the charge questions, she asked whether the ROE should be viewed as a means to provide a snapshot of environmental conditions, or as a report that should be answering questions about why environmental conditions exist, and how EPA can address environmental problems. Mr. Young responded, indicating that the charge questions address both of these purposes of the ROE. He asked the Panel to bear in mind the short time that EPA had to develop the draft ROE and indicated that the Agency is looking for advice to develop and organize the next report. Dr. Vu noted that the ROE Panel is an advisory panel, and that EPA is looking for a review of the draft report with advice and recommendations responding to all aspects of the charge questions.

The Panel then discussed the meaning of the words "managing for environmental results" in charge question number one. Several Panel members and EPA staff discussed whether the ROE should contain information about the possibilities of chemical prophylaxis against air pollution, and the level of certainty that would be needed to include this in the report. Dr. Dale noted that the Panel should be thinking about all aspects of the charge questions. She stated that the advisory report should follow the structure of the charge to the Panel. However, she also said that this would not preclude the Panel from providing input concerning any other recommendations they may have.

Dr. Trobulak said that he thought Panel recommendations should address both measuring environmental indicators and managing for environmental results. Dr. Shaw responded, noting that the charge to the Panel is not to comment on EPA's management goals. However, EPA is interested in recommendations to develop a report that will provide the most useful scientific information to support Agency programs.

#### Discussion of Charge Question One

Dr. Dale asked if there were any comments or questions about aspects of the charge question number one (this question calls for recommendations on the process used to develop the draft ROE and the framework of the report).

Dr. Ozonoff commented that, in response to this part of the charge, the Panel should evaluate whether EPA went about the process of developing the ROE in the right way. Mr. Young responded that EPA is looking for advice about how the Agency could improve the process that was used to develop the draft ROE. Dr. Shaw stated that EPA developed the draft ROE using questions as drivers, and went through a process to review the key questions and indicators. The Agency is looking for advice from the Panel concerning the validity of these questions and indicators, and how they were presented in the draft ROE.

Dr. Satterson asked whether EPA wants the Panel to look at how well the draft ROE takes a snapshot, and how well the draft ROE sets up what the snapshot reports (i.e. what EPA needs to do to manage for environmental results). Dr. Shaw responded, stating that EPA is interested in Panel recommendations concerning how the ROE can lay the scientific foundation of the infrastructure that can be used to manage for environmental results. However, the Agency is not looking for recommendations concerning policy and management decisions. Mr. Young indicated that EPA is looking for recommendations about the environmental information that is needed to more effectively manage for environmental results.

#### Discussion of Charge Question Two

Dr. Dale asked the Panel whether they had questions or comments concerning charge question number two (this question focuses on the discussion of indicators in the draft ROE Technical Document).

The Panel discussed this charge question. Dr. Ozonoff asked whether EPA is looking for specific advice on how to better describe indicators. Dr. Shaw explained that EPA is looking for advice concerning the scientific and technical defensibility of indicators and conclusions in the draft ROE. However, in developing the charge, EPA did not necessarily expect the Panel to look at each indicator in the report.

#### Discussion of Charge Question Three

Dr. Dale asked the Panel whether there were questions or comments about charge question number three (this question calls for recommendations concerning the measurement of human health and ecological condition impacts).

The Panel discussed the charge question. Dr. Bromberg noted that conventional EPA practice has been to use avoidance as a measure for reducing human health risks from environmental contaminants. He asked whether EPA wanted the Panel to provide recommendations that would address other risk reduction measures. Mr. Young responded, indicating that in 1990 the Science Advisory Board produced a report on reducing risk. That report recommended different points of intervention to achieve risk reduction. The Agency would be interested in any recommendations the Panel may have in this regard.

Dr. Kolb commented on the measurement of primary and secondary air pollutants, noting that the draft ROE makes no distinction between them. He also noted that the draft ROE does not discuss multiple impacts of pollutants. Dr. Shaw responded that this is the kind of issue that EPA would like the Panel to discuss at the face-to-face meeting. Mr. Young stated that EPA would like to Panel to discuss how the Agency might be able to better explain the complexity of pollutant impacts.

The Panel discussed measurement of exposure to pollutants and the use of biomarkers as indicators in the ROE. Several Panel members noted that there should be linkages between the air, water, and land chapters of the draft ROE and the human health and ecological condition chapters. Panel members also noted that illustrative examples could be provided in the ROE. Dr. Shaw responded, stating that EPA is interested ways to improve the discussion of linkages between environmental pollutants and human health or ecological effects. She noted that EPA had limited data available to draw conclusions about linkages. Mr. Young suggested that the Panel may want to consider using one or more case examples to provide recommendations concerning approaches to describing the causes and effects of pollutants.

Dr. Trombulak questioned EPA about the meaning of the second sentence in charge question three. This sentence of the charge question asks whether the Panel could suggest how measurements for human health and ecological condition impacts resulting from environmental pollution could be more effectively addressed. Dr. Trombulak noted that there are many indicators in the draft ROE that are not related to environmental pollution. Mr. Young responded that EPA wanted to make statements in the draft ROE about environmental impacts and outcomes, and therefore asked broad questions. Answering these questions required the use of a broad range of indicators. Dr. Dale suggested that it might therefore be appropriate to change the words “environmental pollution” to “environmental perturbation” in the second sentence of charge question number three. Dr. Shaw noted that it may not be necessary to make this change because the term “pollutant” can have a broad definition. She stated that leaving the narrower language in the charge question could focus the Panel’s recommendations on EPA’s traditional mission. However, she understood the Panel’s concern, and said she would not object to changing the language as suggested by Dr. Dale. Dr. Vu stated that changing the question as recommended by Dr. Dale would clarify the charge to the Panel, and that the SAB Staff Office would make this change.

#### Discussion of Charge Question Four

Dr. Dale asked the Panel whether they had questions or comments concerning charge question number Four (this question focuses on recommendations concerning the use of regional indicators).

The Panel discussed the charge question. Several Panelists expressed the opinion that, in order to answer questions posed in the ROE, it will be important to look at regional and local data. They noted that more information is needed about data available at multiple levels.

### Discussion of Charge Question Five

Dr. Dale asked the Panel whether they had questions or comments concerning charge question number Five (this question focuses on recommendations concerning the draft ROE Public Report).

Several Panelists observed that EPA seems to be seeking feedback on whether the Public Report is too long or too short. Dr. Morandi noted that the ROE Panel is not part of the target audience (the lay public) for the Public Report. She asked whether EPA is planning to seek input on the Public Report from other groups. Mr. Young responded that EPA has asked for public comments on the document, but he noted that the SAB ROE Panel is well qualified to provide recommendations on this document. He stated public comments on the ROE are available on EPA's indicators website if the Panel is interested in reviewing them. Dr. McManus stated that the Public Document will be very important because it is likely to be more influential than the Technical Report.

### Public Comments

Dr. Dale asked if any other participants on the teleconference wished to make comments. There were no public comments.

### Discussion of assignments and agenda for the planned face-to-face meeting of the Panel

Dr. Dale reviewed the agenda for the planned face-to-face meeting on March 9-12. She noted that, in addition to participating in the plenary sessions, each panelist has been assigned to two breakout writing groups. During the first breakout writing group session panelists will develop recommendations concerning the air, water, or land chapters of the draft ROE. During the second breakout writing group session panelists will develop recommendations concerning the human health or ecological condition chapters. Dr. Dale asked if there were any questions or comments on the agenda or assignments. The Panel expressed agreement with the agenda and assignments for the face-to-face meeting.

Summary and Closing Remarks

Dr. Dale thanked the Panel for their work to prepare for the face-to-face review. She noted that the charge questions will be revised as discussed in the teleconference, and stated that she looked forward to meeting all of the panelists at the face-to-face meeting.

Respectfully Submitted:

*/Signed/*

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Thomas M. Armitage, Ph.D.  
Designated Federal Officer

Certified as True:

*/Signed/* (email 5-19-2004)

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Virginia Dale, Ph.D.  
Panel Chair

## **APPENDICES**

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Appendix A: Roster of SAB Advisory Panel on EPA's Report on the Environment

Appendix B: Teleconference Agenda

## **Appendix A – Roster of the U.S. EPA Science Advisory Board Advisory Panel on EPA’s Report on the Environment**

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### **CHAIR**

**Dr. Virginia Dale**, Corporate Fellow, Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN

### **MEMBERS**

**Dr. Mark Bain**, Director, Center for the Environment, Cornell University, Ithaca, NY

**Dr. Philip Bromberg**, Bonner Professor of Medicine, Department of Medicine, School of Medicine, UNC Chapel Hill, Chapel Hill, NC

**Dr. Timothy Buckley**, Associate Professor, Environmental Health Sciences, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD

**Dr. Joseph Bunnell**, Public Health Research Biologist, United States Department of the Interior, United States Geological Survey, Reston, VA

**Dr. Ann Marie Gebhart**, Director, Drinking Water Program, Underwriters Laboratories, Northbrook, IL

**Dr. Joseph Helble**, Professor and Department Head, Department of Chemical Engineering, University of Connecticut, Storrs, CT

**Dr. Arturo Keller**, Associate Professor, Bren School of Environmental Science and Management, University of California, Santa Barbara, Santa Barbara, CA

**Dr. Charles Kolb**, President and CEO, Aerodyne Research, Inc., Billerica, MA

**Dr. George Lambert**, Associate Professor and Center Director, Center for Child and Reproductive Environmental Health, Environmental and Occupational Health Sciences Institute, Robert Wood Johnson Medical School/ University of Medicine and Dentistry of New Jersey, Piscataway, NJ

**Dr. Norman LeBlanc**, Chief of Technical Services, Hampton Roads Sanitation District, Virginia Beach, VA

**Dr. John McManus**, Professor and Director, NCORE, RSMAS, University of Miami, Miami, FL

**Dr. Maria Morandi**, Assistant Professor of Environmental Science & Occupational Health, Environmental Sciences, School of Public Health, University of Texas - Houston Health Science Center, Houston, TX

**Dr. David M. Ozonoff**, Professor and Chair, Department of Environmental Health, School of Public Health, Boston University, Boston, MA

**Dr. Kathryn Saterson**, Research Scientist/Executive Director, Center for Environmental Solutions, Division of Environmental Science and Policy, Nicholas School of the Environment and Earth Science, Duke University, Durham, NC

**Dr. Peter Scheff**, Professor, Environmental and Occupational Health Sciences, School of Public Health, University of Illinois at Chicago, Chicago, IL

**Dr. Oswald Schmitz**, Professor, Yale School of Forestry and Environmental Studies, Yale University, New Haven, CT

**Dr. Mark Schwartz**, Associate Professor, Department of Environmental Science and Policy, College of Agriculture, University of California, Davis, CA

**Dr. Alan Steinman**, Director, Annis Water Resources Institute, Grand Valley State University, Muskegon, MI

**Dr. Stephen Trombulak**, Professor of Biology and Environmental Studies, Biology and Environmental Studies, Middlebury College, Middlebury College, VT

**Dr. Cynthia Warrick**, Assistant Professor, Management and Policy Sciences, School of Public Health, University of Texas Health Science Center Houston, Houston, TX

**Dr. Barry Wilson**, Professor, Animal Science and Environmental Toxicology, College of Agriculture and Environmental Science, University of California, One Shields Avenue, Davis, CA

#### **SCIENCE ADVISORY BOARD STAFF**

**Dr. Thomas Armitage**, Environmental Scientist, 1200 Pennsylvania Avenue, NW, Washington, DC, Phone: 202-564-4539, Fax: 202-501-0582, (armitage.thomas@epa.gov)

## APPENDIX B – Meeting Agenda

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**SCIENCE ADVISORY BOARD**  
**Advisory Panel on EPA’s Report on the Environment**  
**Public Teleconference**  
**February 18, 2004, 11 a.m. – 2 p.m. EST**

Agenda

11:00 am	Convene Meeting, Roll Call of Meeting Participants	Dr. Thomas Armitage Designated Federal Officer. EPA SAB Staff Office
11:15 am	Welcoming Remarks	Dr. Anthony Maciorowski Acting Associate Director EPA SAB Staff Office
11:30 am	Purpose of the Call and Review of Agenda	Dr. Virginia Dale, Chair
11:35 am	Purpose of EPA’s Draft Report on the Environment and Review of Charge to the Panel	Dr. Peter Preuss, Director EPA National Center for Environmental Assessment
		Dr. Denice Shaw, EPA National Center for Environmental Assessment
12:05 pm	Panel Questions and Clarifying Discussion on the Draft EPA Report on the Environment and Charge to the Panel	Dr. Virginia Dale, Chair and Panel
1:30 pm	Public Comments	
1:45 pm	Review Agenda for March 9-12 Meeting and Information to be Presented at the Meeting	Dr. Virginia Dale, Chair and Panel
2:00 pm	Adjourn	